

**To the memory of
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Editor: Grant Matthews

This is the second revised and extended edition of the book “Who Asked the First Question? The Origins of Human Choral Singing, Intelligence, Language and Speech” (Logos, 2006. ISSN 99940-31-81-3. The second edition also includes 15 maps of the distribution of various types of polyphony, a map of prevalence of stuttering, as well as 49 audio examples from various polyphonic cultures.

Content

Foreword and Acknowledgments	11
PART 1 CHORAL SINGING IN HUMAN CULTURE	32
Foreword	32
Question of terminology and classification.....	34
Vocal Polyphony in Africa.....	44
Sub-Saharan Africa.....	45
Rhythm	46
Unity of singing and dancing	46
Tone languages and polyphony.....	47
Characteristics of sub-Saharan polyphony.....	48
East Africa	52
Central Africa.....	53
Southern Africa	56
West Africa.....	59
Madagascar.....	61
North Africa	63
Sahara	64
Conclusions	65
Vocal Polyphony in Europe.....	67
Vocal Polyphony in Eastern Europe	69
Russia	70
Polyphonic traditions of Minorities in the Russian Federation	76
North Caucasian Peoples.....	76
Abkhazians	77
Adyghes.....	78
Balkarians and Karachaevis	80
Ossetians.....	81
Chechens and Ingushes	83
Dagestan	84
The Volga-Ural Region Minorities of the Russian Federation.....	85
Mordva	85
Komi	87
Mari	87
Udmurtia.....	88
Tatarstan	89
Bashkiria.....	89
Chuvashia	90
The Northern European part of the Russian minorities	90
Jews and Rom.....	91
Ukraine	91

Belarus.....	96
Georgia.....	99
Vocal polyphony in Georgia.....	100
General and regional characteristics	102
East Georgia	103
West Georgia.....	109
Improvisation in western Georgian polyphonic songs	113
Traditional polyphony in Svaneti.....	120
Religious music.....	124
Urban music	127
The scale systems.....	130
Melody in polyphony	132
Singing men and singing women	133
Conclusions	134
Vocal polyphony in Balkans.....	135
Romania	135
Bulgaria	136
Serbia.....	138
Montenegro	140
Bosnia and Herzegovina	141
Croatia	142
Slovenia.....	143
Macedonia	144
Albania	145
Greece.....	149
Vocal Polyphony in North Europe	151
Baltic Region.....	151
Lithuania.....	151
Latvia.....	157
Estonia.....	158
Finland.....	160
Iceland	160
England.....	163
Wales	165
Scotland and Ireland.....	165
Sweden	166
Denmark and Norway	166
Vocal Polyphony in Central Europe	167
Poland.....	167
Slovakia.....	167
Czech.....	168
Germany	168
Austria	169
Switzerland.....	170
Belgium and Holland	171

Vocal Polyphony in Western Europe	172
France	172
Breton	172
Corsica.....	173
Portugal.....	175
Spain	175
Basques.....	176
Italy.....	177
Sicily.....	179
Sardinia.....	180
Conclusions	181
 Vocal Polyphony in Asia.....	 183
Vocal Polyphony in the Middle East	184
Pearl Divers of the Persian Gulf.....	185
Polyphony in Jewish music	186
Yemenite.	187
Samaritans	188
Syria and Yemen	189
Armenia	189
The Bedouins, Egypt and Oman	191
Turkey.....	191
Central Asia – Overtone Singing	191
Tajikistan	193
Kazakhstan	194
Afghanistan: Nuristan.....	194
North Asia	198
East Asia.....	198
Japan: Ainus	198
Ryukyu Islands	201
China.....	202
Chinese minorities.....	203
Tibet.....	205
Taiwan	206
Southeast Asia.....	208
Indonesia	208
Vietnam	209
Nepal and Burma (Myanmar)	210
India.....	211
Assam	211
Southern India	212
Conclusions	212
 Vocal Polyphony in North America.....	 214
Northwest Coast	214
Eastern Coast.....	216

Southwestern USA	216
Plain Indians	216
Vocal Polyphony in South America.....	218
Q'ero.....	218
Amazonian region	219
Polyphonic singing on Pacific Islands	222
Polynesia.....	222
Tonga.....	223
Tahiti	225
Smaller islands	225
Melanesia.....	225
Guadalcanal Island	226
New Guinea.....	226
Micronesia.....	227
Australia.....	228
Conclusions of the first part.....	228
 PART 2 COMPARATIVE PERSPECTIVES.....	 230
Introduction: Dialogue between regional and comparative studies....	230
A brief review of comparative studies and ideas.....	234
 Section 1: Methodological Issues	 240
“They sound so similar”, Or how could we compare polyphonic traditions	240
What is more stable: Language or music?	243
What are the stable and mobile elements of musical culture?	245
A set of stylistic parameters of polyphonic traditions	257
 Section 2: Practical Issues	 257
Introduction: Regions, Styles, Peoples, Migrations: Historical Dynamics and Comparative Perspectives.....	257
Case Study #1 What has Happened to the Vocal Polyphony in Khevsureti?	258
Case Study #2 Historical Dynamics: Appearance or... Disappearance?	262
Case Study #3 Who Can Drink Milk? Or the Origins of European Professional Polyphony.....	266
Conclusions for the previous two case studies	273
Case Study # 4 Drone and Horses: Ancient European Family of Polyphony and the Indo-Europeans.....	276
Legacy of singing Indo-Europeans	285
East Georgia: Listen what the “Long” table songs can tell us.....	286
European mix: Indo-European contribution to	

Ancient European polyphony	290
More about mixed styles: Age matters.....	291
More mixture: The influence of European professional polyphony	293
Conclusions	295
Case Study #5 Heterophony	298
Case Study # 6 Lithuanian Sutartines	303
Case Study #7 Overtone Singing of Central Asia.....	311
Case Study #8 The Nuristan Polyphony.....	317
Case Study #9 Ainu Polyphony	328
Case Study #10 Southeast Asian Polyphony	333
Case Study #11 From the Atlas Mountains to Bahrain.....	335
Case Study #12 “I’ll Follow the Sun”: Round-the-World travel ticket or the vocal polyphony of Native Americans	339
Case Study # 13 Vocal Polyphony in Ancient Civilizations: Mesopotamia and Mesoamerica	347
Ancient Mesopotamia	351
Ancient Mesoamerica.....	357
Small Appendix to this “Case Study”: The unique passage between the Hemisphere: The Andes	361
Case Study #14 Polynesian Polyphony	363
Case Study #15 The Beatles: Ancient Sounds in Hit Parades.....	368
Unity of the music creator and the performer	369
Writing music together.....	370
Performance style	373
The performance as a social experience.....	373
Harmony of The Beatles songs	374
Dissonances	379
Drone	381
Vocal harmonizing	382
Conclusions	383
Conclusions of the Second Part.....	384
 PART 3 CHORAL SINGING IN HUMAN EVOLUTION	 388
A brief summary instead of an introduction	388
Sounds of the Ancient Choir: Primordial Vocal Polyphony.....	389
A few preliminary questions and answers	394
 An Ape Who Refused to Stop Singing.....	 396
“No, sorry, I can not sing!”	397
“I want my fis!”	398
“My dog understands me!”	398
Times to Fight: The Role of Singing in the Physical Survival of Early Hominids	400
Why do chimpanzees not sing?.....	402
Singing as intimidation.....	403

In the Wake of a New Intimidating Strategy: The Origins of Bipedalism, the Stone Tool Industry, and a Few Morphological Changes in the Human Body	414
The origin of bipedalism	415
The appearance of head hair	416
The appearance of body painting as a survival mechanism.....	417
Appearance of clothes as a part of AVID	419
The difference between men's and women's voice ranges	421
Singing in harmony as a part of AVID	421
Singing in dissonances as a part of AVID	423
Losing bodily hair: Non-contact forms of confrontation and hominid sexual life.....	427
Decreasing of the size and number of human teeth	428
Increasing body size and decreasing physical strength.....	430
The origins of Paleolithic industry.....	431
Conclusions: Emotions? What are they for?.....	432
Times to Relax: Humming alone	433
Humming as contact calls?	435
Thank you for the music	437
“Good Night, Sleep Tight”: The Problem of Night Time Security	438
Reclaiming dead bodies as factor of predator control for early hominids..	438
Cannibalism as a part of predator control among early hominids	440
Use of “eyespot” in hominids.....	441
 Towards the Origins of Human Language	 444
The Gestural Theory of Language Origins	450
Pitch-Based Language: Singing, Whistling, Drumming	453
Whistle languages	455
“Language” of African drums.....	456
Tone languages.....	457
Pitch Language: The first dead language in human history.....	458
Is Music an Enigma? Answering Steven Pinker.....	462
A Small Question for Noam Chomsky	466
 Has anybody asked a question? Language and Intelligence.....	 468
Questions in Music: Musical Dialogue.....	470
A Few Basic Questions about Questions	471
Why do we ask questions?	472
What evolutionary advantage could the ability of asking questions have given to humans?.....	473
What evolutionary advantage could the ability of asking questions have given to human groups?	474
So, who asked The First Question? Or “Interrogo Ergo Cogito”	475
Is asking questions a uniquely human ability or do we share this ability with a few other species?	476
Do apes ask questions in their natural environment?.....	480

Where did the phenomenon of questions came from? Are there any evolutionary prerequisites for the questioning behavior?	482
Who could answer the first question when it was formulated?	483
Is the question one of the higher functions of syntactic structures?	484
Is there a genetic component for questioning behavior?.....	486
Questions and mental retardation.....	487
Questions and Genie: Do we learn to ask questions?	487
Answering questions, asking questions: Apes and children	488
Questions and protolanguage: A comment to Bickerton	489
How do we learn to ask questions?	491
Question of chronology: When was the ability to ask questions born?	492
Let's Talk: The Origin of Speech	494
What can vocal polyphony tell us about the origins of speech?	495
Language, Speech and Homo Sapiens	499
Correlation with the paleoanthropological data	501
East Asia.....	501
Australia	502
Europe.....	502
Sub-Saharan Africa	504
Choral polyphony and the theories of human origins.....	505
Tone languages and the asynchronous model of speech origin.....	506
Music, Speech and Stuttering.....	508
Speech, choral singing and stuttering.....	510
Stuttering in different cultures: A shadow of the “milk-drinking syndrome” again?.....	512
Stuttering among Native Americans	513
Stuttering among sub-Saharan African populations	515
What about stuttering among the Chinese?.....	516
The Official attitude towards prevalence studies	521
Reasons? Plenty of them!	525
Conclusions.	526
PS: What about polyphony?	527
Developmental dyslexia.....	528
Dyslexia in China and Japan	530
Dyslexia in Europe, sub-Saharan Africa and the West Indies	532
“My child said today ‘biscu-it’: Cross-Cultural Aspect of the Acquisition of the Phonological System	534
Acquisition of phonological system among Japanese and American children	534
Acquisition of phonological system among Chinese speakers	536
Conclusions: Any more questions?	537
History of Polyphony: Attempt of the reconstruction.....	537
Main conclusions.....	540
PostScript: Moral and ethics issues of the study of vocal polyphony.....	543

Appendix: Conferences, Seminars and Symposia on traditional	
polyphony	549
References	575
I N D E X	641
List of audio tracks	663

Foreword and Acknowledgments

April 26, 1977, Tuesday, was a sunny day in Tbilisi, capital of the former USSR Republic of Georgia. I was coming down from the mountain ‘Mtatsminda’ (lit. “Saint Mountain”), an impressive 500 metres high mountain range that dominates the very centre of Tbilisi. I was accompanying my guest, a musicologist student from the Lvov Conservatory (Western Ukraine) Natalia Shvets, who happened to be at the graduate students’ conference, which was taking place at that time at Tbilisi State Conservatory. Walking down the narrow and steep streets of old Tbilisi, I was teaching Natalia the beautiful Georgian healing song “Batonebo” [“Lords”]. Everything was going well, Natalia had a good musical ear and soon we were able to sing the tantalising dissonant harmonies of the healing song together. The only problem was that, as with most Georgian traditional songs, Batonebo needs at least three singers to convey all three necessary parts of the song. Well, there we were - only two of us, walking down the empty street of Old Tbilisi and singing two parts of the three-part song. And then suddenly, out of the blue sky of that Tbilisi spring afternoon was heard a bass voice complementing the full three-part harmony of the healing song. We looked around and there he was, a Georgian male in his thirties, leaning over the balcony on the second floor on the left side of the street and helping two lone singers with the bass part. We waved to each other and continued on our way down the street, still accompanied by his bass.

This is by no means a “life-changing experience” (particularly in Georgia where almost everyone sings in harmony), but I still remember it as one of the nice moments of life, when a song suddenly brings together people who have never met before. Actually, the real reason I can pinpoint the exact day when this happened after so many years is because I have been writing a diary every (well, almost) single day for the last 40 years.

My good friend and colleague, arguably the most influential ethnomusicologist of the Soviet Union, Izaly Zemtsovsky from St. Petersburg (currently at Stanford University) had a somewhat similar experience in Abkhazia, the north-western part of Georgia. Let us listen to how he described his experience in his own words: “... I would like to share with you what I saw in the hamlet of Gudauta in the summer of 1978: an Abkhazian, dozing as he waited for the bus, *in his sleep* immediately began intoning a drone as soon as he heard the distant sound, barely audible in the cavernous empty waiting room, of a solo voice singing in the manner of his native land, a song that required a drone.” (Zemtsovsky, 2005:26). [For non-

professional readers – the “drone” is a long sustained sound, often (but not always) sung as the lowest part of a polyphonic song. Drone can be played on instruments as well.]

The following tongue-in-cheek story comes from the decorated Georgian traditional singer and the leader of the world-renowned Rustavi Choir, Anzor Erkomaishvili. Let us listen to his own words: “A big group of artists of the Georgian Philharmony (the State Concert Organization), arrived from Tbilisi to our village Makvaneti, in Guria, [the mountainous Black Sea-side region of western Georgia]. After their performance a traditional ‘supra’ [banquet-like Georgian traditional feast at a long table with toasts and singing] was organised in the spacious room of ‘Kolkhoz’ [Soviet Collective Farm] officials. We (village singers) were also invited. The guests from the State Philharmony toasted our singing and said they enjoyed Gurian traditional songs very much, although I somehow had an impression that at that moment the guests were enjoying more the traditional ‘Honey-Vodka’, home-made by Kasiane Bersenadze. As the feasting reached its highest point, one of the guests, a professional opera singer, started singing, announcing beforehand that he was going to sing for us the aria of ‘Abdul the Arab’ [from the opera ‘Tale of Shota Rustaveli’, by the Georgian composer Dimitri Arakishvili]. Ilarion Sikharulidze, a well-respected Gurian traditional singer who was at the table waited for a while, and when he lost faith that the lone singer would be supported by any of his own friends or colleagues, he himself gave a supporting high harmony to his singing. Tele Iobishvili [another traditional Gurian singer who was at the feast as well] supported the aria with the bass part. I should confess that the result was not bad at all, particularly considering that two out of the three performers had no idea of the song they were singing. ‘This is an “aria” from the classical opera and should be performed alone’, announced a professional opera singer with mild annoyance in his voice as the song came to an end. ‘Well’, came the reply from Ilarion Sikharulidze, ‘as we Georgians say, it is a pity for a man to be alone while eating, as for singing, I have never heard of a song that has to be sung alone’” (Erkomaishvili, 1988:56).

Georgia was widely known for its rich polyphonic traditions in the former Soviet Union. “Two Georgians and a bottle of red wine is already three-part singing” was a popular Russian saying. But of course, such stories of compulsory group participation to complement the harmony of a polyphonic song do not come from Georgia alone. It would be natural to expect that in most of the cultures with traditional polyphonic singing, you would come across similar stories of people joining in singing to complement

the harmony, sometimes in the most unusual circumstances. Our good friend, Bulgarian ethnomusicologist Boryana Alexandrova, told me a family story that took place in 1970, during the “Silver Wedding” of her uncle, Mladen Angelov, an ardent singer of Bulgarian traditional songs. In the midst of the most sacred part of the ceremony, while standing with his head leaning forward and covered with the sacral cloth by the local priest, to the common laughter of everyone present at this memorable moment, the “silver groom” suddenly started singing a drone to support the priest’s recitation (personal communication from December 27th, 1987).

I also vividly remember Dunja Rihtman, an ethnomusicologist from Bosnia, singing along quietly during the concert of Georgian polyphonic songs on November 14th 1986 in Borjomi, Georgia, during the International Conference “Problems of folk polyphony”. Conforming to the etiquette of a conventional performance, Dunja was trying not to be loud, but I was sitting next to her and I could clearly hear her droning along to the unknown (for her) Georgian songs. By the way, I was droning as well. Exactly the same way as I was quietly harmonizing to the (unknown to me) Hungarian monophonic melodies at the Kechkemet music festival in Hungary on August 27, 1977.

Co-participation in a musical performance can happen without singing. As a matter of fact, singing along is not the most widely spread form of co-participation (particularly in western cultures). The most universal (and the most natural and economical) way to “join in” the musical flow must be joining the beat of a musical piece by simply tapping, finger snapping or even just making a swinging movement using any part of the body. This phenomenon is so widely spread in human societies that it often escapes our attention. Representatives of some cultures are particularly prone to the urge of “joining the beat”. I remember how amazed was my friend, musicologist and singer Irina Bavkun from the Novosibirsk Conservatory, when she went to a concert of Russian classical music together with a big group of African exchange students. According to Irina’s words, “every time, as soon as there was a more-or-less rhythmic section in the music (compositions of Tchaikovsky, Rachmaninoff and other Russian “classic” composers were performed at that evening), there was a vigorous rhythmic tapping coming from our guests” (personal communication of 28 March, 1979).

Why it is so pleasurable to move our body following the rhythm of a musical piece (often without even noticing this) or to sing along with our favorite song? This is one of the key questions that I will try to answer on the pages of this book.

The problem of a listener's behaviour during the performance, or, in more "scholarly" words, the relationship between the "performers" and the "listeners" is a fascinating topic by itself. In some musical styles the gap between the performers and the listeners is immense, and in other styles and cultures there is hardly any difference at all. Let me give a brief description of the performer/listener relationships of some of the best-known musical styles.

If you have ever been at a live performance of any of Beethoven's magnificent symphonies, or heard pieces by any other "classical" composer, you might notice the strict rules of behaviour for listeners at the performance of classical European music. The listeners at a classical music concert must remain absolutely silent for the duration of the playing. They are not supposed to clap even during the break between the parts of the symphony (you must wait until all the parts are finished!), let alone any more emotional expression of excitement during the performance. In this style of music (European classical music) the gap between the performers and the listeners is the greatest.

If you have ever been at a performance of jazz music you will remember the quite different set of rules for an audience of this style of music. Listeners are expected to support performers and appreciate their improvisational skills not only at the end of the pieces, but during the performance as well. Not to clap when any of the jazz musicians finishes her/his share of the improvisation is almost as rude as to clap after the first part of the symphony at a classical music concert. The jazz model of listeners' appreciation during the performance is widely known in different traditional cultures, particularly in non-polyphonic cultures, where the boundaries between professional musicians and listeners are clearly set but the listeners are not required to be passive.

Now let us turn to the cultures, where polyphonic singing (part-singing) tradition is well alive. Here the performer/listener relationship has a totally different meaning. I remember, during my fieldworks in Georgia (mostly during recording sessions at a traditional "supra" feast) I would often realise that all present were contributing to the choral singing (sometimes including myself). So, although this may sound bizarre to some readers, in the societies with a tradition of polyphonic singing there often are no listeners at all, as all the members of the event are actively involved in the music making (singing, dancing, or making different rhythmic sounds at the traditional celebrations). Listening through your own performance, you may agree, can be emotionally a much more loaded experience than passive listening to somebody else's

performance. The closest to this kind of model of the total participation of all present, characteristic of traditional polyphonic societies, is the model of the performer/audience relationship characteristic of rock concerts. Rock musicians naturally encourage this kind of emotionally loaded mass participation during their live concerts as an important part of their show. If the readers of this book have ever seen a rock-performance on a TV screen (or even more importantly - have been at a live rock concert) they will remember the high moments, when the performers invite the audience to participate (sometimes stopping singing in the midst of the song and directing the microphone to the audience). Of course, the “rock-audience” is hardly even “waiting” for such “invitation”, and generally the more successful the performers, the bigger and louder is the audience participation (singing along and making different kinds of supporting sounds). Singing the most popular hit songs along with the rock performers has long been a routine element of rock concerts. Few who have experienced this kind of mass excitement and group participation would agree that sometimes the “supporting” sound can in fact reach an uncomfortably loud level.

So, the model of relationships between the performers and the listeners varies widely from the very passive role of the listeners, who cannot express their feelings until the very end of the musical composition (we may call this the “European Classical Music Model”) to the very active participation of all present, where everyone is actively involved in the performance (we may call this the “Traditional Polyphonic Culture Model”). It is not hard to imagine the level of confusion that could be created by an inappropriate model of the performer/listeners relationship during the performance. Imagine, for example, listeners trying to sing along and generally trying to vigorously support the performers of a Beethoven symphony, or, on the other hand, imagine the listeners at a “Metallica” concert clapping only at the end of the songs. If the first case would be evaluated as ‘total anarchy and a disastrous degrading of the values of classical music’, the second would be evaluated as a ‘total failure’ for the rock-band.

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This book is mostly dedicated to research of the traditional vocal polyphonic cultures, to the traditional social model of the performance, distribution of polyphonic traditions throughout the world, their possible links to each other, and the possible origins of the phenomenon of polyphonic singing.

While talking about polyphonic singing traditions, we should not forget that there is a big group of cultures where mass participation and group singing (particularly singing in different parts) is not so widely practised. For example, vocal polyphony was generally absent in Central Asian musical cultures. For representatives of such cultures listening to the simultaneous singing of a few different parts could be as unnatural and confusing as listening to the simultaneous speech of several speakers. It was quite natural therefore, that despite the major efforts of Soviet cultural ideology during the few decades of the existence of the Soviet Union to create a “unified Socialist musical culture” (with multi-part choral polyphonic singing as one of its main elements), one of the first things that happened in Central Asia after “Perestroika” started was that the big choirs were disbanded.

We will concentrate on the peculiarities of the distribution of polyphonic and monophonic traditions a bit later in this book, but I would like to stress that one of the most intriguing features of vocal polyphony is its enigmatic distribution throughout the world’s musical cultures. For example, why there is so much vocal polyphony in sub-Saharan Africa and almost no signs of polyphony among Australian Aborigines? Or why do the Ainus (the indigenous population of North Japan) have vocal polyphony whereas almost no other traditional culture in East Asia practices vocal polyphony? And why is it that sometimes only a part of the culture of a country contains vocal polyphony whereas the rest of the country does not practice it (as happens in China, Vietnam, India, Bulgaria, Romania, Lithuania, Greece and many other countries)?

Some of these questions have been around for many decades and quite a few scholars have contributed publications aiming at their solution. And still, ethnomusicologists are not yet sure about most of the existing answers. During the twenty+ years of my own research in this field I have come to the conclusion that, contrary to the general belief of musicologists and ethnomusicologists, vocal polyphony is not a late cultural development of initial monophonic singing, but was in fact a very archaic phenomenon and an integral part of the evolutionary process of the development of human language and speech (Jordania, 1986a, 1986b, 1988, 1988a, 1989, 1992, 1994a, 1997, 1998, 2000b, 2001, 2002, 2003, 2005, 2006, 2008, 2009, 2011, 2014).

Recent years have seen an unparalleled boom in research of the origins of our species and human language, and new technical means of research have come to the scholars’ aid. We are now much better equipped than ever before

to understand the evolutionary processes of some of the most important cognitive and communicational acquisitions of human history.

Throughout this book I will argue that the evolutionary history of human choral singing is closely connected not only to the evolutionary history of human language and speech, but to the evolutionary history of human cognition as well.

This book consists of three parts:

Part 1 is fully dedicated to the detailed picture of the enigmatic distribution of traditional polyphony all over the world. I will try to use the wealth of publications on different styles of vocal polyphony, as well as sometimes unpublished information generously provided by my colleagues and will try to provide an updated picture of the distribution of polyphonic traditions in different countries and major regions of the continents of the contemporary world.

Part 2 is dedicated to the research of the historical perspectives of traditional vocal polyphony through different polyphonic traditions. I will argue that the historical dynamics show clear signs of the decline (and disappearance) of vocal polyphonic traditions in many parts of the world. I will concentrate on the multi-faceted process of the disappearance of vocal polyphonic traditions, I will discuss the possibility of the existence of vocal polyphony in some long-gone civilizations, and I will attempt to raise the elusive issue of the possible age of some of the polyphonic traditions (for example, drone polyphony, overtone singing, heterophony, Lithuanian Sutartines and many more). This part of the book will be mostly organized around different “Case Studies” of different styles or interesting regions of traditional polyphony.

Part 3 is fully dedicated to the origins and evolution of human choral singing in the light of the initial development of human language, speech and intelligence. Data on the distribution of vocal polyphonic traditions all over the world, advances in physical anthropology, archaeology, primatology and neurology will be employed. Peculiarities of epidemiology of speech and reading pathologies (stuttering and dyslexia), as well as the process of the acquisition of a phonological system by children from different regions of the world will be also employed. I will try to argue that the last major acquisition of human evolution – the emergence of articulated speech - fundamentally affected the general picture of the distribution of the traditions of vocal polyphony all over the world.

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In 1989 Tbilisi State University Press published my book on traditional polyphony (“Georgian Traditional Polyphony in the International Context of Polyphonic cultures: the Problem of Origins of Polyphony”). The book was published in Russian with an English summary. There is no doubt that the intervening years have brought very dramatic changes for many regions of the world, and particularly for the former USSR where I came from. The fall of the Soviet Union and the creation of new independent states (including my native Georgia), the breakdown of the Iron Curtain and communist governments in East Europe, the advent of the Internet and email communications has drastically changed the world and opened up revolutionary new possibilities of interaction between peoples and cultures. Global confrontation between the different models of the future of humanity (capitalism vs. communism) changed into the confrontation of the future with the past of humanity (secular democracy vs. religious fundamentalism).

Ethnomusicologists were among those who benefited from the new possibilities of interaction between the cultures and scholars. In the wake of the increased interaction between the cultures of different regions of the world, the role of ethnomusicology is increasing in the contemporary world. Freedom of travel and new possibilities for fieldwork in most regions of the world, new cooperation between scholars and research institutions, and the migration of scholars (mostly from the former communist countries and the Third World countries to Western countries) created a new global stratification of ethnomusicological research and resources.

Traditional polyphony has been one of the most actively developing spheres of research activity in ethnomusicology in the last twenty years. New national and international bodies, dedicated to the coordination of international research in the sphere of traditional polyphony, have emerged (Polifonies Vivantes in Paris, France; International Research Centre for Traditional Polyphony at Tbilisi State Conservatory, Georgia; European Centre of Study of Polyphony, Vienna, Austria, ICTM group on polyphony). Conferences and symposia fully dedicated to the problems of traditional polyphony have been held at different national institutions (Georgia, France, Austria, Russia, Taiwan and Portugal).

It is not surprising that in the context of radically increased means of communication a major body of new data on traditional polyphony has emerged. The new data and continuing research brought about a set of new ideas on the distribution and mechanisms of the evolution of traditional polyphony. In my 1989 book I tried to summarise the situation to that

moment, mostly without access to the major Western libraries and without the help of the Internet and email communication. Attempts were made to translate and to publish the revised version of my book into English (I am very grateful to Lynn Newman-Bertrand from the Emory University in Atlanta for her efforts), and for some time I was diligently preparing all sorts of additions (new materials and ideas) to upgrade the text of my first book for its new revised (and translated into English) publication. The accumulation of new data and the development of new ideas were going so rapidly that by the mid-1990s I realised that the book I wanted to be published was quite different from the one that I had published in 1989, both in the scope of the materials and in the suggested model of the evolution of traditional vocal polyphony. The idea of writing a new book arose.

Let me briefly introduce some of the new ideas from my 2006 book that were not part of my book in 1989:

- My new understanding of what is polyphony, underlying the **social** and **musical** factors of this phenomenon;
- A much more accurate picture of the distribution of traditional polyphony all over the world;
- A new stratification of the big intercontinental polyphonic families;
- A discussion of the importance of the big migration processes in the formation of contemporary stratification of polyphonic traditions in different parts of the world;
- A discussion of the possibilities and the methods of comparative studies of traditional polyphony, and a suggestion of the particular importance of the *set of stylistic features* for comparative studies of polyphonic cultures;
- Attempts to analyse the historical dynamics of the distribution of different polyphonic forms, and discussion on the elusive issue of the dating of some of the traditions of vocal polyphony;
- A discussion of the scale systems in the context of the interaction of the polyphonic and monophonic cultures (tetrachordal, pentachordal and octave scales, and why is the interval of the fourth the only exception in music history to be regarded as a consonance earlier and turned later into a dissonance);
- A suggestion that social polyphony (group singing), or, according to Dieter Christensen, “multisonance” (Christensen, 2003) is

one of the strongest (and one of the most ancient) universals of human communication;

➤ Based on the model “singing without listeners” social polyphony must have been present in all early human societies (the remnants of this phenomenon are evident in both polyphonic and monophonic cultures)

➤ The primacy of the rhythm and synchronic bodily movements for the initial forms of hominid and human group singing;

➤ The suggestion of precisely coordinated group polyphonic singing of our hominids ancestors being one of the survival strategies against the major predators in Africa, and the means for obtaining protein rich food via confrontational scavenging;

➤ A new model of the origins of human choral singing, as the central feature of pre-linguistic communication;

➤ The role of human choral singing in creating the rhythmic flow of human communication and later language and speech.

➤ Full support to the relatively recent suggestions that choral singing was one of the main communication mediums for the social cohesion and bonding of early human communities before the development of articulated speech;

➤ The suggestion that, after the change of the communication medium from singing into articulated speech, choral singing lost its direct survival value has been gradually marginalised and started disappearing over the centuries and millennia. Multiple examples of the gradual disappearance of traditions of polyphonic singing in different cultures support this supposition;

➤ A discussion of the historical processes and dynamics of weakening and gradual disappearance of the tradition of vocal polyphony (appearance of the division of the society on “singers” and “listeners”; advancement of individualism and the beginning of professionalism; replacement of polyphonic songs by monophonic developed melodies comprising the most important points from different parts of the polyphonic texture; increasing the role of instrumental polyphony and the appearance of double wind instruments);

➤ The suggestion of the particular importance of the responsorial form of group singing as one of the strongest universals of human musical culture and vocal communication, and the acknowledgement

of the importance of responsorial singing in the emergence of the ability of asking questions;

➤ The new idea that the *ability to ask questions is possibly the uniquely human* feature of our intelligence, and that the emergence of this ability was the most revolutionary change over the course of the evolution of human language and intelligence;

➤ With the emergence of the uniquely human ability of asking questions human brains turned into a self-developing and collectively organised system;

➤ I'll try to demonstrate that the ability to *answer* questions evolutionary preceded the ability to *ask* questions. The ability to answer questions exists in the animal kingdom. Ground-breaking studies on apes intelligence proved that they are able to properly answer human questions and even understand the meaning of some question words, although they do not seem to use these words themselves in "conversations" and they do not ask questions;

➤ The suggestion that the ability of asking questions is a genetic trait of the human brain, but it does need an early development through communicative interaction with adult humans to develop this ability. There are some indications that after the "critical period" the ability of asking questions may not develop in a human brain;

➤ According to my model, the unification of the "languages" of apes, children under two, "feral children", and Pidgin languages under the notion of "protolanguage" (Bickerton, 1990, 2000) must be critically reviewed, because unlike the language of young children and Pidgin languages, feral children's and apes' does not contain a critically important feature of human intelligence - asking questions;

➤ In the same way I suggest that the critical difference between the intellectual development of human babies and apes arises as soon as children start asking their first questions, using the *question intonation*, long before the appearance of any syntactic structures in their speech;

➤ According to my model, the appearance of human intelligence and human language (and consequently the appearance of *Homo sapiens*) happened on the musical communicative stage of development, long before the advance of articulated speech as the dominating medium of language.

➤ The initial ideas from 1989 book about correlation of distribution of polyphonic and monophonic singing with the data of physical anthropology seems even stronger.

➤ As is clear from my attitude towards the origins of group singing in pre-human society, I totally reject the still-popular idea of the later development of multipart singing from the initial monophonic (one-part) singing. On the contrary, I suggest that group singing was a part of initial pre-human communication and it started disappearing after the drastic advance of articulated speech.

➤ According to my new model, *Homo Sapiens*, equipped with human intelligence, enabling them to have a dialogical communication, the ability of asking questions and the ability of mental cooperation, existed long before the advance of articulated speech;

➤ Comparing the chronological depths suggested by two contemporary conflicting theories of the origins of Homo sapiens (1) Multiregional Evolution Theory and (2) the Recent African Origin Theory (respectively around 2.000.000 and 200.000–100.000 years ago), and then comparing these dates with the often-suggested chronology of the development of articulated speech (around 30-40 000 years ago) it is clear that there is a good theoretical possibility that the first human migrants in different regions of the world did not come to new territories fully equipped with articulated speech.

➤ This simple chronological comparison suggests that speech was developed by different human populations after their initial migration from the African “cradle” into different parts of the world.

➤ Living in different regions of the world with a different climate, geography and ecology, different human populations **could have shifted to articulated speech in different epochs**. I understand how this idea must sound to the reader, but, on the other hand, the alternative idea that after humans migrated to different parts of the world (still without fully developed articulated speech), they independently shifted to articulated speech synchronously, seems much more unrealistic.

➤ The shift to articulated speech marginalizes vocal communication, with the subsequent loss of the function of group polyphonic singing. So with the shift to articulated speech the long process of the disappearance of the tradition of vocal polyphony began. But, according to my model, it began in different populations at

different times, which is why in some populations the tradition of vocal polyphony is almost absent (this is the case in among East Asian, or Australian Aboriginal populations), and in some populations it is still thriving (as among some populations of Europe and particularly, sub-Saharan Africa).

➤ Therefore, I suggest that the ancestors of the East Asian, Australian Aboriginal and most of Native American populations shifted to articulated speech much earlier than the ancestors of the sub-Saharan African and European populations.

➤ Fully realising the moral dilemmas connected to the suggested “asynchronous model of the shift to articulated speech by different human populations”, I will specially discuss moral issues and stereotypes we may be confronted with when discussing the suggested model. I will argue that the earlier (or later) shift to articulated speech did not give any evolutionary (historical, social or cultural) advantage to any of the human populations.

➤ According to the general consensus between speech pathologists, the nature of the well-known human speech pathology, stuttering, is closely related to the late evolution of articulated speech in human evolution. Therefore, I suggest that the prevalence of stuttering in different human populations can be very different and can indicate the chronological differences of the shift to articulated speech in different populations. It will be demonstrated that there is a clearly marked correlation between the distribution of traditional polyphony and a much higher prevalence of stuttering in the same human populations (for example, among Europeans and sub-Saharan Africans);

Here is the list of some of the new material, ideas and developments that appeared during the last several years and are only included in the second edition of the book:

➤ This edition is accompanied by sound examples, representing audio different polyphonic traditions from around the world, and maps of the distribution of vocal polyphony in the World;

➤ A more comprehensive and updated review of the publications on the origins of music and vocal polyphony;

➤ The recognition of the important fact that humans are the only species that live on the ground and sing. All other singing species (over 5400 species) live in the trees or in the water. I believe this

neglected fact is crucial for the understanding of the beginnings of singing in human evolutionary prehistory;

- The support for the idea of intimidation being the crucial factor in forming human bipedalism (through the Audio-Visual Intimidating Display, or AVID);

- A discussion of the possible importance of vigorous rhythmic stone hitting (as a part of the AVID) in initiating the human stone tool industry;

- A discussion of the possible connections between the development of non-contact means of defense and attack (via AVID) and losing the hairy cover of the hominid body;

- Discussion of the possible causal connections of the AVID used by early hominids in obtaining long head hair;

- Suggestion of the possible links between the AVID and the reduction of the size and number of hominid teeth;

- Discussion of the possible causal connections of the AVID and the increase of hominid group size and hominid body size;

- Suggestion of the possible survival importance of cannibalism among the early hominids as an important part of predator control;

- A discussion of the importance of indistinctive humming (or “vocal grooming”, Dunbar, 1996) in the origins of human music;

- Suggestion that group humming was the effective tool for (1) creating a safe and relaxing environment, and (2) alerting group members about danger;

- Links between the ancient relaxing power of so called “contact calls” of social animals, and the wide use of soft background music in contemporary everyday life from elevator music to the use of music therapy;

- The importance of drone-dissonant polyphony (D/D) as possibly the earliest type of hominid/human polyphony;

Although traditional polyphony is a topic mostly studied within the field called “ethnomusicology” (and the author of this book is an ethnomusicologist), I deeply believe that the origins and development of the phenomenon of human choral singing is not an ethnomusicological or musicological problem only. That’s why this book is not written for musicologists and ethnomusicologists alone. I hope that scholars of a few other disciplines will also be interested in discussing the issues of the

evolution of human intelligence, language and speech in the light of the evolution of human group singing. That's why I have tried to avoid maximally using technical musicological terminology wherever it was possible, and also tried to provide simple non-technical explanations of these terms to make clear most of the concepts discussed in this book for non-musicological readers.

Any work that tries to combine a very wide scope of problems and material is an easy target for criticism from experts in different fields. Of course, it is impossible for a scholar to be an expert in many fields, and I am sure that most of the expected criticism of my book will be well deserved. That's why I understand too well the desire of most contemporary scholars to stay strictly within their immediate sphere of expertise and not to venture "outside the circle". The contemporary scholarly world is racing towards the multiple division of each of the disciplines with an astonishing speed, but there is hardly a doubt that we still need a wide interdisciplinary and multidisciplinary look at the problems as well. Although sometimes inevitably imprecise in details, interdisciplinary research might provide a fresh look at some old problems. Studying the origins and history of vocal polyphony and group singing, I found myself shifting into such non-musicological spheres as, for example, physical anthropology, primatology, genetics, psycholinguistics, child development or the incidence of stuttering and dyslexia in different regions of the world. It is obvious that sometimes the problem we study determines the circle of the spheres we have to touch in order to address the core of the problem. Unless, of course, we make a firm decision that wherever the solution of the problem is, we are not going outside our sphere of expertise. I found my work to be increasingly more connected to research in such topics as "gesture vs. vocal" language theories discussion, or research on the incidence of stuttering in East Asian and sub-Saharan African populations, than to research on many purely musicological topics (for example, the history of European opera or the musical language of the 19th century symphony).

During all these years of interdisciplinary research I was extremely lucky to meet some of the most renowned experts in some of the fields I was interested in and to receive very encouraging and deeply interested responses from them. I am a strong believer in dialogue between scholars of different disciplines, and I hope that behind some inevitable technical errors, at least some of the non-musicologist readers of this book will acknowledge the possibilities of a fresh look at some of the old problems in their spheres.

And finally, I would like to **acknowledge** the huge group of my colleagues and the experts of different fields that greatly contributed to my research during all these years. I have been extremely lucky to have been able to meet and discuss my ideas with a large group of scholars from the different disciplines from around the world. My biggest thanks should go to ethnomusicologist Izaly Zemtsovsky, whose unique expertise not only in ethnomusicology, but equally in musical composition, philosophy and oral folklore played a critical role in the shaping of my multidisciplinary model of the origins of choral singing, language and speech. Although I have never been (formally) his student, I do consider myself a member of his “school”.

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I am very grateful to my new country, Australia, and the endless possibilities of scholarly progress it provides. I am endlessly grateful to my native Georgia, truly heaven on earth for those who love polyphonic singing.

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I understand the list of people I feel grateful to is unusually long. Dieter Christensen expressed this in a characteristic humorous question, “did you copy the phone book?” He asked me this after he started reading the first edition of this book in picturesque Svaneti in October 2006. Well, when you try to study an international phenomenon throughout the entire world, trying to use a wide interdisciplinary perspective, including such vastly different fields as musicology, primatology, speech pathology, linguistics, and physical anthropology, to mention only a few, and you work on such a huge project for more than 20 years, you will naturally find yourself connected to a great number generous experts.

Thanks to all the readers of this book, and particularly to critical readers. They should know that despite the big group of the most generous scholars and musicians, whose help I very much appreciate, I am solely responsible for all the mistakes.

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If vocal polyphony was designed in human evolution to help to develop human cooperation, the search for the origins of vocal polyphony was the greatest way for me to experience the strength of this cooperation.

PART 1

CHORAL SINGING IN HUMAN CULTURE

Foreword

Despite the lively interest towards the issues connected to traditional polyphony among ethnomusicologists, there are surprisingly few works dedicated to the worldwide distribution of vocal polyphony. Works dedicated to the different regional polyphonic styles are relatively common, particularly in cultures where vocal polyphony is considered to be an important element of national musical culture, but the works where all the available data would be gathered worldwide are extremely few. In fact, apart from the book of Marius Schneider “History of Polyphony” and my own book, “Georgian Traditional Polyphony in the International Context of Polyphonic Cultures: The Origins of Polyphony” I do not know any other work on this subject with the worldwide detailed review of the polyphonic traditions. Schneider’s book was published first in 1934-35 as two volumes, and then in 1969, as one revised volume, combining two earlier published volumes and adding one new chapter in it. Both publications of Schneider’s work were in German and have never been translated into English. My book was published in 1989, twenty years later after the second publication of Schneider’s book. It was published in Russian (with a small English summary) and has never been translated into English as well. Therefore this chapter seems to be the first work, published in English and dedicated to the worldwide distribution of vocal polyphony.

I think there are a few objective reasons for such neglect in studies of such a popular and intriguing topic as the worldwide distribution of the tradition of vocal polyphony:

➤ Since WW2 the mainstream interests of ethnomusicologists were occupied by local traditions, and major comparative studies dedicated to the study of any global phenomenon of traditional music (such as traditional polyphony) vanished from the pages of most of the ethnomusicological journals.

➤ Following the worldwide scholarly trend, most of the ethnomusicologists try to be experts of a very limited number of regions (usually one culture or one local area) and try to conduct their research mostly based on their own fieldwork materials.

➤ To do research on the worldwide distribution of any element of traditional culture, the ethnomusicologist cannot escape incorporating materials collected by other scholars. The result of such a research, which is not based (mostly) on the original material collected by the researcher, is very much discouraged.

In this chapter I will discuss the distribution of the tradition of vocal polyphony in different parts of the world. No hypotheses and no theories, just what we know today about the worldwide distribution of vocal polyphony.

I have been intensely interested in the distribution of traditional polyphony for more than 40 years, and have been organizing a number of special international conferences entirely dedicated to the problems of traditional polyphony from 1984. I had been preparing materials (abstracts, extended abstracts and full papers) of these conferences and Symposia for publication, and have been in touch with a number of leading experts of traditional polyphony from around the world. Despite this fact, the picture of the distribution of traditional polyphony on our planet is by no means complete. There is no doubt that there are still plenty of unknown traditions of vocal polyphony in many regions of the world. I have a few reasons for this belief:

➤ There is a tendency in national scholarly traditions to be occupied with a “trademark” phenomenon of certain musical cultures (like the raga in India, gamelan in Bali, vocal polyphony in Georgia, or mugham in Azerbaijan). This tendency does create a convenient basis for the study of these “trademark” traditions, but at the same time most of the “non-mainstream” cultural phenomena often fall into neglect. That’s why I expect that some pockets of traditional polyphony could be still concealed under the shadow of the stereotype of so-called “monophonic cultures”.

➤ A big part of the ethnomusicological production is still published in national periodicals, and mostly in national languages. This factor severely limits their accessibility to the Western reader.

➤ Even if the results of the work of scholars from different countries reach the Western reader, there is a chance that these results

will not be easily compatible with the other existing studies. Ethnomusicology is still suffering from the lack of unified methodology and terminology in many areas, including traditional polyphony.

Question of terminology and classification

Before we start discussing polyphonic traditions of different parts of the world, I would like to discuss briefly the terminology that I am going to use in this book. Unfortunately, as in many other spheres, ethnomusicology does not have the commonly accepted set of terms in this field that everyone could follow easily without much misunderstanding.

Quite a few different terms had been used in ethnomusicology to denote the phenomenon of singing in more than one part. “Polyphony” seems to be the most widely used term, although not universally accepted. “Multi-part music” is maybe the next most popular English term used widely in ethnomusicological publications. “Polyvocality”, “plurivocality” and “multiphony” also made appearances. They denote generally the same phenomenon and could be used as the uniting word for this phenomenon.

Let us pay attention to the most popular term – polyphony. Traditionally it has been used in two – general and narrow meanings. “Those ethnomusicologists who accept the very general etymological meaning of the term often tend to call all multi-part music, whether vocal or instrumental, ‘polyphonic’ even if there is no obvious organization. In itself, the concept of polyphony thus embraces procedures as diverse as heterophony, *organum*, homophony, drone-based music, parallelism or overlapping. The shared characteristics of all these procedures is that they all relate to multipart phenomena” Arom, 1985:34).

To find the most convenient term, we should know what we need this term for. I suggest that we need a uniting term, the one to use conveniently as the “family name” for the extended “polyphonic family”. This term in its broadest meaning should unite a whole set of types and subtypes of this “family”.

The very wide general meaning of the term “polyphony” (as Arom described it) seems to be very convenient to use in this context. I suggest using the category of the “polyphonic family”, with a subsequent division on types (heterophonic polyphony, drone polyphony, parallel polyphony, contrapuntal polyphony etc.) and sub-types of polyphony (unison-heterophony, pedal and rhythmic drone, tonally unconnected and tonally

linked parallelism etc.). In search of the better alternative for the uniting wide term for the whole “family”, we could use the term “multi-part music”. This word is not so much “contaminated” by the extensive use in musicology and ethnomusicology and could make a good alternative for the term “polyphony”. At the same time, as a three-word-composition (“multi-part music”) this term might not be the most convenient and practical to use as a “family name”. When I imagine myself (or my colleagues) using the terms to denote the further sub-types of polyphony (for example, “heterophonic multi-part music”, “drone multi-part music”, or “canonic multi-part music”), I feel there will be a certain resistance in implementing this kind of terminology. Therefore, I believe that the use of the term “polyphony” as a “family name” leads to a more practical and convenient terminology to denote different types and sub-types of polyphony.

So, although both terms (“polyphony” and “multi-part music”) actually mean the same (the first one in a long ago dead ancient Greek language, and another in a very much alive and most widespread contemporary English) we have in one case the one word-term (“polyphony”) and in another case a complex three-word-combination to denote the same phenomenon (“multi-part music”). This simple fact works in favor of the practical use of the one-word-term “polyphony”. [As a matter of fact, the term “polyphony” also contains two words “poly” and “phony”.] So, without insisting that this is the only correct way of naming this family, type and sub-types of music, for the sake of practicality I will be using in this book the term “polyphony” as a “family name” for all types and sub-types of music, where more than one pitch is heard simultaneously.

So, according to this model, we have one big family of polyphonic music, and this “family” consists of several different types of polyphony:

- (1) Parallel polyphony,
- (2) Drone polyphony,
- (3) Canonic polyphony,
- (4) Contrapuntal polyphony,
- (5) Ostinato polyphony,
- (6) Heterophonic polyphony,
- (7) Overlapping polyphony,
- (8) Chordal polyphony,
- (9) Array of Synthesis polyphonic subtypes;

(1) Parallel polyphony is based on the parallel movement of parts and can be divided further into at least two sub-types (these two sub-types were distinguished and described in Marius Schneider's 1934-35 book):

a. Tonally linked parallelism, or when parallel movement of different parts is united into one tonal system. As a result, intervals do change occasionally, for example, parallel fourths sometimes change into isolated thirds, or fifths (as this happens in some sub-Saharan African traditions), or, in other cases, minor and major thirds follow each other in a tonally specified succession (this kind of parallelism is very popular in most European and some African traditions);

b. Tonally unconnected parallelism, or when two or more parts are singing the same melody in parallel movement, keeping all the time the same interval. In most cases this means that the parts are sung without the unifying tonal system. Vocal part singing without the shared tonality may indicate that this is a case of "thick unison", or when singers intend to sing in unison, and sometimes they believe they are singing in unison, but in reality they start from different pitches and proceed as they started – maintaining the initial interval throughout. This kind of singing is usually present in monophonic cultures. As a matter of fact, maintaining the same interval throughout the whole melody is an arduously difficult task for the representatives of polyphonic cultures, as they tend to unite different co-sounding parts into a shared tonal system. If the reader of this book tries to sing, together with a musically gifted friend, the melody of the Beatles song "Yesterday", or any other well known melody, say, in parallel fourths, or even in major thirds, you will soon see how difficult this is. At the same time, at least for some representatives of monophonic singing cultures this task does not seem to be difficult at all, as they seem to follow the logic or horizontal melodic line, ignoring the vertical coordination of parts and therefore, they are singing without the interference of the desire to sing all parts into one shared tonal system. Russian musicologist Viktor Sergeevich Vinogradov told me how surprised he was when

his friend, a choir master, working with a choir in one of the Central Asian republics (where singing traditions are strictly monophonic), showed him how easily his students could sing quite a complex classical melody in parallel fourths, fifths, sevenths, or even seconds and augmented fourths (personal communication from 30 January, 1986). Hugh Shields gave another interesting anecdote of the accidental two-part organum in parallel fourths, where a professional French singer (France is one of the most monophonic singing cultures in Europe) was unable “to adjust his pitch to his Parisian grandson’s accordion. The effect might be described as a two-part equivalent of heterophony; while contributing a lower part, of pitch at times uncertain, the singer seems to have perceived the whole as strictly monophonic” (Shields, 2000, 542-543).

These two sub-types of parallel polyphony could be further divided into two-part, three-part etc. subtypes of both tonally linked and tonally unconnected parallelism. This is a very interesting topic by itself, although I am not going to discuss this issue (classification of polyphonic types) in more detail.

(2) Drone polyphony is definitely one of the most important “members of the polyphonic family” and has one of the biggest numbers of the subtypes among all the types of polyphony. Without going into the detailed description of all possible subtypes of drone polyphony, let me give you some feel of the wealth of the different subtypes of drone polyphony:

a. The first level could be a division of a drone into pedal drone and rhythmic drone subtypes. Despite an obvious difference between these two drone subtypes, sometimes in the same village ensemble some sing the pedal, and some the rhythmic drone in the same song at the same time.

b. Each of them (I mean “pedal” and “rhythmic” drones) would further divide into single note drone and moveable drone (with the possibility of further division of moveable drone into “two-pitch drone”, “three-pitch drone” etc.).

c. Moveable drone can be further divided into “narrow range moveable drone” (secondal pitch changes in

the drone only, characteristic mostly for traditional archaic drone traditions, (as found in the Balkans, Caucasus, the Baltic region or Polesie), and “wide-range drone” (fourth and fifths pitch changes in the drone, a characteristic of European traditional polyphonic traditions, mostly influenced by the European professional harmonic system, as in the Alpine region or the new polyphonic singing style in Balkans);

d. Secondal changes in the drone could be (1) leading to modulations (like in the East Georgian Long Table Songs), or (2) leading to functional changes within the same tonality, without the key change (for example, as found in Latvia, or western Georgia);

e. The same way the rhythmic drone can have “one-pitch” and “moveable” versions, further divided into “the drone with secondal changes” and “the drone with fourth-fifths changes”.

f. The whole new set (or, more precisely, two new sets) of drone polyphony subtypes emerge when we take into account that the drone does not have to be the lowest part of the polyphonic texture (bass), that it can well be in the middle of the polyphonic texture, or even on the very top of the texture. Here I must say that having a drone in the middle or on the top of polyphonic texture is much more common for traditional polyphonic cultures, than for European professional music. Both of these new sets of subtypes (“drone in the middle”, and “drone on the top”) would go through all the abovementioned subtypes (pedal and rhythmic subtypes; one pitch and changeable subtypes; secondal and fourth-fifths changes subtypes; modulating and non-modulating subtypes etc.).

g. This is not the end. We could add here another factor of the drone performed by the group (this is mostly the case), or by an individual singer (much more rare); In the same way we need to consider a very important factor of simultaneous use of different types of drones (for example, pedal and rhythmic drones together, like in western Georgia); or still another important factor of double (triple, etc.) drones. And of course, all these double and triple drones will

come with further division according to the different intervals between the drones.

As I have already mentioned, I am not going to discuss here all the existing types and subtypes of drone polyphony, although even from this short survey it is clear that drone polyphony has an incredible amount of subtypes (see also the classification of different types of drone polyphony in Brandl, 1976).

(3) Canon polyphony is based on the principle of the imitation of the lead singer's melody by another vocal part (or parts). If we do not consider the large body of responsorial songs, where the leader and the following chorus sing the same (or related) musical phrases, as examples of canon polyphony (and I believe we should not), then we will find that true canon forms of polyphony are quite rare in traditional music. Although they do exist and there are incredibly interesting polyphonic cultures based on the use of canon polyphony (in the survey of polyphonic traditions later in this chapter we will discuss canon polyphonic traditions like "sutartines" in Lithuania and the polyphony of the Ainu from North Japan). Canon type can be further divided into subtypes according to the moment of the joining of the next singing part with the same melodic material (early entry, late entry), and could be divided into monotonic and even polytonal canons (this is a case in Lithuanian "secondal sutartines"). Unlike the great European professional school of polyphony, overshadowed by the giant figure of J.S. Bach, which was mostly based on imitational polyphony, most of the folk polyphonic traditions are based on non-imitational polyphony.

(4) Contrapuntal polyphony, or as it is sometimes addressed, "free polyphony", or "polyphony in the narrow sense", is the type of polyphony where all different vocal parts are independent from each other. Well, I actually do not find this popular definition of contrapuntal (or free) polyphony justified, because both in European and traditional polyphonic music separate parts are actually never "independent" from each other. As a matter of fact, from the extensive talks and experiments during fieldwork with Georgian singers it became clear to me that even in the most saliently independent contrapuntal western Georgian polyphonic "trio" songs (discussed later) singers intensely listen to

each other and are ***very much mutually dependant***. It would be more precise to say that in contrapuntal (or free) polyphony ***there is no hierarchy between the parts***, as none of them can claim to be more important than the other parts. So, I would suggest, that contrapuntal polyphony is not “free”, or “independent”, but rather “egalitarian”. Another fruitful idea would be to divide contrapuntal polyphony into two subtypes – (1) imitational polyphony and (2) non-imitational, or contrast polyphony. As I wrote above regarding canonic forms of polyphony, professional polyphony uses more imitational forms, and folk polyphony mostly uses non-imitational forms of polyphony.

(5) **Ostinato polyphony** is based on the constant repetition of a relatively short musical phrase (phrases) in one or several parts. As repetition is one of the key elements of traditional polyphonic cultures, ostinato is present in most of the polyphonic traditions, both in vocal and instrumental music. Ostinato can be present in one part, in two parts, etc. The most widespread form of ostinato contains a repetitive phrase in one of the voices. Ostinato is mostly present in the bass, but it can be in the top part as well, and in rare cases in the middle of the texture. Like a drone, ostinato creates a powerful pitch reference point for the other parts, but unlike the drone, ostinato is more melodically active. It is a powerful “engine” and the point of reference both for the melodic and metro-rhythmic development of the song. One of the most colorful and specific techniques of the use of ostinato in a top voice is the yodel. In some polyphonic traditions (particularly in dance genres) the ostinato principle becomes so dominant (in all parts), that no space is left for any other compositional principle of polyphony in the entire polyphonic texture. In such cases the whole texture is filled up with continuous ostinato phrases. Gabisonia calls this subtype of ostinato polyphony “total ostinato” (Gabisonia, 1988:9). Sub-Saharan African music is filled with ostinato phrases. According to Arom, “all the polyphonic and polyrhythmic procedures used in Central Africa... [could be described] ... as *ostinatos with variations*” (Arom, 1991:39).

(6) **Heterophonic polyphony** takes place when members of the singing group sing different versions (variants) of the main melody. Another term – “variant heterophony” seems even better in describing the essence of this type of texture. In a certain sense,

heterophony is a “shadow of the unison”, as in every culture with traditional unison singing there is always a possibility of some elements of heterophony appearing. Although heterophony is present in most of the major regions of the world, the East European region with three Slavic peoples seems to be the kingdom of very interesting (and sometimes very complex) forms of heterophony. In heterophonic texture unison and polyphonic sections usually alternate. Subtypes of heterophonic polyphony mostly differ from each other according to the quantity and quality of the differences between the versions of the main melody, sung by different performers. Heterophonic polyphony differs from all other types of polyphony, because it can belong to the

(a) Polyphonic family (when the differences between the versions are well defined), or it could also belong to the

(b) Monophonic family (when the deviations from the unison are minimal). As it often happens in similar cases, where the difference is purely quantitative (and not qualitative), we could also distinguish the third subtype, strategically positioned between the “polyphonic” and “monophonic” subtypes. Adler suggested classifying heterophony alongside homophony and polyphony as a third stylistic category (Adler, 1908:24). So, heterophony is strategically positioned in-between two great families of musical cultures: polyphonic and monophonic. Particular interest towards heterophonic singing was expressed by scholars interested in problems of historical musicology, when discussing the practical ways of the emergence of the initial rudimentary forms of polyphony from the “primordial monophonic” singing tradition. As the discussion of the problem of the origins of polyphony (and defining the place of heterophony in this process) is one of the aims of this book, I will be addressing this topic in the second and third parts of the book.

(c) In some polyphonic traditions of East Slavic peoples (and some of their neighbors, see in a section discussing polyphonic traditions of Russian minorities) there is a tradition of “thick” heterophonic performance of the main melody, contrasted by only one singer on top, who

sings a functionally different part from the main melody part (often a drone).

(7) **Overlapping polyphony** takes place when two different parts, instead of following each other in antiphon, start overlapping. This means that the new part comes in while the previous part has not yet finished its turn. Strictly speaking, overlapping is not an ordinary compositional principle. All the other polyphonic types are based on the principles of (1) melodic development of a part (drone and ostinato are in this group), and (2) vertical, or harmonic coordination between the parts (parallelism, canon, counterpoint, chordal polyphony and heterophony would be in this group). Overlapping polyphony does not belong to any of these categories.

(8) **Chordal polyphony**, or homophony is a type of polyphony where parts are moving in a steady progression of chords. Chordal polyphony mostly (but not always) develops in a slow or medium tempo. All the parts here follow the same rhythm, and the overall sound is very full. Subtypes of chordal polyphony could be distinguished according to the harmonic language, based on

- (a) Chords with the triadic structure, or
- (b) Chords with non-triadic structure.

Chordal polyphony often uses drones in different parts.

(9) **Synthesis polyphony**. As usual, real life is much more complex than any theoretically constructed classification scheme. The same is the case with the classification scheme of polyphonic types and subtypes. In regard to Georgian traditional polyphony Gabisonia suggested using the notion of “synthesis” types of polyphony for the cases when polyphonic texture contains more than one compositional principle (or type) of polyphony (Gabisonia, 1988). Simultaneous use of the drone and parallel polyphonies, or contrapuntal and ostinato polyphonies, or the combination of pedal and rhythmic drones together with the contrapuntal or ostinato polyphonies are only a very few of the existing synthesis types of polyphony. I am not going to discuss all the wealth of existing (and potentially possible) synthesis combinations of polyphonic subtypes in traditional musical cultures, but it is clear that they can easily outnumber all the “non-synthesis” polyphonic types and subtypes taken together.

Now we are ready to start discussing polyphonic traditions of different regions of the world according to the available information. We will start with the polyphonic traditions of the African continent.

Vocal Polyphony in Africa

The African continent is traditionally divided into two geographically and culturally different zones: (1) Sub-Saharan Africa and (2) North Africa. Most of the African polyphony is concentrated in the sub-Saharan zone. North Africa is in fact one of the most monophonic regions of our planet. Desert Sahara, the biggest and the most inhospitable arid region of our planet plays the role of the buffer zone between these two, and in my opinion must be distinguished as a third culturally separate region. The Musical culture of the Tuaregs, dwellers of the Sahara desert, shows some unique features, different from both sub-Saharan and North African musical traditions. Comparative prospects of the polyphonic traditions of these three African zones will be discussed in the second part of this book, as for the survey of African polyphonic traditions in this chapter, I am going to discuss three different zones in Africa: Sub-Saharan Africa, North Africa, and the Sahara Desert.

Interest towards African music has been tremendous since it first came to the notion of Europeans. In his bibliography, completed in 1964, Alan Merriam lists more than 1000 LPs of African music issued by more than seventy companies and organizations involved in the distribution of long-playing records (see his annotated bibliography *African Music on LP*, published in 1970). Alan Lomax declared Africa as “the best recorded of continents” (Lomax, 1968:xvi). Interestingly, out of the wealth of publications about African music (about 1700 authors by 1965) less than 4% of the authors were native Africans themselves. Another interesting fact is that out of this huge amount of European writers about African music less than 2% were professional musicologists. Although European scholars still play an important role in studying African traditional music and polyphonic singing, the number of native scholars is steadily increasing. Europeans that greatly contributed to the recording and research of African music were Hugh Tracey, Klaus Wachsmann, Andre Schaeffner, Gilbert Rouget, John Blacking, Alan Merriam, David Rycroft, Simha Arom, Hugo Zemp, Robert Gunther, Nicholas England, and Gerhard Kubik, to name only a few of them.

The number of native musicians and musicologists who studied African music has been increasing since the first professional studies by George Ballanta and particularly Ephraim Amu (an influential scholar and prolific teacher, whose former students in Ghana became leading scholars in African ethnomusicology). The most influential scholar of African music of the 20th century, Ghanaian Kwabena Nketia was one of Amu’s students.

It is clear that it would be unrealistic to try to give a detailed analysis of the wealth of African vocal polyphony in a brief review. I will try first to discuss a few important components of sub-Saharan African polyphony, and then I will briefly review the polyphonic traditions of the main regions of sub-Saharan Africa (the eastern, central, southern and western regions of Africa).

Sub-Saharan Africa

It would be quite safe to say that sub-Saharan Africa is the biggest and the most active polyphonic region of the world. Although generalizations are always volatile and it is always better to avoid them, I would say that there is hardly a musical tradition in sub-Saharan Africa that does not employ a vigorous group musical activity.

“All African melodies are constructed upon harmonic background” declared arguably the first influential native African musicologist George Ballanta (Ballanta, 1926:10). Of course, bold generalizations like this are almost always to be found incorrect, and these words are often cited in ethnomusicological scholarly publications as one of Ballanta’s obvious inaccuracies (Nketia, 1998:20). There is a certain historical importance in these words though, acknowledging the immense importance of part-singing in African traditional music. “To some extent, most people in African communities are expected to perform music and dance at a basic level. Performing is considered as normal as speaking. In many areas, social puberty is marked by singing and dancing, as young people display their accomplishments in token of their maturation” (Stone, 1998:8).

Performance practice in most African societies can be considered as a social model of traditional polyphonic performance, where all the members of society are actively involved in the process of performance, without any division of the society into “performers” and “listeners”. Going to the music performance is a different experience for native Africans in Africa than for most Europeans in Western Europe. “People do not go to ‘listen music’, they make music together” (Arom, 1991:15). Alan Merriam wrote that in Africa the “Distinction between the artist and his audience ... are not so sharply drawn as in our own [European] culture. In some parts of Africa the cultural expectation involves almost everyone as potentially equal in musical ability, although this is not the case everywhere” (Merriam, 1962:129). In some sub-Saharan traditional societies there is no profession of a musician at all (see for example, Arom, 1991:12).

Before we discuss the type of polyphony in sub-Saharan Africa, we must mention two very important aspects of African traditional musical culture: (1) the immense importance of rhythm in African music, and (2) the intimate relationship of music and dance in African traditional culture.

Rhythm. There is nothing unusual in having a special appreciation of the rhythmic element of music in sub-Saharan Africa, as rhythm (together with pitch) makes up the two most important elements of any music. And still, the extraordinary importance of the rhythmic component in African music goes beyond our (western) appreciation of this element of music. Scholars noted, that in some regions of Africa (for example, in South Africa) the rhythmic component of music (and the resulting meter) is considered to be more important than the pitch. Therefore, rhythm alone without the pitch (for example, drumming, or reciting) is considered music, whereas the vocalization without meter in South Africa is not considered as music (Kaemmer, 1998:701).

Rhythm in sub-Saharan Africa is generally clearly pronounced and strictly followed. Duple rhythm is dominating. According to another famous generalization of George Ballanta, “duple time is the only time used in Africa” (Ballanta, 1926:11). Later studies found the simplicity of Ballanta’s overgeneralization misleading; although we may say that duple time does play the leading role in most of the sub-Saharan African musical traditions. Arom presented an excellent survey of African rhythms and works connected to them (Arom, 1991).

African drums have found followers all across cultures (particularly in the western world), and the appreciation of the African sense of rhythm became a common place in popular accounts about African music and African musicians. If the reader of this book has ever attended a workshop of African traditional drumming, she (he) would already have learnt the most important lesson, that the extraordinary complexity of the African drumming ensemble sound is based on the simultaneous repetition of several layers of relatively simple drumming patterns. This phenomenon is known as “polyrhythmic” (see Arom, 1991).

Unity of singing and dancing is another crucial feature of African traditional musical life. As a matter of fact, most of the music in sub-Saharan Africa involves dance and body movements. Ruth Stone wrote: “Honest observers are hard pressed to find a single indigenous group in Africa that has a term congruent with the usual Western notion of “music”. There are

terms for more specific acts like singing, playing instruments, and more broadly performing (dance, game, music); but the isolation of musical sound from other acts proves a Western abstraction, of which we should be aware when we approach the study of performance in Africa” (Stone, 1998:7). This primordial syncretic unity of singing and dancing, which is well documented from the most archaic layers of traditional cultures, is still a very active part of traditional cultural and social life of sub-Saharan African peoples.

Tone languages and polyphony. One of the important issues that fundamentally affect African music (and traditional polyphony as well) is the *tone* (or *tonal*) character of most of the African languages. According to Pike’s classical study (1948), all the languages of Africa “west of Ethiopia and south of the Sahara” are tone languages. Despite the fact that more than half of the human languages of our world today are tone languages, it is amazing how little they are known among the general public. Every year, when I start discussing tone languages with my students at the University of Melbourne, only one or two students out of the group of thirty or forty usually know something about them.

In tone languages tone modulation (rising or falling of the pitch) during their speech have lexical (and sometimes grammatical) significance. In more simple words, if you pronounce a word with a rising intonation, and then pronounce the same word with the falling intonation, this word will have two totally different meanings in tone languages. According to the number of tones and their combinations, the number of different meanings of the “same word” can exceed half a dozen.

In the case of the grammatical use of the tone, if you, for example, pronounce a sentence, and then pronounce the same sentence, but on a higher pitch, this could mean the same content, but in a past tense. So, if you want to learn a tone language, you would need to pronounce not only the correct mix of consonants and vowels, but you would need to learn and maintain the certain melodic contour and the duration of each syllable as well. Therefore, ordinary everyday speech of a tone language contains musical qualities. “The languages are themselves pregnant with music” (Senghor, 1964:238). Africa is not the only region where tone languages are spoken. Two other major regions of the distribution of tone languages are southeastern Asia and languages of southwestern Mexico and the USA. As a matter of fact, in a contemporary world there are more tone, than non-tone languages.

The implications of the character of tone languages are crucial for the musical traditions. Kirby was possibly the first to point this out: “Speech-

tone of the Bantu has not only influenced his melodies, but has also directed the course of his polyphonic thought in a direction analogous to that taken by the polyphonic thought of the peoples of Europe during the early years of the Christian era” (Kirby, 1930:406). This idea is generally accepted (see, for example, Arom, 1991: 22).

Therefore, the use of tone languages must be responsible for the first (and the most important) feature of sub-Saharan African traditional polyphony: the ample use of **parallel** movement of the different parts. The basis of this feature seems quite obvious: as soon as the group of singers pronounce the same verbal text, they are bound to move in the same direction, in a parallel melodic movement (otherwise the meaning of the text will be completely changed or become obscure).

Characteristics of sub-Saharan polyphony. Scholars described sub-Saharan African polyphony with different terms with a subsequent difference of the meanings behind these terms: organum (Kirby, 1930, Schaeffner, 1936, Jones, 1959, Kubik, 1968), harmony (Jones, 1959, Kubik, 1968, Brandel, 1970), homophony (Arom, 1991), parallel homophony (Nketia, 1972), tonally linked parallelism (Schneider, 1934-35, 1969). Arom (1991:22) considers the term used by Schneider (“tonally linked parallelism”) the best describing the peculiarities of sub-Saharan polyphony, and these links between the tonal systems and the parallel polyphony in sub-Saharan Africa was later confirmed in influential works of the Austrian ethnomusicologist Gerhard Kubik (Kubik, 1968, 1986, 1988). Without going into the detail (for example, details of the use of different portions of the series of natural harmonics in different cultures), we can point to the following characteristic features of sub-Saharan polyphony:

- The first feature would be, as I have already mentioned above, the **parallel movement** of parts. This is natural when the population speaks a tone language.
- The second important issue concerns the **distance** between two parts. (In music the distance between two notes is called an *interval*). In the case of polyphonic music we are talking about the **vertical distance** between two simultaneously sounding pitches. According to ethnomusicologist Gerhard Kubik, if you want to count the vertical distance between any two simultaneously sounding notes in sub-Saharan polyphonic music, you should “skip one step” on a scale. So, say, if we are in the “C major” scale (white keys starting from “C” to the next “C”), and if we have someone singing the pitch

“C”, the other (top) voice would be singing the note “E” on top of “C” (as we need to skip “D” which is next to “C” – you remember, we need to skip the next note), or, if we want to sing a lower harmony, we need to sing “A” below the same “C” (again, we need to miss the next note “B” below the “C”). In this kind of scale we will always have the same vertical distance. In music this particular distance (between “C” and “E”, or between “C” and “A”) is called a “third”. To be more precise, the third can be “major” or “minor”, but I think we can skip this technical detail from our current discussion (more so as in traditional music the third is often between the major and minor thirds and is sometimes referred to as a “neutral” third). As a matter of fact, the existing system of labelling the intervals as “second”, “third”, etc. is mathematically controversial. The distance between “A” and “C” is actually a “2”, not “3”, so it would be more correct to call the “A-C” distance as a “second” not the “third”. In the same way the distance between the same notes is “0”, not “1”. I sometimes jokingly tell my students that “musicians are the worst mathematicians, because in music $3+3$ equals 5 ” (try to put two “thirds” together on a piano and you will get the “fifth”). In the same way according to “musical logic” $2+2=3$ (because two seconds together make up a third). All mathematical equations are incorrect when using the existing incorrect numeral names of the musical intervals. Russian composer Sergey Taneev, who actually was the first to record and transcribe the traditional polyphonic songs of the North Caucasians in the 19th century, and who is best known as the student of the Russian composer Tchaikovsky, suggested using another, mathematically correct set of name-numbers. For Taneev the same note distance (unison) is “0”, the distance between “A” and “B” is “prime”(1), the distance between “A” and “C” is “second”(2) etc. Of course, this brings us to the mathematically more coherent system and suddenly all the equations become correct (ex. $2+2=4$), but, unfortunately, the force of tradition prevailed (once again!) against this sound argument, and we still call the “A-C” interval a “third”. Of course, Taneev was by no means the first to pay attention to this odd arithmetic of musical intervals. This has been a topic for discussions from Guido d’Arezzo and Boetius (11th and 13th centuries).

➤ One of the difficulties of this system is that the scale that we just used for the counting of the vertical distance – C-major scale (the set of seven white keys from “C” to the next “C”) – is only one (and not the most popular) of possible scales, used in sub-Saharan

Africa. Scales in Africa (as in some other regions of the world) often have less than seven notes. Imagine, for example, to have the same C-major scale, but instead of the whole set of the seven white keys (C, D, E, F, G, A, B) omit the “B” and have only six keys in a scale (C, D, E, F, G, A). Now, if we use the same sub-Saharan African principle of the distance between the keys (“skip the next key” principle) in this new scale without “B”, on top of the “C” key we will have the same “E” key, but the lower harmony from the same “C” will be now different, because now there is no “B” in a scale. So, the lower harmony for “C” now will be “G” (as there is no “B”, we will need to skip the “A” key, as “A” is now the next from “C”). As a result, in this scale we will have not only thirds, but a couple of fourths as well. If you now imagine that there are only five keys in a scale – omit two keys from the set of seven white keys between “C” and the next “C” (most likely the omitted keys will be “F” and “B”). Other versions are also possible). We will have now the scale C, D, E, G, A. This is the so-called **pentatonic**, or **anhemitonic scale** [“pentatonic” means “five tones”; and “anhemitonic scale” means a scale that does not have any half between any of the keys. The name “pentatonic” is generally more popular for this scale]. Many cultures of the world (including Chinese and Scottish) are mostly based on this (pentatonic) scale. Now, if we try again to put harmonies to a melody in this five-tone pentatonic scale (with the same principle “skip the next note”), we will soon find out that we will have the interval of a fourth almost all the time (there will be only one third – between the “C” and “E”). This scale is dominating, for example, in the Central African Republic, where polyphony mostly consists of two parts. As if this is not enough, there are also scales with less than five (four) keys in a scale as well. They are called “tetratonic scales”. In this scale you would have fourths and fifths in the harmonies, and in this scale the number of parts do not exceed two.

Of course, as in every generalization, this characteristic of African polyphonic music by no means covers all the diversity of polyphonic forms in African music. For example, there are singing traditions where the verbal text is not used at all (or used only as nonsense-syllables). This frees the melodic movement of different parts, so no parallel movement of parts is necessary. For example, this is the case with the wonderfully developed tradition of **yodeling** in some African musical cultures (yodels are always free of meaningful verbal text). The abovementioned characteristic of

African polyphony (based on the parallel movement of parts and using vertical harmonies by “skipping the next note”) will serve only as a rough guide as the main (or the most widely distributed) form of sub-Saharan African vocal polyphony.

Another very important feature of sub-Saharan African vocal music is the crucial role of **responsorial singing** – based on the alternation of the leader’s call and the group response. Responsorial singing is so widespread and so well documented in all regions of Africa (and in fact in the whole world) that I do not feel the need to provide any proof for the crucial importance of this phenomenon in sub-Saharan Africa.

Another uniting feature of sub-Saharan African cultures could be the live interest of native African populations towards European choral (polyphonic) music. Although the original Christian hymns were very often changed according to the local traditions, it has been frequently noted in musicological literature that the work of Christian missionaries was very much aided by the strong interest of Africans in Christian choral music (most likely the result of the wide distribution of the tradition of polyphonic singing among sub-Saharan African populations).

Jones divided sub-Saharan polyphonic traditions into two big groups: “Generally speaking, all over the continent south of the Sahara, African harmony is in *organum* and is sung either in parallel fourths, parallel fifths, parallel octaves, or parallel thirds” (Jones, 1959:217). According to Jones, Africa can be divided into two groups: (1) certain peoples sing in thirds, and (2) other peoples sing in fourths, fifths and octaves (Jones, 1959:219).

After this brief general characteristic of sub-Saharan African traditional polyphony, let us now briefly discuss the **regional** styles of sub-Saharan African polyphony: east, central, south and west, finishing with the island of Madagascar.

East Africa

We are talking about the region, which contains countries south from the Red Sea, from Ethiopia and Somalia through Kenya, Uganda, Tanzania, Rwanda and Burundi, up to Zambia. Three different groups of peoples live in this area: (1) nomadic and pastoral peoples (including Turkana and Maasai), (2) sedentary agriculturalists (Nilotes and Bantu-speaking peoples), and (3) Cushitic-speaking peoples of Ethiopia and Somalia. Proliferation of Islam in East Africa continues, although this process has been mostly connected to the long tradition of trade with the Arab world (more than conquest). The well-known tendency of the prohibition of musical practices by Islam, so important and strict in many countries, has very little effect in Africa

(including East Africa). In the areas that have an Arab influence, frame drums and kettledrums are widely used for singing accompaniment.

The most widely used scale system in East Africa is pentatonic (C,D,E,G,A – the five-tone scale system that we have already discussed). Therefore, as we have mentioned before, polyphonic singing will be mostly based on the use of parallel fourths, and occasional (or as Kubik mentions, “isolated”) thirds. Traditional music is mostly purely vocal (particularly in the regions without much Arabic influence). Singing is usually aided only by hand clapping or feet stomping and dancing. “Though call-and-response form is ubiquitous in Africa, among pastoralists the choral response tends to be longer than the call, and sometimes overlaps the soloists’ parts to produce simple part singing, or includes ostinati, creating harmonies of fourths and fifths” (Cooke, 1998:605). Maasai singing is quite typical for this region: group unison ostinato on the syllables “ho-la-le-yo” against the melodic line of a soloist (Kavyu, 1998:623).

Very specific is the scale system and the harmony of the tribe Wagogo (or Gogo, Central Tanzania. Vallejo, 2004). They use the scale C, E, G, Bflat, (and adding C and D) which effectively is a tetratonic scale [“tetra” means four. “Tetratonic” is a scale that uses only four steps within an octave.] (See Kubik, 1968). Wagogo people are also well known among ethnomusicologists for their tradition of **overtone singing** which is unique in Africa (the elements of this tradition within Africa is found also among Xhosa from South Africa). Polyphonic singing of Dorze (reaching six parts, Lortat-Jacob, 1994), Ghimira and Maji peoples (Jenkins, 1968) from Ethiopia, and the above-mentioned Wagogo in Tanzania must be distinguished by their complex polyphonic texture.

Christian missionaries found very appreciative listeners among Africans when they introduced richly harmonized Christian Hymns after 1850. Later, during the 20th century, African local composers started creating their own Christian hymns (replacing the old European ones). These new African Christian hymns are mostly based on the traditional call-and-response style. One of such composers, Ugandan Benedicto Mubangazi composed a very popular hymnbook for the Catholic Church (published in 1968. Cooke, 1998:607).

The choral scene is thriving in East Africa. Let us listen to the ethnomusicologist Peter Cook who wrote the introductory article about East African music in *The Garland Encyclopedia of World Music*:

“In Kenya, Uganda, and Tanzania, school-music festivals have stimulated the production of innumerable secular and religious compositions in quasi-

traditional style, staged alongside the performance of traditional tribal songs and dances, European scholastic songs, madrigals, and Christian spirituals. Arrangements of traditional songs are now part of the repertory of village cultural societies which meet to rehearse and perform traditional songs and dances of the community in new contexts, grouped and sometimes acted as miniature dramas” (Cooke, 1998:607)

Contemporary East African **popular music** (equipped with the ubiquitous electric instruments) is also heavily influenced by traditional polyphonic tradition. This influence (particularly active after the 1970s) is evident “with much part-singing and call-and-response patterns using local languages” (Cooke, 1998:608).

Central Africa

This region consists of The Democratic Republic of the Congo, the Central African Republic, Congo, Equatorial Guinea, Gabon and (partly) Angola. This is a highly polyphonic region, dominated by the unique tradition of polyphonic singing of the first dwellers of the Central African rainforests – Pygmies.

“The music of African Pygmies has held a special place in ethnomusicological imagination. In the writings of Colin Turnbull (1962), Alan Lomax (1976), Robert Farris Thompson (1989), and Simha Arom (1978, 1985), the yodeling and hocketing of pygmy singing has served as an icon of social and musical utopia” (Kisliuk, 1998:688).

Although Pygmies today live only in several pockets of Central Africa, scholars believe that around 3000 B.C. Pygmies inhabited most of the Central African rainforests (Kisliuk, 1998). They were pushed into several isolated pockets, deep into the Central African jungles, by the carriers of early Bantu languages, who migrated southwards from the western Cameroon and eastern Nigeria about 1000-500 B.C. Scholars still try to find the remnants of the original Pygmy language, which must have been lost when the Bantu languages replaced their native language (Kubik, 1998:657). Therefore, despite the obvious cultural, social and physical differences, linguistically there is no difference among Pygmy and non-Pygmy peoples in Central Africa today, as both speak Bantu languages. Despite the fact of losing their native language to the newcomers, the music of Pygmies survived the cultural assimilation and still has a tremendous influence on the musical culture of the neighbouring countries. Let us listen to Gerhard Kubik on what he has to say about the Pygmy polyphony:

“Pygmy music distinctively combines a polyphonic style of singing with an extremely developed technique of yodeling. These traits appear in the music of Pygmy groups in widely separated areas, as shown by a comparison of recordings: in the Ituri Forest, Zaire (Tracey, 1973); among the Bangombe and Manbenjele of the Upper Sangha, Central African republic (Djenda and Kubik, 1964, 1966, Phonogrammarchiv Vienna); and among the Babenzele (Ba-Benzele) and the Aka, south of Bangui (Arom, 1967). Even outposts of Pygmy culture prove the persistence of a Pygmy musical style, as witness recordings by barely a dozen individuals staying at Ngambe (in the Cameroon grasslands), and associating with the Tikar chief of that town (Kubik, 1963-1964: B 8650) ... The strength of Pygmy musical culture also shows in the fact that the Pygmies’ neighbors have almost invariably borrowed, however imperfectly, the Pygmies’ vocal polyphony. In one musical genre or another, these neighbors adopt a pygmy style of singing, which quite often associates with hunting songs. Bantu-speakers such as the Mpuems and Mpompo, in the southwestern Central African Republic and southeastern Cameroon, have adopted Pygmy musical traits; but so have semi-Bantu-speakers, such as the Tikar, notably in a dance called *Ngbanya* and in hunting songs called *nswe*. The Mangbetu, speakers of a Central Sudanic language in northeastern Zaire, have also adopted some elements of Pygmy polyphony. Therefore, on finding Pygmy-style vocal polyphony among any sedentary population in Central Africa, a listener can conclude there has been Pygmy contact in the past, even if none occurs at present.” (Kubik, 1998:658).

Pygmies do not have professional musicians. Instead, all of them are expected to perform traditional polyphonic songs. Their musicality and ability to sing naturally in parts is quite astounding. “When two or three Pygmies are gathered together, they always sing polyphonically; I have never heard Pygmy choral singing in unison” wrote Rouget in 1959. Polyphony up to seven parts had been documented among pygmies (Grimaud & Rouget, 1957). Even among the black Africans, whose outstanding musical and rhythmic sense has been highly revered by Europeans, Pygmies are considered to be much more skillful and talented musicians. According to Lomax, “Even today Congo Pygmies are regarded by their Negro neighbors as master entertainers who can outperform them on their own drums and in their own dances” (1968:18). Interestingly, most of the borrowings by the Pygmies from the neighbor’s musical cultures were those of different musical instruments. As for the vocal style, and particularly the tradition of polyphonic singing, Pygmies had a tremendous impact on the musical style of the whole of Central Africa.

The basic pattern of pygmy polyphony is based on four-part texture, but unlike many other polyphonic traditions of the world, Pygmy singers are not committed to the same part during the whole song: they easily switch from one part to another during the performance, and if more than one person happens to sing the same part, they immediately try to avoid unison by using different versions of the same part (Arom, 1994:145; Furniss, 2006:192). Metro-rhythmic pattern of Pygmy polyphony is also very elaborate. Although initially it might seem as a simple 4/4 metre, it is actually 12/8, and the singers of different parts are creatively employing different possible groupings of the flexible 12-beat pattern (Arom, 1991).

Another tendency is also apparent. According to the leading expert of Pygmy polyphony, Simha Arom, the tradition of polyphonic singing is showing some signs of decline. According to Arom's words, "there are quite a lot of places where polyphony is either disappearing (especially instrumental polyphony) or becoming a "secondary archaism". On example: some pieces from the Aka pygmies, which used to be sung in 4 voices about 1970, are performed today in only 3 and even 2 voices – the others are forgotten..." (From a personal letter of the 7th August, 2007).

Vocal polyphony of non-pygmy populations of Central Africa is very close to the East African polyphonic traditions. Their polyphony is based mostly on pentatonic and hexatonic scales [five-note and six-note scales respectively – we discussed them earlier], and they employ parallel movement of melodic parts and the vertical coordination of parts according to the above-described principle of "skipping one step".

In the same way, as in East Africa, Christian missionaries found great interest in local populations towards the Christian religious polyphonic hymns. European hymns were later replaced by the compositions of the native composers (such as Joseph Kiwele. See Kubik, 1998:671). Changes did not stop at that. "In some churches even dances have been introduced [obvious courtesy to the strong local tradition of the unity of singing and dancing. J.J.], and the interior of the church adapted accordingly (Mapoma, 1980:20:630. Cited in: Kubik, 1998:671).

The contemporary pop-music scene in Central Africa is one of the most active and competitive in Africa. Ethnomusicologists note that it is not easy to put a clear border between the terms "traditional", "popular" and "modern" in this region. Traditional singing practices are very much alive, and many local musicians are creating contemporary bands with electric instruments and are creating their own original music (for example, *zokela* style) using the wealth of the musical landscape of their environment, and

trying to find their voices on the expanding local or world market. “In a flourishing and ever-changing expressive world, teenagers in Bagandou village enjoy performing the dances of their Bolemba pygmy neighbors, and the village children in turn inspire Aka pygmies in their forest and *zokela* musicians in the city to interpret similar styles – all to different, though thoroughly modern, rooted, and relevant ends” (Kisliuk, 1998:696).

Southern Africa

This region comprises countries south of the Zambezi River: lower parts of Angola, Zambia, and Mozambique, as well as Zimbabwe, Namibia, Botswana, and South Africa. Native populations of southern Africa speak languages of two groups: (1) Khoisan languages and (2) Bantu languages. The name “Khoisan” comes from the names of two different peoples: “Khoi” (or “Khoikhoi”) for pastoral Hottentots, and “San” for the hunter-gatherer Bushmen. Both of these peoples differ physically from the rest of the people in other regions of Africa. It is believed that carriers of Khoisan languages lived on a much wider territory of the African continent before the advance of Bantu speaking peoples from the northern regions. Carriers of Bantu languages advanced in this region within the last thousand years and pushed the indigenous peoples of this region to more inhospitable regions (Phillipson, 1985:208)

The best known feature of Khoisan languages is the presence of specific clicking sounds (indicated traditionally in Western writing system by the exclamatory sign “!”). So, for example, to pronounce the name of one of the groups: San people, !kung, you would need to make a clicking sound with your tongue, followed immediately with the syllable “kung”). Most of the Khoikhoi groups either disappeared or have been assimilated among the Bantu speaking populations. Regarding the use of speech tones scholars note, that singing traditions of south African peoples are not so highly dependent upon the speech tones as are, say, peoples in West Africa, so in South Africa the “match of speech tone with melody is more a matter of aesthetics than comprehension” (Kaemmer, 1998:701).

Like the Pygmies polyphony, which is crucial for the “musical profile” of Central Africa, we may say that the “musical profile” of South Africa is mostly defined by the polyphonic traditions of the carriers of Khoisan languages.

The San live today in parts of Botswana, Namibia, and southern Angola. Polyphony is one of the central elements of their traditional music. Among the “eight principal traits” of San traditional music, distinguished by Kubik,

the first deals with their polyphony, including their wide use of yodeling. Another interesting trait of San music is the “near absence of song texts; singers mostly use syllables and isolated words, but extensively employ the imitations of animal sounds, especially bird calls” (Kubik, 1998a:307). Wide use of polyrhythmic (characteristic for most of African music though), based on the simultaneous use of duple and triple rhythm is also an important feature, although Kubik notes that there are no asymmetric times used in music of !kung people (Kubik, 1998a:307). John Blacking noted the interesting “principle of harmonic equivalence: tones that can be sounded simultaneously, or that can be substituted for each other, must belong to the same harmonic series” (Kubik, 1998:715). Another characteristic feature of San music is the quite wide use of **canon** in their polyphony (England, 1967:61).

England provides an incredibly interesting process of creating a new song by San women, when they work, like composers, on the rough melodic idea of “medicine man”. “The medicine men (and rarely women with reputed medicine powers) compose these songs. At least, they are the purveyors of these songs to the human level, for it is god himself ... who really gives the song to the medicine men, along with the concomitant medicines, during the times of trance or of nocturnal dreams. After such a theophanous experience, the Medicine Man will bring back the song to the women of his community. It will be in a basic form; for example, the following melody:

Ex. 1. Basic melody composed by Medicine Man (England, 1967:61)



“...the women will rehearse the song, elaborating the basic melody according to their usual polyphonic habits: they will insert tones, shorten and prolong rhythm values, etc, until they arrive at a melody (or melodies) that pleases them and the Medicine Man composer... Thereafter, in full performance of the song, the women might add extensions in order to weld the many, many repetitions of the musical period into a tighter whole, or they might make deletions that will change the emphasis or direction of the melodic lines” (England, 1967:61).

San traditional music (unlike the music of Central African Pygmies) also widely use their traditional instrument, the musical bow. Rock painting indicates the prehistoric use of the hunting bows (Kirby, 1934:193).

Among the other peoples of this region Xhosa and Zulu have been the most prominent. “In communal musical events, choral singing is the most important form of music... Singing is polyphonic and responsorial, with the divergence of parts occurring as phrases beginning and ending at different points” (Kaemmer, 1998:705-706).

A form of overtone singing (*umngqokolo*) is known among Xhosa women and girls (Dargie, 1991). “This technique involves singing a low fundamental tone while shaping the mouth to emphasize different overtones. This kind of singing is said to sound somewhat like a performance on the *umrhubhe*, a bow, played by scraping a string with a stick. The style may have developed from a practice of small boys: they impale a beetle on a thorn, put it in their mouths, and isolate various overtones produced by the insect’s buzzing” (Dargie, 1991:40-41. Cited from Kaemmer, 1998:706).

An important feature of South African traditional music is the clear indication of the importance of rhythm in their music: “Many people in southern Africa define music in terms of the presence of metered rhythm. This means that drumming alone is considered music, and chanting or speaking words is singing, so long as it is metrical. When the singing voice is used without rhythm, the resulting vocalization is not usually considered singing. Many of the groups have no word which would accurately be glossed as “music”; most of them have distinct words for singing, for playing an instrument, and for dancing” (Kaemmer, 1998:701). Group singing tradition is very important among other South African peoples (for example, Sotho people. See Kaemmer, 1998:707). Ethnomusicologists distinguish a specific “African tonal-harmonic belt” comprising the southern part of Zambia, most of Zimbabwe, and central Mozambique. Musical practices here are quite distinct from the rest of Africa (although they show similarities to the polyphonic traditions of southern Africa). It is based on so-called “Principle of harmonic equivalence”: according to this principle the tones that can substitute each other (or can be performed simultaneously in vertical harmony), must belong to the same harmonic series (we have mentioned this principle in connection with San polyphony, first described by Blacking).

Christian religious hymns with European harmony found a good basis in polyphonic singing traditions of the local populations. The African Methodist Episcopal Church, based in Philadelphia, sent missionaries to South Africa, where they set up schools and churches, and most importantly, taught the local populations American black spirituals. Tours of black American choirs started from the 1880s and the 1890s, and had a tremendous impact on southern African musicians. The word “choir” gave birth to a southern

African term for a specific musical style *makwaya*. *Makwaya* which uses jazz elements with the traditional responsorial forms of polyphonic singing, accompanied by drumming, dancing, marching and special costumes (Kaemmer, 1998:718). The South African Native Choir had an extensive repertoire of *makwaya* songs (Coplan, 1998:765). A few native composers became very popular with their choral compositions: Reuben T. Caluza (from Natal), Benjamin Tuamzashe (Xhosa), Joshua Mohapeloa (Basotho). It is widely acknowledged, that “the old traditions of choral dance music, continuing to flourish in performances among black South Africans, played an important role in the mobilization of the antiapartheid movement” (Coplan, 1998:780).

West Africa

This region comprises large number of countries from Cameroon and the southern half of Chad to Senegal. Out of the whole of sub-Saharan Africa, West Africa shows the most signs of external influence (mostly from North Africa). Two geographic regions: (1) savanna and (2) forest are distinguished here (see DjeDje, 1998: 443). The savanna is geographically in between the arid northern regions and the forest costal regions of West Africa.

Polyphonic traditions, showing obvious similarities to the rest of the sub-Saharan Africa are mostly present in the forest region. On the contrary, monophony plays the prominent role in the Savanna region. The Savanna region can be also characterized by the whole set of distinctive (from the rest of sub-Saharan Africa) features: great importance of full-time professional and semi-professional musicians, a high pitched and tense singing style with specific melodic embellishments, and the importance of instrumental and vocal-instrumental genres. Other non-musical characteristics of the savanna region are a higher proportion of urban settlements, dominance of Islam religion, and historically early establishment of states and social stratification.

The long tradition of trade with North Africa brought most of these unusual, for the sub-Saharan Africa elements of social and musical life, to the savanna regions of West Africa. It is important to take into account, that the actual influence, coming from North Africa, was not homogenous, as it was connected at least to two different ethnic and cultural elements: (1) Berber-Tuaregs, the indigenous populations of North Africa, and (2) Arabs, who spread into North Africa from the end of the 7th century and pushed Berber-Tuaregs towards the southern regions across the inhospitable Sahara desert. The presence of both Berber and Arab ethnic elements from North Africa in

the populations of West Africa is a well-known and very important factor for the understanding of the characteristics of the musical culture of this region.

Although group singing (and dancing) is present in most of the societies living in the savanna regions of West Africa, polyphony mostly exists here in instrumental music. In vocal music polyphony is not as important as in other parts of Africa. For example, there is a highly interesting tradition of instrumental ensemble performance among Kasena people. "Three to six flutes or horns, or a mixed ensemble of both, accompanied by drums, play in a hockett style with polyphonic structures. The music is diatonic, and polyphony derives from the third as a consonant interval. As final cadences, parts moving in parallel thirds resolve into unison (Nketia, 1980:331. Cited from DjéDjé, 1998:456). Regarding the vocal forms of polyphony, it is very interesting that in the musical culture of the so-called "western Sudanic cluster" there are elements of vocal drone (DjéDjé, 1998:446), rare to the rest of the sub-Saharan African singing style. For understanding the origins of vocal drone in Western Africa we need to take into account the presence of drone polyphony among the Tuaregs (see about this later), and the Tuareg influence in western Africa is well documented.

The Forest region, in contrast, shows much less external influences and has much closer links to the other regions of sub-Saharan Africa. The populations of the forest regions are also ethnically more diverse (more than 500 ethnic groups), more village than urban and it has much less centralized power (although historically one of the strongest coastal kingdoms between the 15th-19th centuries in West Africa was created by forest Yoruba people). Forest cultures are also characterized by a much stronger importance given to traditional African religions (instead of Christianity and particularly Islam among savanna peoples), much less professionalism among musicians and more community oriented group performance. Musical cultures of the forest regions are also united by the bigger importance of vocal forms (instead of instrumental forms popular among savanna peoples. DjéDjé, 1998:458).

Most importantly for our subject, forest peoples of West Africa practice musical forms similar to the other sub-Saharan forms of traditional vocal polyphony: responsorial singing between the call of the soloist and the group choral response, wide use of thirds and fourths in part singing, parallel movement of vocal parts (connected again to the tonal character of the languages of western African forest peoples), presence of different scales (from seven-tone heptatonic or diatonic, to five-tone pentatonic).

All these traits are more or less present among the people of the forest regions of West Africa: the Igbo, the Yoruba (particularly among the Yoruba

living in the west), the Aja, the Ga, the Akan, the Dan, the Kpelle, the Mende, the Temne, and some other groups (DjeDje, 1998:459 – 469). To generalize, we may say that the tradition of vocal polyphony becomes less prominent as we move westwards, towards the extreme western parts of West Africa.

Of course, as always, the reality is more flexible than this rigid division of West African peoples on the “Islamic monophonic peoples of the savanna regions” and the “non-Islamic polyphonic peoples of the forest regions”. For example, C. Waterman stresses the strong influence associated with Christianity (and particularly Islam) on the Yoruba popular music. “Though Islamic authorities do not officially approve of indulgence in music, the success of Islam among the Yoruba (as elsewhere in West Africa) has depended on its ability to adapt to local cultural values. Many traditional drummers are Muslim, and some of the biggest patrons of popular music are wealthy Muslim entrepreneurs” (Waterman, 1998:474).

West African popular music has very rich traditions (with charismatic performers like Tunde King, a star of popular Juju style, and particularly Fela Anikulapo Kuti from Nigeria). According to C. Waterman, “To draw a sharp boundary between “traditional” and “popular” music in Yoruba society is impossible. The criteria most commonly invoked in attempting to formulate a cross-cultural definition of popular music – openness to change, syncretism, intertextuality, urban prominence, commodification – are characteristic even of those genres Yoruba musicians and audiences identify as deep Yoruba” (Waterman, 1998:487)

Madagascar

Although the island of Madagascar is situated off the southeast coast of Africa, the population and the culture of this island (or the Republic of Malagasy) have very strong historical, ethnic and cultural contacts outside of the African regions. Austronesian-speaking peoples of Southeast Asia are supposed to be the first settlers here. Their initial settlement of the island (presumably about A.D. 500) was followed by migrations (from around A.D. 1000) from the Arabic counties and continental Africa, and later – from Europe. Islam spread on the island from around A.D. 1500 and created the basis for the emergence of hierarchical kingdoms among the Malagasy. The island has been a scene of a struggle between the three major forces: the kingdom of Sakalava (the western coast of Madagascar), the confederacy of the eastern coastal ethnic groups, and the kingdom of Merina (the central part of Madagascar).

Musical traditions of the republic of Malagasy are as diverse as the ethnic origins of its population. The same is true about the vocal polyphony of different regions of the island. Let us listen to the expert of the music of the Republic of Malagasy, Mireille Rakotomalala: “At present, the mixture of African and southeast Asian influence is visible in all genres of music among the Malagasy, though some genres reflect one influence more strongly than others. Gilbert Rouget, for example, called the choral polyphony of the central island Merina, with its intervals of thirds and sixths and rapid rhythms, “oceanic” (1946:87), and found a more pronounced African influence among the Sakalava, with genres in call-and-response style, appearing more rhythmic than melodic (p. 88). Norma McLeod identifies two styles – one distinct to the Merina, the Vakinankaratra, and the Betsileo of the central highlands, and the other more typical of groups in the southern desert. Both styles demonstrate the polyphony mentioned by Rouget, and both show rhythms whose variability depends on whether the music is meant for dancing or singing. Of the difference between the two styles, McLeod says “songs in the high plateau area are set strophically. In the desert region, litany is prominent with some examples of development into serial polyphony” (1980:547) (cited from Rakotomalala, 1998:783).

To finish the survey of the vocal polyphonic traditions of sub-Saharan Africa, it would be appropriate to mention the outstanding influence of sub-Saharan populations on the musical cultures of the different parts of the world, and particularly the Americas. Transported from their native lands initially as slaves, representatives of sub-Saharan African populations played a crucial role in the development of national musical cultures of South, Central and North America.

North Africa

North Africa is traditionally considered as a region stretching from the Mediterranean Sea in the north to the Sahara Desert in the south. Regarding the tradition of vocal polyphony, I suggest to divide North Africa into two sub-regions: The coastal line of the Mediterranean Sea (with its predominantly Arabic population with a monophonic musical culture) and the more isolated and inhospitable mountain and desert regions of the Sahara and adjacent territories, populated with Berber-Tuareg people with specific polyphonic traditions. Therefore, musical traditions of Berber-Tuareg populations will be discussed separately in the next section “Sahara”.

North Africa can be considered as one of the most monophonic regions of the world. Close links between the North African and the Middle Eastern musical traditions are well established. Lomax united the huge region including North Africa through the Middle East, Central and East Asia in a giant family of cultures under the name Old High Cultures. Relatively static demographics of ancient North Africa (consisting of the indigenous Berbers and Phoenician traders) started to change dramatically with the first waves of Arab invasions from A.D. 688 onwards. Contemporary musical culture of North Africa is defined mostly by the musical traditions from the Islamic Middle East. “Music occupies an ambiguous role in Muslim life. Since the beginning of Islam, Muslim authorities have disputed the question of whether music should be permitted in worship. Because music, especially instrumental music, was associated with pagan practices and sensual entertainment, early authorities declared the act of listening to music “unworthy” of a Muslim. The debate continues. To avoid secular associations, references to music are usually avoided when mentioning calls to prayer, Koranic recitations, and other forms of religious expression” (Anderson, 1971:146-147). In some communities, music making of any kind – religious or secular – is discouraged in the name of Islam. A few forbid music altogether, as do members of the puritanical Mozabite sect of Algeria (Alport, 1970:228, 234-235). Nevertheless, the sung praise of the Islamic deity is standard practice in most of the region” (Wendt, 1998:536).

North African musical cultures have several characteristic features that are very similar to Middle Eastern musical cultures: (1) the prevalence of solo singing (or group unison singing), (2) a high, tense vocal performance, (3) a rich melodic ornamentation, (4) a sometimes metro-rhythmic freedom (non-regular and free rhythms), (5) the particular importance of professional performers and musical instruments, (6) the presence of elaborate theoretical works, where the scale systems and melodic types of music are analyzed.

Sahara

As I have already mentioned, the Sahara is traditionally considered as a part of North Africa (or a buffer zone between North Africa and sub-Saharan Africa). My suggestion is to distinguish the Sahara as a separate region. This suggestion is based on the unique polyphonic traditions of Berber-Tuareg populations, unknown neither among North African Arab populations, nor among sub-Saharan African peoples.

The name Tuareg was given by the outsiders to the fearful militant tribes of the Sahara desert. Berber is a generic and wider external name (possibly

from Latin *barbari* (“those who speak a foreign language”). The term *Imazighen* (self-name, meaning “free men”) is increasingly used.

Berber-Tuareg populations are believed to be the earliest inhabitants of North Africa, joined by Phoenician traders about 1200 B.C. Together they built Carthage and for centuries were the fierce competitors of Rome for the dominance over the Mediterranean basin. The Berber warrior Hannibal came through the Alps to defeat Rome, although Rome eventually won the competition and destroyed Carthage in 202 B.C. Drastic demographic changes for this region came much later, after 688 A.D. with the first waves of Arabic invasions. Part of the Berber-Tuareg population was assimilated, but another part of the Berber-Tuareg population retreated deep into the desert and mountain areas, where they fought for centuries to maintain their identity and traditional culture. Some populations of Berber-Tuaregs were not affected much by the Muslim religion until the latter part of the 19th century (Wendt, 1998:533). And even today, although Berber-Tuaregs consider themselves Muslims, a few unique “non-Moslem” features of their religion (such as matrilineal kinship and the very high status of unveiled women, or the tradition of veiled men) are well known in the anthropologic literature. Today Tuaregs live at eight different locations on the territories between southern Algeria, southwestern Libya, a few regions of Niger, Mali, Burkina Faso and a few neighbouring countries. Although nomadic peoples often display close language connections on vast territories, the existing Berber-Tuareg dialects are mutually unintelligible. According to the most optimistic (and inclusive) estimates, there are about 500 000 Tuaregs in Africa, although according to other, much more conservative estimates, the “real Tuaregs” (camel-herding nomads) consist of only about ten to twelve thousand in the Sahara desert. Large Berber (*Imazighen*) populations also live in Algeria and Morocco. They mostly live in the mountain ranges of the Atlas, Djurdjura and Aures mountains, and the southern, desert parts of Algeria and Morocco. The ongoing fight of Berber populations for minority and women rights and for their language and culture is one of the important elements of North African political life (Goodman, 2002:274-275).

Most importantly for our topic, together with other elements of their culture, Berber-Tuaregs maintained the tradition of polyphonic singing. This tradition is particularly spectacular during traditional celebrations, when the whole village is participating in creating the complex “thick” texture of polyphony. Most of the participants sing a drone, unique for the polyphonic traditions of the entire African continent. Ostinato formulas are also very usual among Tuareg polyphonic songs. Drone is sometimes sung by dancers

(Wendt, 1998:543). Both men and women sing, although men are preferred singers (and women are traditionally instrument players – another unusual element of Tuareg culture). Interestingly, there is an important difference in the singing style of men and women as well. The male singing style is close to the North African singing style (high register, tense voice with lots of melodic ornaments), and the women's singing style, which is much more relaxed (Wendt, 1998a:579-580). Generally, men follow the Muslim religion closer than women. Women are considered (and are very much revered) as the guardians of Tuareg traditional pre-Islamic culture (Wendt, 1998a:593).

Very interesting are the camel festivals (*tende*) where singing plays an important role. In northern regions singing is accompanied by the women's choral pedal drone, and in the southern regions it is ostinato that mostly (but not always) replaces the pedal drone (Wendt, 1998a:585). According to Tuareg belief, strong rhythms attract spirits, so rhythmically vigorous music with the drone or ostinato is performed to cure the "possessed" or "emotionally ill" person. The solo lead singer is joined by the whole community (with clapping, shouting encouragements, or raspy grunts) at this very important for the Tuareg society ceremony. This ceremony may be repeated for several consecutive nights.

In the Algerian Sahara flute playing by Tuaregs is often accompanied by the vocal sound, produced by the flute player (the player is usually a herdsman). And again, as in Tuareg vocal music, the vocal part represents the pedal drone (Wendt, 1998a:591-592).

Conclusions

To conclude this survey of African polyphonic traditions, we may say that the African continent houses a remarkable amount of live polyphonic traditions. Considering the vocal traditions, I suggest to distinguish three major regions in Africa: (1) Sub-Saharan Africa, (2) North Africa, and (3) Sahara. Two out of these three major regions have traditions of vocal polyphony (although based on different types of polyphony). The biggest, sub-Saharan region of Africa is traditionally divided further into four sub-regions (East, Central, South and West Africa).

Let me briefly remind readers the basic facts about the vocal polyphony in Africa:

- The whole of Africa (except northern Africa) is the largest and virtually uninterrupted region of the distribution of the traditions of vocal polyphony in the world;

- Based on the dynamics of the tone languages, the leading principle of sub-Saharan African polyphony is parallelism;
- East Africa is maybe the most typical region of African polyphony, with the parallel movements of voices in parallel thirds and fourths;
- Central African vocal polyphonic traditions are dominated by the unique polyphony of Pygmies, based on a wide use of yodel technique;
- South African polyphony can be distinguished from the other African regions by the Khoisan polyphonic tradition;
- There are a few common elements between Pygmy and Khoisan polyphony (most importantly, the wide use of yodel);
- The West African region consists of two different types of musical cultures. The first type (connected to the savanna residents) shows the influence of the Moslem North African musical style, and the second type (connected to the forest peoples of West Africa) shows a similarity to the vocal polyphony of other African regions;
- West Africa is virtually the only region in sub-Saharan Africa where drone polyphony is found (possibly the result of the influence of the Tuareg ethnic and cultural element);
- The Madagascar polyphonic traditions show the features of continental Africa, as well as Austronesian polyphonic traditions;
- North African music is based on a vocal monophonic tradition, with the remarkably developed professionalism, virtuoso singing style and musical instruments;
- I suggest distinguishing the Sahara as a separate region of Africa, on the ground of the specific polyphonic traditions of the Berber-Tuareg peoples. Tuareg tradition of drone polyphony is unique within the African continent. The Sahara musical traditions do not show links either with the sub-Saharan polyphonic traditions, nor the monophonic traditions of North Africa.

Vocal Polyphony in Europe

It would be quite safe to say Europe is the second most polyphonic continent on our planet. Although in most of the cases European traditional cultures did not retain the vitality of the African polyphonic traditions, the number of polyphonic regions and the sheer diversity of polyphonic traditions create the unique European “polyphonic tapestry”.

A few remarks will give the reader some general idea about the peculiarities of the European traditions of vocal polyphony:

- Unlike sub-Saharan Africa, where the distribution of polyphonic traditions is represented mostly as an unbroken geographic region that covers thousands of the square kilometers, most of the European traditions of vocal polyphony represent certain isolated “islands”;

- Also unlike Africa, where we have polyphonic sub-Sahara and mostly monophonic North Africa, there is hardly a major part of Europe where the monophonic traditions would be as prevalent as in North Africa. Pockets of polyphony are scattered all across the European continent in southern, northern, central, and the eastern regions of Europe. Traditions of vocal polyphony have survived better in the southern (Mediterranean) and eastern regions of Europe;

- Many European polyphonic traditions show the obvious signs of the late influence of European professional polyphony. Of course, music professionalism existed in many different regions of the World as well (including North Africa), and some of these traditions have a much longer tradition of professionalism, than Europe (for example, a few regions from North Africa to East Asia, labelled by Lomax as “Old High Cultures”. Lomax, 1968). But, unlike the European classical (professional) tradition, non-European professional vocal traditions were mostly orientated on the **solo** performer, or at least, on **monophonic music** (or a variant heterophony). European professional music (which interestingly, at the beginning was also monophonic) turned into polyphonic by the end of the 1st Millennium and had a tremendous impact on polyphonic traditions of European communities with its polyphonic and harmonic language. This influence later extended much wider, throughout the major regions of the world;

➤ As a result of the strong influence of European professional music, the original character of many European local polyphonic traditions has been strongly affected, and ethnomusicologists working on local polyphonic traditions often mention the existence of two different – “old” and “new” styles of polyphony. The most salient stylistic elements of the “new” polyphonic style are the prevalence of parallel thirds, triadic chordal structure, and the TSD (tonic-subdominant-dominant) harmonic system;

➤ Quite paradoxically, although ethnomusicology started in Europe, most of the European polyphonic traditions came to the knowledge of European ethnomusicologists much later than the polyphonic traditions of the faraway regions of the world (as in sub-Saharan Africa or Polynesia). The main reason for this paradox was the initial belief of musicologists that their main purpose was to study the musical traditions of non-European peoples. In fact, the name of the discipline - “ethnomusicology” was not used until the second half of the 20th century and the name “Music history of non-European Peoples” was one of the widely used names of the subject. Therefore, European traditional music was left without the attention of European scholars for a few decades. This is the reason that unlike the African and Polynesian polyphonic traditions, which had come to the attention of European scholars in the 19th century, the rich traditions of vocal polyphony of, for example, the northern Greeks and southern Albanians became known only during the 1950s.

➤ Some of the very interesting polyphonic traditions of Europe are in East Europe. Western scholars were mostly unaware of the richness of these traditions, as the infamous “Iron Curtain” made the professional interaction of ethnomusicologists from the “Western” and “Eastern” countries almost impossible for decades. As musicological research in developing countries was often conducted by European scholars, material from some of the “Third World” countries was more readily available to Western scholars, than the material from the “Second World”. [A “Threefold division” of the world’s countries appeared after WW2, when free-market and Communist countries were considered to be the “First” and the “Second” World countries, led respectively by the USA and USSR. Countries, which did not belong to any of these two “Worlds”, were considered to be the “Third World” countries. Fight for the “Third

World” countries was one of the main driving forces of the fierce and often violent military clashes between the “First” and the “Second” World countries in different regions of the developing world, (for example, in Afghanistan and Vietnam.)] One of the main aims of my survey is to make the information about the regional traditions of vocal polyphony from the territories of the former USSR, available to western scholars and readers, interested in the worldwide distribution of the tradition of vocal polyphony. Unlike the survey of African (or later Oceanian) polyphonic cultures, where transcribed material is relatively easy to access for western readers, material from the former Soviet Union and Eastern Europe is much more difficult to access. So, unlike the review of African and Oceania polyphonic traditions, I am including quite a few musical examples from Europe, and particularly from the Eastern European polyphonic traditions.

I will start the review of European polyphonic traditions with East Europe. Then we’ll move to the polyphonic traditions of Southern Europe (the Mediterranean Basin), where we will touch on some Central European polyphonic traditions as well, and finally we’ll discuss the North and West European polyphonic traditions. As I have already mentioned, “pockets” of traditional vocal polyphony are represented in all of these major regions of the Europe.

Vocal Polyphony in Eastern Europe

According to our current knowledge, Eastern Europe has some of the richest polyphonic traditions in Europe. We will discuss most of the countries and important minorities of Eastern Europe. We will start with three Eastern Slavic states. First we will discuss Russia, including the numerous peoples of the Russian Federation (North Caucasian Ossetians, Balkarians and Karachaevis, Chechens and Ingushes, Dagestanians, the Volga-Ural region peoples – Mordvinians, Komi, Udmurts, Tatars, Mari, Bashkirs, Chuvashs, and speakers of Finnish languages from North Russia, as well as Jews and Rom). Then we will move to the polyphonic traditions of the Ukraine, then to Belarus, and we will finish with the polyphonic traditions of Georgia.

Russia

Even after the break-up of the Soviet Union, the Russian Federation remains easily the largest country on our planet, comprising major parts of East Europe and all of North Asia. Regarding the sheer size of the Russian Federation and the wide distribution of ethnic Russians (with subsequent close contacts with totally different cultures of Europe and Asia) it is clear that all the generalizations about Russian traditions of polyphonic singing cannot be exhaustive. We will first discuss the polyphonic traditions of ethnic Russians in both (European and Asian) regions.

The study of traditional polyphony in Russia has quite an extraordinary and somewhat paradoxical history. Today Russian traditional music is widely known for its rich polyphony, but during the first few decades of the development of Russian musicology (roughly the second part of the 19th century) it was mostly believed that Russian music was monophonic. The influential Russian musical critic Vladimir Stasov (1824-1906) famously declared that to verify “Russianness” of a song, the song must comply to the following two conditions: (1) it should be playable on black keys of the piano only (pointing to the pentatonic character of scales) and (2) it should be playable (on a piano again) with one finger only (pointing to the monophonic character of Russian traditional music).

The first serious blow to this unfounded generalization was the publication of the collection of Russian folk songs by Yuly Melgunov (Melgunov, 1879). Although the collection itself represented a collection of professional arrangements of folk tunes with piano accompaniment (therefore it had not much value for representing traditional Russian polyphony), in his descriptions of the Russian traditional singing style Melgunov was able to verbalize the essence of Russian traditional polyphony. According to his notes, Russian traditional polyphony is generally built around one main melody, sung in a large group, but it is crucial that participating voices do not sing in unison all the time. Instead they often depart from the main melody, creating interesting multipart harmonies. These “departures” from unison happen in specified moments of the melody, and going back to the unison also happens in specified moments – to mark the most important sections of the song (as in the beginning and the ending of the sections). This was actually the first description of Russian polyphonic style, today known in Russia as “Podgolosochnaia polifonia” (literary – “polyphony of subsidiary voices”). By the way, the term “*podgolosok*”, very popular in Russian, then Soviet, and now post-Soviet ethnomusicology, was introduced by Melgunov. In western musicology and ethnomusicology the closest term to describe

“*podgolosochnaia polifonia*” is “variant heterophony”, although to be more precise, besides the heterophonic “thick” group singing of the melody “*podgolosochnaia polifonia*” also contains a very important additional, functionally contrasting part, mostly sung by a soloist higher than a main melody (see about this below).

In 1905 –1912 Evgeniya Lineva published her landmark collection of Russian traditional songs (Lineva, 1905-1912). The collection represented well-documented transcriptions of recordings made on the phonograph. This collection proved the correctness of Melgunov’s ideas about the character of Russian polyphony. Later studies revealed the more complex character of Russian traditional polyphony. Recordings of Russian polyphonic songs on multi-channel technology (Rudneva et al, 1979) were particularly important in this regard.

Discussing different styles of Russian traditional polyphony, Zemtsovsky lists five main types:

- (1) Singing in “***almost unison***”. In this style small polyphonic elements usually occur just before the cadences;
- (2) So called “***heterophonic polyphony***” (or variant heterophony). This style is widespread, particularly in the northern half of Russia. Zemtsovsky points out the differences of the performer’s intentions in creating this texture: in one case “the intention is monophonic, with a heterophonic result: in the second, the intention is polyphonic, and creates a heterophonic structure” (Zemtsovsky, 2000:757).
- (3) *Drone polyphony* was maybe the most neglected among the Russian polyphonic types (possibly because of the so-called “*Podgolosochnaia polifonia*”, which was considered to be the “trademark” style of Russian national polyphony). Drone polyphony is present in some isolated “pockets” in the western (Bryansk district) and the southern (Voronezh and Belgorod districts) regions of Russia. There is a special subtype of drone polyphony in the Belgorod district – a double drone on the fifth, framing the melody from both sides (from below and above). Zemtsovsky also distinguishes so-called “fake” drone, where “no one voice sings the drone, but the illusion of a drone emerges from the combination of voices” (Zemtsovsky, 2000:757);
- (4) Another polyphonic type (Engovatova mentions this type as “***dishkant polyphony***”, Engovatova, 1989:24) involves singing in two

functionally different parts: the main melody and the contrasting part. There are three regional subtypes of this type of polyphony, and the main difference between them is in differences between the versions of the accompanying (top) part. The top part has three regional versions: in southern Russia, among the Cossacks, the accompanying high voice is performed by a soloist (called “*golosnik*”, or “*dishkant*”), who sings an anhemitonic tune without text” (Zemtsovsky, 2000:757); In Central Russia the top voice (“*podvodka*”) is also solo. In northern Russia (the most monophonic region of Russia) the top part is performed by a group as well and it represents the octave doubling of the main melody. The main melody, on the contrary, is everywhere performed by the majority of participants (both male and female) and is in fact the lower part. This part is called “*bass*” or “*tolsty*” (“thick”) voice. M. Engovatova suggested distinguishing a version of this style – polyphony with “*podvodka*” (always performed solo by the alto voice) in lyrical songs with an extremely wide distribution throughout Russia (including the whole of Siberia, and excluding only northern Russia. Engovatova, 1989:23-24). T. Digun wrote about the importance of the interval of fifths for the heterophonic “beam” of the melody in Southern Russian tradition (Digun, 1987: 30)

(5) The most complex type of Russian traditional polyphony is three-part polyphony. This type is represented in central and southern Russia (Belgorod, Voronezh, and the Ryazan districts and among Cossacks living in the basin of the river Don. As in most other types of Russian traditional polyphony, in this type the majority of singers perform the main melody (called *bass*). The second part (“*golosnik*”) is in fact the top voice. It represents the drone and is sung sometimes without the text. The third part (*tonki golos* – thin voice) is “performed by two or more women in a tense voice in heterophony with the bass voice” [“bass voice” meaning the main melody] (Zemtsovsky, 2000:757). Dmitri Pokrovsky discovered an interesting version of this polyphonic type (among Cossacks): four functional parts, consisting of the bass, a relatively independent “*dishkant*”, a previously unknown part that coordinates the other parts, and a fourth part “*tenor*”, which is singing the version of the third (previously unknown part)

Out of these five main types of Russian traditional polyphony, discussed in the article of I. Zemtsovsky, written for the Garland Encyclopedia, I would like to discuss in more detail the polyphonic type #3: drone polyphony.

Drone polyphony was virtually neglected in Russia for a few decades. Nikolai Kaufman wrote with regret about this in his attempt to find parallels between Bulgarian and Russian drone polyphony (Kaufman, 1968:197). Fortunately, a few papers on drone polyphony in Russian traditional music were delivered as a part of the national conference “Vocal Polyphony of the Peoples of Russia”, which was held in Voronezh (one of the actual centers of Russian drone polyphony) in September 1989. The authors of the “drone” papers at this conference were O. Pashina and I. Fedorenko on Russian material, I. Nazina on Belarus material, and I. Zemtsovsky on drone polyphony in general (their extended abstracts were published in Russian: Engovatova, 1989). The main melodic line in Russian drone polyphonic singing usually has a narrow range (up to the fourth) and can be performed both by a soloist (which is usually the case in most drone polyphonic traditions. Fedorenko, 1989:13), or by the group (very unusual for drone traditions. Pashina, 1989:11). Interestingly, in the latter (unusual) case there is no traditional terminology to distinguish these two different parts (drone and the melody) and (possibly even as a result of this) in this particular style “singers freely move during the performance from the drone to the melody and back to the drone even within the same stanza” (Pashina, 1989:11). Pashina also mentions (as “extremely rare” though) cases, when the drone is sung by a soloist, and the melody is performed by the rest of the singers (Pashina, 1989:11).

Zemtsovsky notes that “the more complicated the polyphonic structure, the fewer the singers involved” (Zemtsovsky, 2000:757). This leads to the existence of two different types of traditional ensembles in Russia: (1) with “locked” membership (singers with more expertise and experience, performing together for years), and (2) an “open” type of ensemble, which is open to everyone to participate. Although, this type of ensemble does not usually get too big – according to Zemtsovsky, the number does not exceed eighteen participants (2000:757).

Maybe one of the most developed traditions of polyphonic singing of ethnic Russians is the polyphony of so-called “*semeiskie*”, or “*semeiskie zabaikal’ia*”, a specific group of Russians, living deep in Siberia. This name comprises a reminder of two major periods in the history of this specific group: the name *semeiskie* comes from the name of the river Seim in Belarus; and the whole name “*semeiskie zabaikal’ia*” literary can be translated as “people from the river Seim, who live behind lake Baikal”. Originally the *semeiskie* Russians come from Central Russia. Persecuted for their religious beliefs (as “*raskolniks*” – literary “those who want to break up”), they went

from Central Russia first northwestwards, to the territory of contemporary Belarus (then a territory of Poland), and settled on the banks of the river Seim (hence the first part of their name – “Semeiskie”). Later they had to move again (as the influence and the territory of the Russian Empire was expanding), so they moved from Poland east, into deep Siberia, behind lake Baikal (here we find the origin of the second part of their name “zabaikal’ia” – “those living behind lake Baikal”). Despite the impressive general difference in sound, the *semeiskie* polyphonic tradition represents an extremely developed version of the Russian “*podgolosochni*” style, where most of the performers sing versions of the main melody (and I must say that the differences between the versions are quite extreme in the *semeiskie* style). As in many other Russian polyphonic styles, in the *semeiskie* polyphony the top part is the only part performed by a soloist. Unlike most of the Russian polyphonic styles, where women play the leading role, *semeiskie* polyphony is performed mostly by men. Among Russian polyphonic traditions the southern Russian Cossack polyphony (also mostly male) shows the closest parallels to *semeiskie* polyphony (Dorofeev, 1985:41). The most salient feature of *semeiskie* polyphonic style is the presence of a large amount of sharp dissonant chords, often moving into other sharp dissonances (instead of moving into the consonances, or to unison, more usual for most of the Russian polyphonic styles).

Ex. 2. Russia. Semeiskie from the Lake Baikal region. (Zemtsovsky, 1972:125)



In the 1920th Russian ethnomusicologist Gippius recorded in North Russia “duets and trios with uniquely independent voices, but this style seems to have disappeared” (Zemtsovsky, 2000:758). Today North Russia is

maybe the most monophonic region of Russia. Another unique style – two- and three-part imitation polyphony (“canon”) was recorded in one Russian village (the village of Foshchevatogo in the Belgorod district) as a part of the wedding tradition, with the local terminology for the different parts (Shchurov, 1985:14-15).

A very specific type of polyphony occurs at some Russian rituals. This is a simultaneous singing of different songs, seemingly totally unrelated to each other. The only connection is that they both are bound to be performed at a certain moment in the ritual (Zemtsovsky, 2000:758). Such songs sometimes are in complete contrast to each other. For example, during the wedding ritual in a Russian village one can hear the simultaneous performance of: (1) a ritual lament by the bride (a female solo lamenting inside her parent’s home), and (2) a cheerful song, sung by the Best Men (a male choir outside the house). These songs have different character, texts, rhythm, formal structure and tonal centers.

To summarize, we may say that different types of traditional polyphony is present in the entire territory of Russia. The only region where monophony is dominating (from the musical point of view) is in North Russia, where only unison-heterophonic and octave forms of group singing had been recorded (not to forget about the polyphonic style with “uniquely independent voices”, documented in this region in the 1920s).

Out of the several different types of Russian traditional polyphony, discussed above, I suggest to distinguish two principally different groups of traditional polyphony:

- (1) A group of **highly developed heterophonic** types of polyphony with functionally different two (and sometimes three) parts. This kind of polyphony is generally called in Russia **”podgolosochnaia polifonia”** and the decisive feature of this style is the heterophonic (“thick”) performance of the main melody (often called “bass”) by most of the singers. The contrasting high part is often performed by a soloist; This group comprise several types (or sub-types), and is widely spread in most of the territory where ethnic Russians live;
- (2) Principally different from the **”podgolosochnaia polifonia”** type of polyphony is the **drone** polyphony, in which the majority of performers sing the drone (a rhythmic drone with text, or a pedal drone). The melody in drone type polyphony has a narrow range and can be performed by a soloist or by a group (Fedorenko, 1989:13; Pashina, 1989:11). In rare cases the drone can be performed by a

soloist as well. In some local styles parts of the drone and the melody are not well defined (terminologically), and performers freely move from the melody to the drone and back to the melody again.

The geographic distribution of these two different types of polyphony is very different: *podgolosochnaia polifonia* is spread extremely widely and comprises almost the whole territory of the settlement of ethnic Russians. The distribution of drone polyphony, on the contrary, is confined to very small isolated regions in western and southern Russia.

Polyphonic traditions of Minorities in the Russian Federation

As you would expect from the biggest country on our planet, plenty of minorities live on the vast territories of the contemporary Russian Federation. Minorities are grouped in several regions of the European part of Russia: (1) in the southernmost part of Russia, North Caucasia, a mountainous region, populated by the peoples of different language families; (2) in the North and North Western regions of Russia, populated by Finnish-speaking peoples; and (3) The Volga-Ural region, populated by the peoples of different language families and cultures. Besides these minorities with their national territories within the Russian Federation (earlier within the Russian Empire and then within the USSR), two more peoples - Jews and Gypsies (Roma) lived throughout the Russian Empire without their own territory. The North Caucasian and Volga-Ural regions will be discussed in more detail, as the tradition of vocal polyphony is a very important part of the musical culture of the peoples of these regions.

North Caucasian Peoples

North Caucasia comprises peoples living on the northern slopes of the Great Caucasian Mountain Range (neighbouring with Georgia on the southern side of the Caucasian mountains). Linguistically North Caucasia is one of the most diverse regions of the world. Speakers of three language families live here: (1) The Indo-European family of languages (Ossetians), The Turkic family of languages (Balkarians and Karachaevis), and the indigenous Caucasian family of languages (Abkhazians in Georgia; Adyghe, Chechens, Ingushes, and Dagestanians in Russia). Islam, introduced in the 17-18th centuries, is the leading religion of the region (interrupted in the middle by mostly Christian Ossetians). Vocal music dominates in all North

Caucasian traditional cultures. The Tradition of vocal polyphony is widely spread throughout the whole North Caucasus.

Abkhazians

Abkhazians (*Apsua* in Abkhazian; the population was about 70 000 at the beginning of the 1990s. New data are not available) are the only people among the group of North Caucasian peoples, who live south off the Caucasian range only, in the northwestern corner of Georgia. Abkhazians are autochthonous of the Caucasus. Ethnically and linguistically they are close to Adyghees (Cherkesses and Kabardinians, living in the northwestern part of the North Caucasus) and together they form the Abkhazo-Adyghean branch of the Caucasian language family. In the world of linguistics Abkhazo-Adyghean languages are known by one of the largest number of consonants known today among the languages of the world. Abkhazian traditional culture retains many archaic genres and rituals.

Polyphony plays a crucial role in Abkhazian traditional music. Polyphony is present in all genres where the social environment provides more than one singer to support the melodic line. Readers might remember (from the very beginning of this book) the recollection of I. Zemtsovsky, when a dozing Abkhazian started singing a drone to support an unknown, to him, singer. Abkhazian two and three-part polyphony is based on a drone (sometimes a double drone). Two part drone songs are considered by Abkhazian and Georgian scholars the most important indigenous style of Abkhazian polyphony. Two-part drone songs dominate in the Gudauta district, the core region of ethnic Abkhazians. Millennia of cultural, social and economic interactions between Abkhazians and Georgians in this territory resulted in reciprocal influences, and in particular, the creation of a new, so-called “Georgian style” of three-part singing in Abkhazia, unknown among Adyghees. This style is based on two leading melodic lines (performed by soloists - *akhkizkhuo*) singing together with the drone or ostinato base (*argizra*). The indigenous Abkhazian style of three-part polyphony uses double drones (in fourths, fifths, or octaves) and one leading melodic line at one time. Abkhazians use a very specific cadence: a tetrachordal downwards movement, ending on the interval fourth.

Ex. 3. Abkhazia. (Akhobadze, Kortua, 1957:226)

soloist 1
Soloist 2

Basses

Ex. 4. Abkhazia. (Akhobadze, Kortua, 1957:221)

Soloist 1
Soloist 2

Basses

Ex. 5. Abkhazia. (Akhobadze, Kortua, 1957:117)

Soloist

Basses

The first scholarly works about Abkhazian music appeared at the beginning of the 20th century (Araqishvili, 1916) and a few others followed during the 20th century (Kovach & Dzidzaria, 1929, 1930; Akhobadze, Kortua, 1957; Khashba, 1977, 1983; Ashuba, 1986; Shamba, 1986), although none of them were published in Western European languages. The article by the author of this book in the *Garland Encyclopedia of World Music* seems to be the first available to western readers on the subject of this very interesting polyphonic tradition (Jordania, 2000a:851-854).

Adyghes

“Adyghes” is a Russian term for several ethnic groups living in the western part of North Caucasia (population about 120 000). To Europeans they are more known under the name “Cherkesses” (or “Circassians”).

Circassians are in fact a small group within Adyghe). Polyphony plays an important role in the musical traditions of the Adyghe. Drone polyphony is leading, although among Adyghe drone is generally more movable and sometimes has its distinguished melodic line (sometimes it is closer to ostinato). The traditional term for the drone is “*ezhu*” (which means “everybody”). Blaeva mentions three types of Adyghean traditional polyphony: (1) two-part drone polyphony, (2) responsorial alternation of the soloist and the *ezhu*, and (3) overlapping alternation of the soloist and *ezhu* (Blaeva, 1988:10). The term *ezhu* is used among neighbouring Balkarians and Karachaevis as well (despite their languages belonging to a different family of languages). Two-part polyphony dominates, although among one of the Adyghean groups – Kabardinians three-part singing (with double drones in fifths or octaves) is quite usual. On the other hand, according to the available information, part of Adyghe - Abadzekhs and Circassians have monophonic singing traditions and they sing in unison. During the 20th century instrumental music became more prominent among Adyghe, particularly among the so called Western Adyghe (Sokolova, 2004, 2006).

Many ancient rituals are still present in Adyghean traditional culture. The central figure of Adyghean society and culture is the *djeguako*, who comprises the highly respected roles of the community historian, composer, and the keeper of the traditional values and institutions. The first notions about the Adyghean traditional music and polyphony appeared in the 1850s. The publication of three volumes of the “Folk Songs and Instrumental Tunes of the Adyghe” (Gippius, 1980, 1981, 1986) is considered as one of the best ethnomusicological publications in the Soviet Union. Together with the Ossetian polyphonic traditions, Adyghean polyphony came to be the earliest known (out of all North Caucasian polyphonic traditions) to Western scholars. (M. Schneider used the examples of Kabardinian polyphony in his “History of Polyphony”).

Ex. 6. Adyghe. (Gippius, 1980:128)

Ex. 7. Adyghes. (Gippius, 1980: 128)

The musical score consists of two staves. The top staff is labeled 'soloist' and the bottom staff is labeled 'Basses'. Both staves are in the key of D major (two sharps) and 4/4 time. The soloist part begins with a melody in the first measure, featuring triplets of eighth notes. The basses part provides a drone accompaniment, with a long note in the first measure and a whole rest in the second measure.

Balkarians and Karachaevis

These two peoples are closely connected to each other. As we know from historical sources, Karachaevis were a group of Balkarians, who migrated to a new territory from their original homeland in the 19th century. According to folk tradition, their name “Karachai” comes from the name of the leader of the group who led them to a new territory. The total population of Balkarians and Karachaevis is under 200 000 (70 000 and 120 000 respectively). Balkaria traditionally consisted of several communities living in different gorges, and the name “Balkarian” initially was used specifically for the population of the so-called Balkarian Gorge. Similarly the population of the Chegem Gorge were called “Chegemians”, and dwellers of the Baksan Gorge – Baksanians, etc. The uniting native name for all the related populations was “*Taulala*” (mountain dwellers) (Rakhaev, 1988:21). Living between the Caucasian-language speaking Adyghes from the west and Svanetians (Georgians) from the south, and Indo-European Ossetians from the east, Turkic-speaking Balkarians were believed to be culturally closely connected to the Turkic-language speaking populations that brought Islam to North Caucasus. This belief was the result of the dominating position of linguistics in ethnogenetic studies. Following this trend, musicologists tried to “bring” the musical traditions of Balkarians and Karachaevis closer to the musical traditions of the Turkic world by all possible means. For example, musicians were writing about the chromatic scales in their music (Taneev, 1947 [1886]) although Balkarian and Karachaevis traditional music scales are diatonic. More paradoxically and importantly for our topic, collectors of Balkarian and Karachaevis songs were publishing their traditional polyphonic songs as one-part, monophonic songs (in an attempt to bring their musical traditions close to monophonic cultures of Moslem Turkic peoples).

Despite this tendency of negligence towards their polyphonic traditions, Balkarians and Karachaevis have one of the most developed traditions of polyphonic singing among North Caucasian peoples. Three-part singing is widespread here. The melody, as elsewhere in Caucasus, is performed by a soloist, and the drone (or “drones” in case of double drones) by a group of

singers. Interestingly, the melodic part has a Turkic term “*zhir baschi*” (“head melody”, or “main melody”), but the term for the bass part is non-Turkic (possibly because polyphony is mostly absent in Turkic musical cultures). For the bass part Balkarians and Karachaevis use the indigenous Caucasian (Adyghean) term – “*ezhu*”.

There has been insufficient study of Balkarian and Karachaevean traditional music and polyphony, particularly in terms of availability to western readers. Although Balkarian polyphonic songs were among the very first among the North Caucasian songs to be transcribed (in 1885, the Russian composer Taneev, student of Tchaikovsky, did fieldwork here. See Taneev: 1947), the Balkarian tradition of vocal polyphony was very slow to reach the western reader. The first publication in a European language, containing information about Balkarian polyphony was a small article in *the Garland Encyclopedia of World Music* (Jordania, 2000a:856-859).

Ex. 8. Balkarian. Example of three-part singing (From Anatoli Rakhaev)

Ex. 9. Balkarian. (From Anatoli Rakhaev)

Ex. 10. Balkarian. (From Anatoly Rakhaev)

Ossetians

Ossetians (*Iron* in Ossetian) occupy the central part of North Caucasia. They live on both (northern and southern) sides of the Caucasian range,

respectively in Russia and Georgia. They are the only representative of the Indo-European languages in North Caucasia, and the only Christian people (or mostly Christian) in North Caucasia. Ossetians were usually considered the descendants of the Medieval Alans, carriers of the Indo-Iranian language. Later archaeological and physical anthropological studies revealed, that despite the fact of the change of the indigenous Caucasian language into an Indo-Iranian branch of the Indo-European family of languages, the newcomers (Alans) did not have much influence on the indigenous population of Ossetia (Alexeev, 1974a:197-200). Musically Ossetians are very close to other North Caucasian peoples, sharing most of the characteristic features with them. Most importantly for us, the polyphonic tradition is as important to Christian Ossetians, as to their Moslem neighbors.

Ossetian polyphony is based on the wide use of drone (and double drone). Songs with a drone mostly representing two-part polyphony. In the case of double drones, these drones are the intervals of fourths, fifths, or octaves apart. In such cases (together with the main melody, always sung individually) the result is three-part drone polyphony. There is another type of three-part polyphony in Ossetia as well (in southern Ossetia, within Georgia), with only one drone, but with two individual singers, singing together two top melodies on the background of the drone. This type of three-part singing is considered by Ossetian and Georgian scholars as the result of the influence coming from Georgian polyphonic music. The name of the bass part in Ossetia is *kirnin*, of sometimes – *fersag*. Male singing dominates. Besides the drone, Ossetians widely use ostinato formulas in the bass part. Rhythmically Ossetian songs are not very strict. Quite often they use complex meters and free rhythm, mostly following the reciting style of the singer of the main melody. Cadences quite often finish on the interval of a fourth.

Arguably the most important musical legacy that medieval Alans left in Ossetian traditional culture is the tradition of epic songs about the **Nart** heroes. Interestingly, these songs (called here *kadeg*) are performed arguably in the original Indo-European performance style: by a solo male performer (*kadeganag*), accompanying himself on a string instrument. Epic songs about the **Nart** heroes became very popular among Ossetian's neighbors and have currently spread throughout the whole of North Caucasia, although in all other North Caucasian cultures (apart from Ossetians) epic songs about **Narts** are performed by a group of singers, in a traditional polyphonic style with a drone.

In contrast to most of the other North Caucasian polyphonic traditions, which were mostly unavailable to European scholars, Ossetian polyphonic tradition became known among European scholars quite early (Lach, 1917, 1931). The 1964 volume “*Ossetian Folk Songs*” (Galaev, 1964) is still the best published source of Ossetian traditional songs.

Chechens and Ingushes

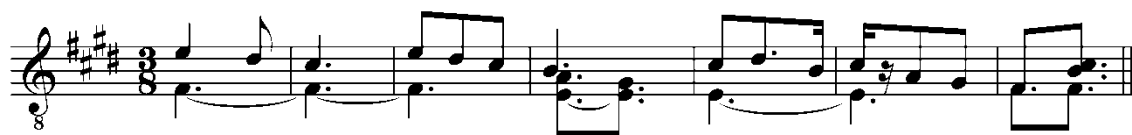
Chechens (*Nokhcha* in Chechen) are arguably the most populous in North Caucasia (about 1.2 million lived here before the recent Russian-Chechen war. According to Chechen State Statistical Committee, Chechens were over 1 million by January 2006). Together with the closely related Ingushes (*Galgai* in Ingush, the population is around 200 000) they call themselves *vainakhi*. Their languages are a part of the so-called Nakho-Dagestanian group of the Caucasian language family. Chechens and Ingushes became Moslems in the 17th.-18th centuries, and they are believed to be the autochthonous residents of the Caucasian mountain ranges.

Both Chechen and Ingush traditional music could be very much defined by their tradition of vocal polyphony. As in other North Caucasian musical cultures, Chechen and Ingush polyphony is based on a drone. Unlike most of the other North Caucasian polyphonic traditions (where two-part polyphony is the leading type), Chechen and Ingush polyphony is mostly three-part. The middle part, the carrier of the main melody of songs, is accompanied by the double drone, holding the interval of the fifth “around” the main melody. Intervals and chords, used in Chechen and Ingush polyphony, are often dissonances (sevenths, seconds, fourths). This is quite usual in all North Caucasian traditions of polyphony as well, but in Chechen and Ingush traditional songs more sharp dissonances are used. In particular, a specific cadence, where the final chord is a dissonant three-part chord, consisting of a fourth with a second on top (c-f-g), is quite unique for North Caucasia. On the other side of the Caucasian mountains, in western Georgia, there are only a few songs that finish on the same dissonant chord (c-f-g). Here are two typical examples of Chechen and Ingush traditional polyphony:

Ex. 11. Chechen. (Rechmenski, 1957:15)



Ex. 12. Chechen. (Rechmenski, 1957:18)



Although still very much alive and functioning in society, Chechen and Ingush traditional polyphony is one of the least studied among the North Caucasian traditions – the inheritance of almost constant hostility and wars against Russia for independence during more than 150 years, including their ban from Caucasia to Central Asia (1944-1957) by Stalin and the current unstable situation.

Dagestan

Dagestan (or the Republic of Dagestan) is the region in the eastern part of the Caucasian mountain range, between Azerbaijan on the south, the Caspian Sea on the east, Chechnya on the west, and Russia to the north. Part of the Russian Federation, Dagestan shares many features of traditional culture with the rest of the North Caucasian peoples. It has already been mentioned that North Caucasia is known for its kaleidoscopic variety of regional traditions and languages, but Dagestan brings this diversity to the utmost. Linguists distinguish more than 100 languages on the territory of Dagestan. Some of the languages are currently spoken by a few native speakers only. Some of the most populous peoples are Avars (in Avar - *Maarulal* 545 000), Dargins (*Dargan* 330 000), Kumiks (*Kumuk* 255 000), and Laks (*Lak* 110 000).

Unfortunately, the information about the traditional vocal polyphony of the Dagestanian peoples is very sporadic and incomplete. According to the available information (I am particularly grateful to the Georgian ethnomusicologist, the late Edisher Garakanidze, who conducted a short but very important fieldwork in Dagestan in 1991, and to Manashir Iakubov, one of the best known experts of North Caucasian music), drone polyphony is quite well-known among some major Dagestanian peoples (particularly among Avars and Kumiks). The tradition of three-part drone singing is present at least among Kumiks. In Kumik three-part drone singing, as in other polyphonic traditions of North Caucasia, the main melody is accompanied by the double drone (a fifth interval apart). Virtually nothing has been published about the polyphonic traditions of Dagestanians even in their own languages. The article of Manashir Iakubov about the parallels between the musical traditions of Dagestan and Bulgaria is a rare publication that contains some material about Dagestanian polyphony. Among other

elements of traditional music, the article discusses the parallels between the Dagestanian and Southwestern Bulgarian traditions of polyphonic singing (Iakubov, 1972). In recent years there has been an increasing local interest in musical traditions of Dagestanian peoples (see Ashkhotov, 2002; Abdulaeva, 2003, 2007; Magomedov, 2007).

The Volga-Ural Region Minorities of the Russian Federation

The easternmost region of Europe (west from the Ural Mountains, the natural border between Europe and Asia), the Volga-Ural region consists of a large group of peoples, who speak in different language families (the Finnish branch of Finno-Ugric languages and the Turkic branch of Altaic languages), have different religious beliefs (pre-Christian, Christian, Moslem) and different traditional cultures. Unlike North Caucasia, the Volga-Ural region is not riddled with high impenetrable mountains, and the migration processes were very active here, resulting in a complete or partial change of languages, physical types of the populations, and cultures.

The Finnish branch of the Finno-Ugric family of languages is represented in this region by Mordvinians, Komi, Mari and Udmurts, and the Turkic branch of the Altaic languages is represented by Tatars, Bashkirs and Chuvashs. A few of the peoples of this region practice various forms of traditional polyphony. Now we are going to have a closer look at the polyphonic traditions of the different peoples populating the Volga-Ural region.

Mordva

Among the peoples of the Volga-Ural region Mordvinians are maybe the best known for their rich traditions of vocal polyphony. Although the first publications of Mordvinian songs were monophonic versions of their polyphonic songs (see Uritskaya, 1973:147). Mordvinian polyphony was also one of the earliest to be published – Mitrofan Piatnitsky published them in 1914, followed by publications from the 1920s. The Finnish scholar A. Vaisanen published examples of Mordvinian polyphony in 1948.

Polyphony is heavily featured in both regional groups of Mordvinians – *Moksha* and *Erzia* (both are the names these groups call themselves). Leading Mordvinian ethnomusicologist, Nikolai Bojarkin distinguishes four types of group singing among Mordvinians: (1) unison-heterophonic type (mostly among Erzia-Mordvinians); (2) specific drone two-part singing, (3)

developed two- and three-part drone type; and (4) a later type of so called *third polyphony*, when two parts are sung mostly in parallel thirds (Bojarkin, 1985:18-19). In her 1973 article dedicated specifically to Mordvinian polyphony, B. Uritskaya stressed similarities between Mordvinian and Russian polyphonic traditions, but failed to mention the presence of drone polyphony in Mordvinian singing (Uritskaya, 1973).

Ex. 13. Mordva. (Uritskaya, 1973:149)



Ex. 14. Mordva. (Uritskaya, 1973:151)



Despite the differences between these four polyphonic types, we may group these four types into two main groups of polyphony: (1) drone polyphony, and (2) heterophonic polyphony. Heterophonic polyphony is characteristic for Erzia, and the drone polyphony is present in both regions (mostly two-part in Erzia, with three- and four-part sections in Moksha). In Mordvinian polyphony all the parts are represented by several singers and they sing as a heterophonic “thick” melody (this is not the case, say, in Caucasia, or the Balkans, where the main melodic parts are virtually always performed by soloists). The scale system is anhemitonic, and chords with non-triad structures are usual (Bojarkina, 1985). Mordvinian traditional terminology clearly states the leading role of the middle part in three-part polyphony: the name of the middle part is *Mora Vaig'al* (lit. “voice of a song”), top part – *Viari Vaig'al* (“high voice”), and the bass - *Alu Vaig'al* (“low voice”).

Komi

Komi consists of two ethnic groups – Komi Zirians, and Komi-Permiaks. Although both these groups practice polyphony, for a long time they were known as mostly monophonic cultures (unlike Mordvinians, whose polyphonic traditions were known for a century). According to the available data, Komi-Permiak polyphonic singing is practiced more widely than among the Komi-Zirians. N. Zhulanova states that polyphonic singing is particularly important for so-called Komi-Permiaks from Invensk, who live in the southern part of the settlement of the Komi people, and in a small region (around the river Lupia) in the northern part. Two main types of polyphonic singing can be distinguished in Komi-Permiak traditional music: (1) drone, and (2) variant heterophony. Drone two-part singing is spread through most polyphonic regions of the settlements of the Komi-Permiaks (see above), and the unique feature of their drone singing is that the drone is sung on **top** of the main melody (Zhulanova, 1989). Although this type of two-part singing exists in some Russian regions (particularly in the central and southern parts of Russia), unlike the Russian style, where the top drone is mostly sung by a soloist, and the main melody – by a large group, among Komi-Permiaks the drone on the top of the texture is performed by a group of singers.

Ex. 15. Komi-Permiak. (From Nadia Zhulanova)



In the middle section of the settlement of Komi-Permiaks the tradition of polyphony is not as prominent, as in the southern and northern regions. Drone polyphony is absent in the central regions, and the variant-heterophony is the only form of polyphony. Komi Zirians also practice mostly unison-heterophonic styles of singing, although Zemtsovsky points at the unique tradition of “collective polyphonic wedding song-laments” among Komi-Zirians and suggests links with the Russian tradition of the wedding lamentation in the eastern Vologda district (Zemtsovsky, 2000:774).

Mari

Mari people consist of three ethnic groups: (1) the “mountain” Mari live on the right bank of river Volga, (2) the so-called “meadow” Mari’s live between the rivers Vetluzhsk and the Viatka, and (3) the “eastern” Mari live

east from the river Viatka. The Mari singing tradition has long been classified as monophonic. Elements of traditional polyphony were researched by Oleg Gerasimov, who came to the conclusion, that variant heterophony is quite usual for Mari traditional culture, particularly in “*rekrutskie*” (soldier’s songs) and lyrical songs, where large groups of singers participate. The most interesting forms of traditional polyphony have been found among the *Lugovie Mari* (“meadow Mari’s”). In their group singing traditions the elements of so-called *podgolosochnaia polifonia* (a complex version of variant heterophony, particularly widely spread among Russians, and generally among eastern Slavs) were noted (Gerasimov, 1988:20-21). According to Gerasimov, traditional singers indicate that they prefer to sing the main melody in their own way, “directly” (“*priamo*”) creating a heterophonic texture, because “it sounds better this way” (Gerasimov, 1988:20).

Ex. 16. Mari. (From Oleg Gerasimov)



Udmurtia

The Udmurts (in Old Russian “Votiaks”) are usually divided into two subgroups – northern and southern, and are ethnically close to Komi-Permiaks. There are also more detailed ethnic divisions among Udmurts. For example, there is a specific ethnic group *Bessermians* in northern Udmurtia, regarded as the descendants of the medieval Bulgars from the banks of the Volga River. Although most of the Udmurts are Christians, there are Moslem and pagan groups among them as well. In regard to traditional polyphony, both southern and northern Udmurtia have a tradition of group singing. In southern Udmurtia the result is mostly unison and variant heterophony. In northern Udmurtia functional polyphony plays a more distinguished role.

Turkic languages are represented in the Volga-Ural region by Tatars, Bashkirs and Chuvashs. Generally speaking, in the Volga-Ural region Turkic language speaker minorities are more populous than Finnish speaking minorities.

Tatarstan

The Tatars are easily the largest minority group in the Volga-Ural region (about 4 million population), and one of the largest minorities in Russia. Besides the Volga – Ural region, Tatars also live in Siberia, and around the northern tip of the Caspian Sea (the so-called “Astrakhan Tatars”). A more detailed division of the Tatars living in these three regions is also available in the ethnographic literature.

In regard to traditional polyphony, Tatars possibly represent the most monophonic musical culture in the Volga-Ural region. As far as I am aware, only one specific group – the so-called “Christened Tatars” (“*kriashennie tatari*”) practice actively the unison-heterophonic type of polyphony (Almeeva, 1985). Christened Tatars are the only Christian group among the Moslem Tatars.

Ex. 17. Tatar. (From Nailia Almeeva)



Almeeva noted the presence of the elements of the drone type in so-called “third-fifths” polyphony. In this style the strong beats are mostly distinguished by the presence of harmonic verticals – the fifth on the first step, or the third on the second step.

Bashkiria

Bashkirs (*Bashkort* in Bashkir) are another major population in the Volga-Ural region. In Bashkir physical type and traditional culture the elements of both substrate and superstrate are evident. Finno-Ugric peoples made the autochthonous substrate of the Bashkirs. The strong elements of Turkic nomad peoples came from North Central Asia and southern Siberia from around the 7th century, and migrations became particularly active during the 10 – 13th centuries. In regard to polyphonic music, there is a clear connection between the traditional music of Bashkirs with the Central Asian singing cultures. This is a tradition of overtone singing, or solo polyphony (when one person produces a drone and together with the drone creates a melodic line on top of the drone, using the natural whistle-like harmonics of

the drone). We will concentrate on this type of polyphony when we will be discussing polyphonic traditions of the Central Asian region. So far we should mention that the overtone singing of Bashkirs is the westernmost instance of the presence of this Central Asian type of overtone singing. The tradition of overtone singing among Bashkirs is called “*uzliau*” (Zemtsovsky, 2000:773).

Chuvashia

The Chuvash population (“*Chavash*” in Chuvash) is divided into three groups: “Upper” Chuvashs (*Vir’ial*, *Turi*), “Lower” (*Anatri*), and “Middle-Lower” (*Anat Enchi*). Upper Chuvashs live in the northwestern region, Lower Chuvash live in the southern region, and Middle-Lower Chuvashs live in the central and northeastern regions of their ethnic territory. Like most of the Udmurts, Chuvashs are Christians.

Regarding the tradition of vocal polyphony, according to the available data, only Low Chuvashs (*Anatri*) display the live tradition of polyphony. According to the specific two-part texture, Chuvash polyphony is close to the “third-fifths polyphony” tradition of the polyphony of so-called Christened Tatars (Almeeva, 1988:4). As in most of the musical traditions of the Volga-Ural region, Chuvash traditional singing (and polyphonic singing as well) is realized on pentatonic scales. Although pentatonic scales in the region are mostly anhemitonic, Chuvash and Mari singing also display rarer hemitonic forms of pentatonic scales (Zemtsovsky, 2000:773). In hemitonic pentatonic scales the number of the notes are five, but they do include half-tone steps, usually absent in most of the pentatonic singing cultures. Japan is maybe the most well-known for the use of hemitonic pentatonic scales. Here is an example of *Anatri* Chuvash polyphony:

Ex. 18. Chuvash. (Almeeva, 1988:4)



The Northern European part of the Russian minorities

Another important group of the Russian minorities live in the northernmost part of the European part of the Russian Federation. These are Finnish-speaking peoples: Sami, Nenets, Karels, Veps. No information is

currently available on the polyphonic singing of these peoples. Together with the ethnic Russians, living in this region, North Russia remains arguably the “most monophonic” among all Russian populations, the largest region of Russia (and in fact, of Europe) where no traditions of vocal polyphonic singing have been documented so far (except the unique and now extinct tradition of two and three independent melodies, sung together, recorded in the 1920s by Gippius. See above). Unison and octave singing (with slight elements of heterophony) has been the only form of group singing in this region.

Jews and Rom

When discussing the music of Russian minorities, **Jewish** (in Russian – “Evrei”) and **Rom** (in Russian – “*Tsigane*”) traditional music should be taken into account as well. Found in most of the regions of the European part of Russia, Jews and Rom were very influential in 18-19-20th century Russia as brilliant musicians. Although the mastery of musical instruments of Jews was well known and highly appreciated in Russia, no data is currently available on vocal polyphonic traditions among them. Later in this chapter I will discuss in detail the polyphonic traditions of a few other populations of Jews from the Middle East and Europe.

As for the Rom musicians in Russia, their singing style widely featured contemporary urban style polyphony, with parallel thirds, European functional Tonic-Subdominant-Dominant harmonies, and European instrumental accompaniment (mostly guitar). Rom choirs (so-called “*khor tsigan*”) were extremely popular and many follower-ensembles existed in many Russian cities. I remember my professor in ethnomusicology in Georgia, the late Grigol Chkhikvadze telling me that for a few years, while he was studying in Russia (in St. Petersburg) during the 1930s, he was a director of a “*Khor Tsigan*” (“Rom Choir”). The Rom singing style was very much appreciated in Russia and had a profound influence on the Russian popular singing style.

Ukraine

Regarding polyphonic singing traditions, the second largest country of Europe (after Russia), the Ukraine has quite a paradoxical situation. On one hand, the Ukraine is the home of very interesting and rich forms of traditional polyphony (in Ukrainian *bogatogolosie*) and on the other hand most of the Ukrainian ethnomusicologists display almost a total neglect towards their own polyphonic traditions.

Founders and the greatest representatives of early Ukrainian musicology Filaret Kolessa (at the beginning of the 20th century) and Klyment Kvitka (from the 1920s and 1930s) were concentrated on the study of solo professional singers (mostly blind musician-minstrels, *kobzars*). Polyphonic singing (“*gurtovoe penie*”) was not in the mainstream of their research interests. K. Kvitka, considering polyphony a late phenomenon, wrote with regret about the replacement of the ancient monophonic tradition of refined music with the late mass tradition of “*gurtovoe penie*” (group singing, or choral polyphony. Kvitka, 1986:87).

One of the best publications of the beginning of the 20th century, representing Ukrainian polyphony (unfortunately, regionally very limited), was published by the Russian scholar Evgeniya Lineva (Lineva, 1991, the first edition –1905). Severely criticized by Kvitka, the publication did not have much influence on the development of Ukrainian ethnomusicology. It is clear today that at least some points of the critique were not deserved. For example, Kvitka wrote that the transcription of traditional songs by ear from memory is much more scholarly than the transcription from phonographic recording (as it was done by Lineva).

A monumental volume “Ukrainian Traditional Polyphony” was published in 1962 (Iashchenko, 1962). A special research article about Ukrainian polyphony came out as a part of this volume. Unfortunately, although the songbook gives plenty of examples of Ukrainian polyphony, the songbook (1) did not provide a regional study of polyphonic traditions; (2) failed to pay any attention to the most important polyphonic northern region of the Ukraine – the so called “Polissia”, and (3) failed even to mention the drone type of polyphony in the territory of the Ukraine (more so: there is a special declaration that drone in Ukrainian music exists only in instrumental music, and not in vocal music. Iashchenko, 1962:57). The whole volume represents solely the examples of late style polyphony, obviously influenced by European classical music (with parallel thirds and European style triadic harmony). There is almost no mention of any possible parallels of Ukrainian polyphony in the accompanying songbook research (even with Eastern Slav polyphonic traditions), and the polyphonic traditions in Ukrainian music are declared to be a result of the late influence of European classical polyphony on Ukrainian traditional monophonic music. My colleagues would agree that this position was generally abandoned in European musicology at least after the first publication of Schneider’s “History of Polyphony” in 1934-35.

In my opinion, the most informative publication on Ukrainian polyphony is a relatively small article (14 pages) by Vladimir Matvienko “On some

peculiarities of Ukrainian Traditional Polyphony” (Matvienko, 1967). Matvienko rejected the idea of the late (19th –20th century) origin of Ukrainian polyphony and suggests that the traditional polyphony was one of the main forces behind the development of Ukrainian professional polyphonic music. Matvienko was also the first who wrote about the existence of drone polyphony in the earliest layers of ritual and calendaric songs of Polissia, and pointed to Polissia as the most important region for the distribution of Ukrainian traditional polyphony. He also was the first to write about the tradition of using dissonant chords and intervals, containing seconds (the idea of the use of dissonances in Ukrainian polyphony was totally rejected in the 1962 volume on Ukrainian polyphony).

Despite the 1967 article by V. Matvienko, the same neglect towards traditional polyphony continued in Ukrainian ethnomusicology. In the early 1990s I received a PhD of a Ukrainian scholar, Irina Belosvetova, and as I looked through the musical examples first, I remember how delighted I was to see plenty of examples of very interesting drone polyphony with secondal dissonances. The dissertation was about one of the regions of Polissia. I started reading the manuscript with much anticipation of the discussion of this interesting phenomenon. Despite the fact that the work was very professionally written, the fact of the existence of polyphony in Polissia (let alone drone polyphony) was hardly even mentioned. To be precise, the word “polyphony” was mentioned only twice, and the term “drone” was not mentioned at all. In the later published standard work, “The History of Ukrainian Music”, published in 1989, and written by a group of leading Ukrainian musicologists, the special section about Ukrainian traditional polyphony mostly follows the 1962 book on Ukrainian polyphony. So, for example, the archaic polyphonic tradition of Polissia with the drone and dissonant intervals is totally missing in 1989 book. Generally speaking, the same trend still continues, and even in the feature article about Ukrainian music in the Garland Encyclopedia of World Music there is nothing about the drone polyphony with dissonant intervals in Polissia (Noll, 2000).

Fortunately, from other smaller publications (together with the article of Matvienko, mentioned earlier) and some unpublished and published material (mostly papers, delivered at the polyphonic conferences and symposia in Georgia) we do have a more complete idea about the distribution of different types of vocal polyphony on the territory of the Ukraine. For example, in a special paper about the polyphony in Polissia written for the 2004 Tbilisi conference, dedicated to traditional polyphony, E. Efremov distinguishes two main styles of polyphony in Ukrainian Polissia: (1) Drone polyphony, and

(2) heterophony. Drone polyphony with a small range melody is characteristic to the northern regions of Ukrainian Polissia. Heterophony is characteristic for both the northern and southern regions. In the northern regions heterophony is based on dissonant harmonies and develops within the third, and in the southern regions heterophony is more parallel third oriented and has a wider range melody (Efremov, 2005).

Generally speaking, the tradition of polyphonic singing in the Ukraine decreases as we go from East to West and from North to South. Therefore, the most polyphonic region is the northeast part of the Ukraine (eastern Polissia), and the only region where there are no data about vocal polyphony, is the southwest part of the Ukraine.

Not going into the detailed classification of polyphonic traditions into types and sup-types, we can say that there are three main polyphonic styles in the territory of the Ukraine:

(1) **Drone polyphony**, present in the most archaic genres of the Polissia region, both in the West (for example, in the Brest district) and particularly – East Polissia. Although Shevchuk mentions drone polyphony in Polissia as a sub-type of heterophonic polyphony (Shevchuk, 2001: 200), the difference between drone and heterophonic types of polyphony is a difference of kind; Here are examples of two-part drone polyphony from Polissia:

Ex. 19. Ukraine. (From Elena Murzina)

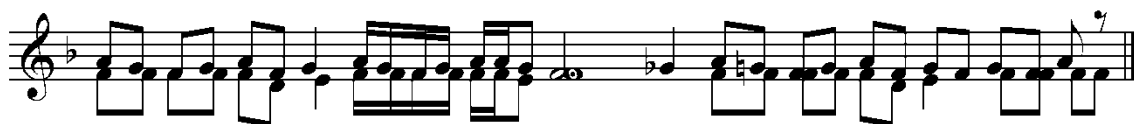


Ex. 20. Ukraine. (Belosvetova, 1989:32-33)



In the Poltava region the drone is “shaken” although the closeness to the previous examples is obvious:

Ex. 21. Ukraine. (From Elena Murzina)



(2) **Unison-Heterophonic polyphony** with the elements of two-part Russian type *podgolosochnaia polifonia*. In this style the main melody is performed by the majority of singers and a solo singer performs a contrasting melodic part on top of the melody. This style has not received much attention in Ukrainian musicology as well, although it definitely was not as neglected as the drone polyphony. The East Ukraine is rich with *podgolosochnaia polifonia*, and the west Ukraine (Northwest) is mostly heterophonic.

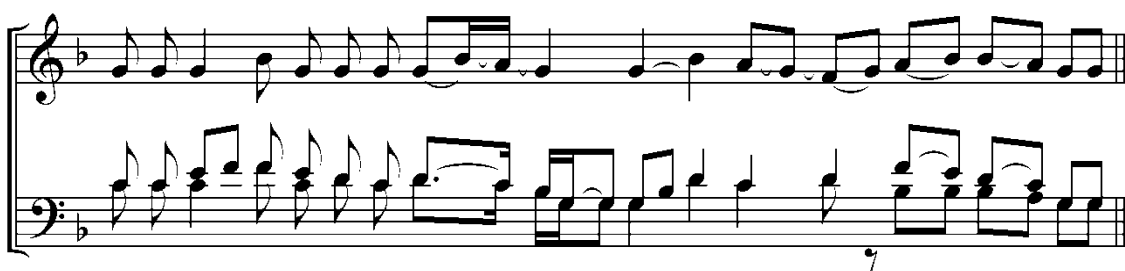
Here is the example of two-part polyphony with parallel thirds and unisons in crucial points:

Ex. 22. Ukraine. (From Elena Murzina)



The most complex tradition of this type of polyphony, based on two- and three-part singing comes from the river Don Cossacks:

Ex. 23. Ukraine. (From Tatiana Rudichenko)



(3) And finally, the late style of traditional polyphony, based on the **European chordal and harmonic system**. As I have already mentioned earlier, this style has been overwhelmingly represented in mainstream publications by Ukrainian musicologists. Here is a typical example:

Ex. 24. Ukraine. Late polyphonic style. (Gordeichuk, 1989:95)



Belarus

Belarus is a part of the “triad” of the east Slav peoples: Russia-Ukraine-Belarus. Like Russia and the Ukraine, Belarus also shows a regional distribution of some very interesting traditions of vocal polyphony. Unlike the Ukraine, where polyphonic traditions decrease from North to South, in Belarus the most polyphonic region is the southern part of the Republic, and, exactly like the Ukraine, the most polyphonic region in Belarus is the same “Polesie”, the border region between the Ukraine and Belarus (Kutireva, 1985:36). The Belarus name of the region – “*Palessie*” literary means “Region of Forests” in Belarus (the same as the Ukrainian name of the same region – *Polissia*). The least polyphonic region of Belarus is the northern part of the country (“*paazerie*” – “Region of the Lakes”). Generally, the polyphonic tradition in Belarus is decreasing from south to north, and Belarus ethnomusicologists pointed to the crucial importance of the drone polyphonic tradition of the Palessie region. The Palessie region holds a very special place in eastern Slav studies, so let us discuss this region in a bit more detail.

Polesie (Polissia, Palessie) is actually the bordering region between all three east Slavic peoples – Russians, Ukrainians and Belarus (and reaches Poland in the west). Geographically Polesie represents the biggest forest massive in Europe (which includes large swampy areas). Polesie has long been regarded as the region of the most archaic layers of language, ethnography and culture of the East Slavs. In this context the existence of drone polyphony among eastern Slavs almost exclusively in the region of Polesie is extremely interesting and important for the study of early forms of traditional music of Eastern Europe.

Unfortunately, the Polesie region underwent one of the most catastrophic events in human history – the Chernobyl nuclear disaster in April 1986 happened in the very heart of the Polesie region, affecting both the Ukrainian and the Belarus parts of Polesie. Shocked by the prospects of mass displacement and gradual devastation of the local population, and trying to document as much of the existing musical traditions as possible while they were still alive, the leading Belarusian ethnomusicologist Zinaida Mozheiko organized special fieldwork just a few weeks after the Chernobyl disaster. Together with a technician and a driver, the three of them travelled long distances through the infected (and still populated) villages and recorded as much as they could. “Sometimes we would suddenly feel very fatigued, so we would just stop our car in the middle of our way from one village to another and would fall asleep”, Zinaida Mozheiko told me later. The result of this heroic fieldwork was devastating for the fieldwork participants. Within five months after the fieldwork two (out of three) members of the fieldwork team were dead from different forms of cancer. Zinaida Mozheiko (the only female participant of the fieldwork) survived, although she was seriously ill for several months. By the way, the photo of Polesie musicians at the wedding in the *Garland Encyclopedia of World Music* (pg. 793) was taken during that fateful fieldwork.

The drone polyphonic tradition in Polesie is performed by women (the same as in the Russian and Ukrainian regions of Polesie). There are two parts – the drone (both rhythmic and pedal versions, performed by a group) and the top melodic part – with a soloist singing a small range (mostly within a fourth) melody, often creating seconds with the bass. Very specific are the cadencies – the extremely long unison, where the melody and drone come together at the end of every musical phrase. This long unison lasts longer (sometimes twice as long – Kutireva, 1985:37) than the main melodic part of the song and can often last more than 20 beats (Mozheiko and Survilla, 2000:794). In terms of the development of the vertical component of the drone type of polyphony, Kutireva points out the formula: “dissonance – consonance – unison” where the musical idea starts with the dissonance, and before it goes to the final unison, it always goes through the interval of a third (consonance) (Kutireva, 1985:38-39). Occasional three-part chords appear in the cadences (see the last example). Here are a few examples of traditional polyphony from Polesie:

Ex. 25. Belarus. (Mozheiko, 1983:156)



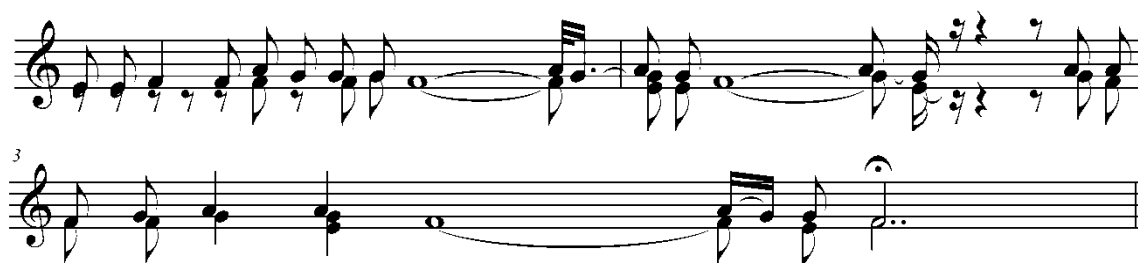
Ex. 26. Belarus. (Mozheiko, 1983:135)



Ex. 27. Belarus. (Mozheiko, 1983:136)



Ex. 28. Belarus. (Mozheiko, 1983:102)



Besides the drone polyphony, the Palesie region also harbours unison-heterophonic types of polyphony. “As a rule, group singing is heterophonic and especially elaborate in the southern region of Palesie. There are two types of heterophonic song: dissonant two-part singing ... and multi-rhythmic monody, in which the divergence from unison arises from variations in the fundamental melody because of differences in ornamentation... This variety of heterophonic singing is particularly characteristic of harvest songs.” (Mozheiko and Survilla, 2000:794-795). In southern, central, and eastern Belarus a two-part singing style with *padvodka* is also characteristic. The main melody is always sung in the lower part called *bas* (pl. *basy*), and to sing the lower part is called *basavats*. The top part (*podvodka* or *hakashnik*) is sung by a soloist and represents the main musical contrast to the melodic low part (Mozheiko and Survilla, 2000:795). Out of the two main types of polyphony – drone and heterophony, the latter is distributed much wider (Kutireva, 1985:36).

Besides the drone and heterophonic styles of polyphony, a later style of polyphony based on a third parallelism has also been distinguished in Belarus traditional songs (Kutireva, 1985:38).

With the survey of Belarus we have completed the survey of the three Slavic countries of Eastern Europe – Russia, Ukraine, and Belarus. Vocal polyphony plays a major role in traditional musical culture of all three countries. Without going into the detail, we may say, that heterophonic polyphony, and connected to heterophony a specific style of functional two-part (sometimes three-part) polyphony, known mostly as *podgolosochnaia polifonia* is widely distributed in the territory of these countries. Much more specific is the distribution of the drone polyphony, which is mostly concentrated in the border region between the Ukraine, Belarus and Russia, known as Polissia/Palessie/Polesie. This region is well known among ethnographers and linguists of the Slavic world, as scholars have long noted the greatest concentration of the most ancient elements of the material and spiritual culture of the Eastern Slavic peoples in Polesie. The third style of polyphonic music in the territory of the Eastern Slavs has obvious traces of the late influence by European professional polyphony with parallel third and triadic harmonies.

Georgia

Although the main focus of my first book on traditional polyphony (Jordania, 1989) was the international distribution of polyphonic cultures of the World, the focus on Georgian polyphony was obvious, and a good half of the book (more than 150 pages out of 300 pages in total) represented a detailed description and analyses of different aspects of Georgian polyphony. This book does not focus so much on Georgian polyphony, but as the tradition of Georgian polyphony represents one of the most complex polyphonic traditions known in ethnomusicology today with uniquely rich live traditions and local styles of village and urban polyphonic singing, we will be covering several important aspects of Georgian traditional polyphony. Therefore this section will be divided into several sub-sections.

Georgia (in Georgian “Sakartvelo”) shows an array of important signs of unbroken cultural ancestry. Autochthonous residents of Transcaucasia, Georgians still speak the Georgian language, which survives from the epoch of the pre-Indo-European languages. The only possible relationship of the Georgian language outside the Caucasus seriously discussed by linguists is that with the Basque language, the only survivor of the pre-Indo-European languages in Western Europe. Geographically Georgia is part of the region known as “Transcaucasia”, situated on the southern slopes of the Great Caucasian mountain range, stretching from the Black Sea to the Caspian Sea (more correctly – the Caspian Lake, the world’s biggest lake). Being

surrounded by the highest mountains of Europe (reaching at several points more than 5.000 meters), the Caucasian mountain gorges represent the ideal “hiding spot” from outer influences for isolated populations. Even today for a big part of the year the only way to reach some of the populated regions of mountainous Georgia is by helicopter only. From the East and the West Transcaucasia is protected by the waters of the already mentioned Black and Caspian seas, and even the southern approach is not an very easy route because of a number of other (although smaller) mountain ranges. Although partly living at the seaside (east coast of the Black Sea), Georgians have never been great travelers and most Georgians still live in Georgia.

Vocal polyphony in Georgia

Unlike many countries in Europe, where the tradition of polyphonic singing is represented only in some of the regions, the whole of Georgia is one big group of closely related polyphonic traditions. Readers may remember the opening of this book when, walking down the streets of old Tbilisi and singing with my colleague two parts of a three-part Georgian song, we suddenly received help – the third part - from an unknown Georgian who happened to hear us at that moment. Another story from the introduction of this book, when traditional singers started singing a harmony to a classical aria totally unknown to them, just to “help” the opera singer at the table who was “left” by his colleagues without supporting harmonies, is also typically Georgian. In another small but very precious moment for me, I remember walking up Alexander Chavchavadze Street late at night on December 4th, 1978, together with my late father, ethnomusicologist Mindia Jordania, and listening to the singing of a Georgian male, who was drunk (obviously just leaving the feast) but was still singing and simultaneously supporting his friend, who was too drunk to sing, and actually, even to walk. When a few moments later this “supported” friend also made a couple of painful attempts to start singing, I unconsciously wondered whether he would start singing the melody in unison or would sing a harmony. He started singing a harmony, and a moment later my father told me he had the same thoughts as I did.

Another story from my native Tbilisi is more interesting and multi-layered. I was at my grandmother’s family house on the slopes of “St. Mountain” (the dominating mountain in the very centre of Tbilisi). It was late evening in a hot Tbilisi summer and all the windows were wide open to catch the faint evening breeze. I was on the open veranda and I could clearly hear from the open windows that our neighbors, two Georgian males, were having a small feast. As usual, they were proposing toasts and drinking. I could hear

every word of every toast they were proposing. Georgian toasts are very interesting – on one hand they are always the same (I mean that everyone knows which should be the first, second, or the third toasts etc, but with a plenty of space for improvisations as well), but still you cannot “number” them like familiar jokes from an internationally known joke book. In Georgia you need to verbalize these toasts through your experiences and ideas every time you are at the table. The feast proceeded without singing, but at some point one of them started singing an urban song, and his friend very soon joined him. Neither of them was a great singer, but both of them were at least singing in tune. The only problem (at least for me) was that they were singing in unison. That was disappointing for me, as I believed Georgians never sang in unison. “Well,” I remember thinking, “Georgians do sing in unison sometimes”. A few seconds later my great aunt Keto came out on the veranda. “These guys, Edik and Lova, they cannot sing but they are still singing!” she commented with a hint of annoyance in her voice. These names, not very typical for Georgians, gave me an idea. “Are they not Georgians?” I asked with some surprise, as their obviously native command of the Georgian language, a good knowledge of the feast traditions and long poetic speeches did not give me any grounds to suspect otherwise. Unlike me, Keto knew both of the participants of the feast, her neighbors, in person. “No. They are not Georgian. Edik is Ukrainian, and Lova is Armenian” she told me in response. As a matter of fact, it is interesting why Keto did not like their singing in the first place – as director of a few choirs in Melbourne, I would not have minded having these guys in a community choir as they definitely could sing in tune quite well. I believe Keto was annoyed by the fact that they were singing in unison. Amazingly, out of the whole set of cultural traits (perfect Georgian speech, detailed knowledge of Georgian traditions and singing Georgian songs), only the fact that they were singing Georgian song in unison was not “Georgian”. So my belief that Georgians never sing in unison survived.

To tell the truth, I did once hear (on the 28th July 1985 during my fieldwork in Upper Svaneti) two Svanetian teenagers singing in unison. They sung only one phrase of a distorted version of a popular children’s song. I was so shocked by the fact of their singing in unison that I still remember the distorted melody they were singing (this was a song “Hit the drums” from the repertoire of “Mziuri”, a Georgian pre-teen girl’s pop-ensemble, very popular in the 1980s).

Ethnomusicologists noted from the 19th century that traditional Georgian monophonic songs are always performed by an individual. More so –

monophonic singing occurs only when the performer is alone (during work in a field, or alone on a road, or putting a baby to sleep, or lamenting alone). If, for any reason, the person is not alone, then even the traditionally monophonic songs can easily turn into polyphonic ones. So, there are polyphonic versions of lullabies, dirges, and field working songs.

General and regional characteristics

Georgia is usually divided into fifteen ethnographic regions (see the map). Some of them are very big, such as Kartli, Kakheti or Imereti, but some of them are very small – particularly in the northeastern part of Georgia.

Without going into a detailed analysis of each ethnographic region, let me first briefly discuss the general characteristics of Georgian polyphony, and then we'll concentrate on the main stylistic features of the major regions.

- (1) Two-, three- and four-part singing is spread through different regions of Georgia, with two-part singing mostly in the mountainous Northeastern regions of East Georgia, and four-part singing in the Southwestern part of Georgia. Three-part singing is the most widespread throughout Georgia;

Fig. 1. Ethnographic map of Georgia (Tsitsishvili, 2004. Used with permission)



- (2) There is no tradition of group unison singing in Georgia, so monophonic songs are performed by individual singers;
- (3) There are more than a hundred terms indicating the names and the functions of different parts of the polyphonic texture (Jordania & Gabisonia, 2011). There has been controversy over the traditional terminology of such names as the “first”, “second” and “third” parts. Later it became clear that the middle part of the song is the “first part”, as it is the main melodic part of the song. The “second” part is the top part, and the third is the bass (M. Jordania, 1972);
- (4) The individual singers always sing main melodic parts, and the group usually sings the bass. In the tradition of “trio” songs (only in western Georgia) the bass is also performed by the solo performer. In four-part western Georgian harvest songs there are actually two basses – one is a pedal drone in the middle of the texture, and another is a melodically active low base;
- (5) Drone and ostinato are the two most important principles of polyphony in all regions of Georgia;
- (6) Sharp dissonant chords are in high esteem in Georgian traditional polyphony.

Georgia can be divided into eastern and western parts, as well as into northern and southern parts. The east-west division is generally considered to be stylistically more important. The north-south division generally follows the natural division between the high mountainous northern and relatively flat southern regions.

East Georgia

East Georgia consists of two of Georgia’s biggest ethnographic regions – Kakheti (the Southeastern part) and Kartli (the central part) and five (some maintain six) small mountain regions in the Northeastern part of Georgia: Khevsureti, Pshavi, Tusheti, Khevi, Mtiuleti (and according to some classifications – Gudamakari as well. Garakanidze, 1991).

The plain regions of eastern Georgia – Kartli and Kakheti - have always been historically central for Georgia. State unity started here, and the capital city (Tbilisi) has been the centre of Georgia for the last 1500 years. The best-

known feature of eastern Georgian traditional singing is the presence of long, “drawn-out” table songs from Kartli and particularly Kakheti. These songs are performed by the two melodic lines singing against a background of a steady pedal drone on “O”. The leading melodies are always performed by individual singers and the drone by all the others. So, for example, if there are two hundred singers at the wedding, and (as usual) they all join in singing, only two of the best singers would sing the two leading top parts, and the other 198 will sing the drone. The leading melodic lines have a wide range (about an octave or wider) and of these two melodies one is usually a bit higher than the other. The lower melody is considered to be the leading part of the song (*mtkmeli*, the one who speaks, or the “first voice”), who usually starts a song, followed by the higher “second voice” or *modzakhili* (the one who follows). The main task of both lead singers is to ornament their melodic lines. The tempo is usually slow, and the songs are mostly performed in free time. Today these two parts quite often sing in parallel thirds, although recordings in the first half of the 20th century show that the coordination between these two melodic lines was freer, ranging from seconds to sixths. Some major sections of eastern Georgian table songs are performed in two parts, as the leading singers sometimes alternate with each other.

Ex. 29. Tamar Kalo [Maiden Tamar]. East Georgian table song (opening section). (Garakanidze, Jordania, 2004:114)

Ad libitum ♩ ≈ 150

The musical score is written in staff notation with a treble and bass clef. The tempo is marked 'Ad libitum' with a note value of approximately 150. The lyrics are written below the notes. The score is divided into three systems. The first system shows the beginning of the song with the lyrics 'ta-mar k'a-lo, k'vekh-nis tva - lo, a - ru - la - lo,'. The second system continues with 'he he a a - ru - la - a - lo da, he he he - i - da,'. The third system concludes with 'a - ru - la - lo,'. The notation includes various musical symbols such as notes, rests, and accidentals, and the lyrics are written in a stylized font.

ta-mar k'a-lo, k'vekh-nis tva - lo, a - ru - la - lo,

he he a a - ru - la - a - lo da, he he he - i - da,

a - ru - la - lo,

According to a common belief of Georgian ethnomusicologists, this kind of three-part drone polyphony evolved from two-part drone polyphony with alternating main singers, when the two main singers started singing some sections together, gradually increasing these sections. As a matter of fact, in a few of my earlier publications I suggested that the enigmatic name of the most famous East Georgian table song “Chakrulo” represents this historical evolution from a two-part (alternating) to a three-part (combined, “embraced”) singing of two lead singers. The term *Chakrulo* literally means “embraced”, of “tied together” (Jordania, 1981, 1984, 1989).

Although the bass is a pedal drone in eastern Georgian “long” table songs, it does move, leading to key changes (modulations). These occasional bass moves are extremely important for the overall form of a song. These key changes, or modulations, make up the main tonal body of the table song. For example, the tonal body of the famous table song “Chakrulo” consists of the following modulations (indicating only the key changes): G – E – F# – G# – A# – G# – F – G – A – B. These bass movements are the most stable element of East Georgian table songs, as they are performed by a big group of singers in unison and are less prone to any changes and improvisations.

These modulations are one of the most fascinating elements of East Georgian table songs, as they are relatively rare among traditional polyphonic cultures. Aslanishvili was the first to investigate this important sphere (Aslanishvili, 1970). I have dedicated my 1982 PhD thesis (Jordania, 1982) to them, and they deserve to be discussed at least briefly.

Modulations can go both ways – downwards and upwards. More varieties occur during downward modulations. Downwards modulations can bring the key a major second, minor and major third down. Upwards modulations are almost exclusively by the major second up. Two more complex modulations – by the minor second down and the minor second up - happen only in another famous eastern Georgian “long” table song – “Long Kakhetian Mravalzhamier”. Here are the “harmonic skeletons” of two modulations that take place in East Georgian table songs: (1) a minor third down (from G to E). This modulation is prepared by the specific melodic formula in the top part, singing the phrase from the octave to the fifths of the future scale, and (2) minor second up (from G to G#). This modulation involves a complex chain of chord progression from G, A, B, F# and finally G#:

Fig. 2. Modulation from G to E tonal centre

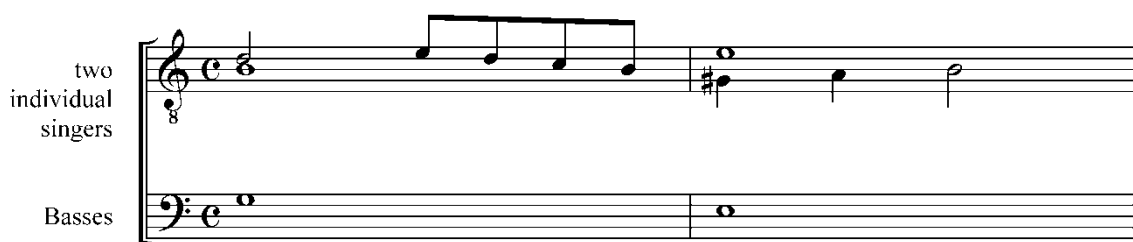


Fig. 3. Modulation from G to G# tonal centre



The scale in East Georgian table songs is very consistent – always the same diatonic scale, commonly known as Mixolydian (the white keys from “G” to the next “G”). I shall specially discuss the scales of Georgian polyphonic songs in a later separate section, as I do not believe this name (“Mixolydian”) adequately expresses the nature of this scale in eastern Georgian table songs.

Modulations always occur in the bass part (when the bass moves to another pitch), but it is one of the high melodic voices that prepare this modulation. The most common way of preparing the modulation is the appearance of the elements of the future scale within the initial tonal centre. For example, if we are in “G” Mixolydian (which has no black keys) and want to move (modulate) into “A” Mixolydian (which has C# and F#), the top melody will sing a melodic phrase, containing F#, and this will give the bass singers (and listeners as well) a powerful signal that the key must move a major second up into “A” Mixolydian. In the same way, if we want to modulate from the same “G” (no black keys) down into “F” (which has two black keys – B flat and E flat) the best way to “prepare” the modulation is to sing the note B flat in one of the high parts and the bass will move down to “F”.

This technique of modulation is remarkably similar to the modulation methods of classical European music. For example, if we want to move from “C” major (no black keys) into “F” major (one black key – B flat), the easiest way is to have the note B flat appearing within the C major chord. When we hear the elements of the future scale, our ear is prepared to move there, both in Georgian and European classical music systems.

Long table songs are not the only genres of polyphonic music in East Georgia. There are plenty of other singing genres here as well – from horse-riding to love, healing, working and round dances. Interestingly, none of them are performed in the style of the long table songs. Although the moderate use of ornaments is encountered in most of the eastern Georgian genres (particularly in the solo, opening sections), the rhythm is usually precise, the songs do not employ the complex system of modulations, pedal drone is mostly replaced by the rhythmic drone, or ostinato, and the verbal text is often rendered by all three parts simultaneously. Here are the two examples of this singing style:

Ex. 30. Gigini [humming] lyrical song (Garakanidze, Jordania, 2004:5)

Andante

solo

o ho ho ho, i - a - o, 1.chven-sa cha-mo-di-a - o.
2.var be-ri-ka-tsi-a - o.

am ert ch'i-k'as ki-de dav-lev, o, me-re dav-tvre-bi-a - o, o.
a-xa-lu-xi she-mo-matsv-da o, cho-xats ar mats-vi-a - o, o.

Ex. 31. Garekakhuri Lashkruli [A horse riding song] (Garakanidze, Jordania, 2004:65)

Maestoso ♩ = 70

A-ru-la-lo hai-da har-nu-na - no, ha-ra - la - li, ha - ri ha - ra - lo,
har-nu-na - no, hai-da har-nu-na - no, ts'as - vla jobs ts'ar - ma - va - li - sa,



Polyphonic singing traditions in the north eastern ethnographic regions are not as developed as in Kartli and Kakheti. Two-part singing dominates here. The northeastern dialectal regions are usually united into two groups: the Tusheti, Pshavi and Khevsureti are generally regarded as more archaic regions (especially Khevsureti), and the Khevi and Mtiuleti are considered to be more advanced. The singing traditions of Khevsureti are of particular interest. They are traditionally regarded as the most archaic survival of the ancient Georgian singing tradition (Chkhikvadze, 1948, 1961, 1964, Araqishvili, 1905, 1916). This hypothesis, I think, does not take into account several very important factors. We will discuss these factors in a separate section in the second chapter, when I shall discuss several isolated polyphonic traditions as separate “cases studies”. Pshavi could be the classical representative of this small group, with two-part drone singing, antiphon between the two soloists, major second moves of the drone, and the typical cadences on the unison. Tusheti is known as the region of the seasonal shepherd-travelers with interesting ties to the neighbouring North Caucasian peoples, and some features of their musical traditions unusual among other Georgian regions.

Khevi and Mtiuleti represent a more advanced region, where two-part singing is well established and there are songs where three-part singing plays an important role. Interestingly, in the Khevi and Mtiuleti three-part singing traditions there are obvious links with Svanetian traditional polyphony from the highest mountain region of western Georgia (Garakanidze, 1991).

One more region which we have not mentioned so far, is Meskheta, in the southern part of central Georgia. This is the only region of Georgia where (possibly mostly due to demographic reasons) the tradition of polyphonic singing began disappearing during the 20th century and was finally lost in the 1970s). According to the last survivors of the local polyphonic tradition, the

Meskhietian polyphonic style was close to the eastern Georgian (Kartlian and Kakhetian) style, with the drone (both pedal and rhythmic), and with “long” table songs with ornamented melody (Magradze, 1986; See also Chkhikvadze, 1961:XXII-XXIII).

Georgians also live outside of Georgia, in the district of Kakhi, in neighbouring Azerbaijan. This region is also known as Saingilo. The Georgian population of Saingilo is partly Christian and partly Moslem. The only ethnomusicological fieldwork that has been undertaken in the Saingilo region was a small, two-week fieldwork undertaken by the Institute of Literature at the Academy of Science of Georgia in 1987 among the Christian part of Saingilo. The author of this book made the only ethnomusicological contribution to the fieldwork. According to the results of this short fieldwork, the tradition of polyphonic singing (in harvest songs) was still alive at least in the village of Alibeglo in the 1920s and 1930s. Some of the melodies (both vocal and instrumental) recorded during the fieldwork combined (in one part) the elements of the melody and the bass as well (Jordania, 1988b:56-57). The group of young local patriotic males was singing new songs in the traditional Georgian style of drone three-part polyphony.

West Georgia

Going from eastern to western Georgia, we leave behind the world of long drones and melismatic melodic lines and enter the world of contrapuntal polyphony. This ostensibly clear picture is not very accurate though, as the drone still plays a leading role in western Georgian polyphony as well.

Western Georgia consists of six (according to some views – seven) so-called musical dialects. Unlike eastern Georgia, where we have two asymmetrically big plain regions and several much smaller mountainous regions, the differences between the regions are not as big in western Georgia.

The musical differences from eastern Georgia are also quite obvious.

- Rhythmically western Georgian polyphonic songs are always well defined (no free metres);
- Melodic lines never use rich melismatic ornamentation, so usual for eastern Georgia and particularly for the genre of ‘long’ table songs;
- Instead of two- and three-part singing we are now in the world of three- and four-part polyphony;
- The drone is present, but it is mostly a rhythmic drone, and besides, in some of the most complex songs the drone is in the

middle of the four-part polyphonic texture (instead of being in the bass in eastern Georgia);

- Unlike East Georgian drone and ostinato bass, the bass part in some West Georgian regions can be extremely active melodically.

- The yodel (absent in eastern Georgia) adds another important element to the sound of the western Georgian singing style;

- The tradition of “trio song” (sung by three individual singers) is also unique to some regions of western Georgia;

- Triple metres $\frac{3}{4}$ and $\frac{3}{8}$, very popular in eastern Georgia (particularly in certain round dances), as well as the specific “melody of *Iavnana*”, are rare in some regions and completely absent in other regions of western Georgia.

The best-known tradition from western Georgia is the highly developed tradition of contrapuntal polyphony in Guria. Let us have a look at an example of a four-part section of the harvest song *Naduri*:

Ex. 34. Naduri. Harvest song (performed during hoeing on maize fields) excerpt from the final 4-part section (transcribed by Joseph Jordania)

The musical score for Ex. 34, *Naduri*, is presented in two systems. The first system consists of two staves. The top staff, labeled 'Krimanchuli & Mtkmeli', features a melody with eighth and sixteenth notes, including a triplet. The bottom staff, labeled 'Shemkhemobari's & Bases', provides a bass line with a steady, active melody. The second system continues the same parts. The key signature has one flat (B-flat), and the time signature is 2/4. The score is transcribed by Joseph Jordania.

In this four-part section we can see: (1) *Krimanchuli* (“distorted falsetto voice”, or according to the other version, “distorted jaw”) – a western Georgian yodel that was admired by Igor Stravinsky, (2) *shemkhemobari* (“the sound that accompanies” – this is a specific pedal drone in the middle of the texture and, believe me, this is the best voice to join in to enjoy the astounding harmonies of “Naduri” songs) (3) *mtkmeli* (lit. “the one who

speaks”), the leading voice, who starts the song and which is the only part that recites the text, and (4) *Bani* (“the bass”), the lowest voice, which is melodically very active, and mostly sings a perfect fifth below the pedal drone of *shemkhmobari*. Out of these four parts, two of them (*shemkhmobari* and the bass) are traditionally performed by groups of singers, and the two other parts (*krimanchuli* and *mtkmeli*) are performed by individual singers.

If we look at this example of western Georgian four-part polyphony, we can see that it contains a few compositional principles of polyphony: (1) ostinato (the top part, yodel), (2) pedal drone (*shemkhmobari*, second from the top), (3) a mixture of the rhythmic drone and the free melody (*mtkmeli*), and (4) the free melodic line of the bass. This kind of mixture of different compositional principles is in fact very common for the Georgian (and particularly western Georgian) tradition of polyphonic singing. Gabisonia distinguished several such types of Georgian polyphony, based on a mixture of different compositional principles of polyphony, in a special group of *synthesis* types of polyphony (Gabisonia, 1988:12).

The tradition of “trio” (“three singers”) is considered by many to be the climax of Georgian traditional polyphony. This is not to be sung by everyone present. All three parts are sung by individuals, including the bass part. This feature (solo bass) is unique to a few western Georgian dialects (Guria, Achara, Imereti, Samegrelo). Unlike eastern Georgia, where the bass is mostly a drone or ostinato, and is always performed by a group of singers, in western Georgia the bass can be the most melodically active part of the song (Jordania, N. 1985, 1986). This is a result of the widest improvisational possibilities for the bass part to create new exciting dissonant harmonies. Have a look, for example, at two small excerpts from different versions of the same section of the same song – it is up to the bass as to which way to go in the cadence to create a totally different final chord, and first time the bass ends up on A, and the second time on E. Continuation after the cadence is the same:

Fig. 4. Guruli Zari [Gurian lament] two different endings of the same phrase (compare the bass part in bars 1-2 of both versions)





These wide improvisational possibilities of the bass part to create a wide range of melodic and harmonic versions in trio songs attracted the most talented Gurian singers, and for this reason most of the well-known Gurian singers were known as bass performers (N. Jordania, 1985). Interestingly, although well-known Gurian singers could sing all the parts of trio songs, when they meet, the most experienced singer is usually suggested to sing the bass as a sign of respect and acknowledgement of his expertise. This must be the reason why in western Georgia the bass also can start songs (unlike eastern Georgia where only the top melodic parts start a song).

Trio songs have some other specific features – they are mostly slow or medium tempo, are performed, as Georgians say, “*giginit*” (humming, softly), and the structure of the trio songs is often complex and asymmetric. Here is the famous “Shavi Shashvi” [“Blackbird”], version by Vladimer Berdzenishvili:

Ex. 33. Shavi Shashvi [Blackbird]. First part of the song
(Garakanidze, Jordania, 2004:117)

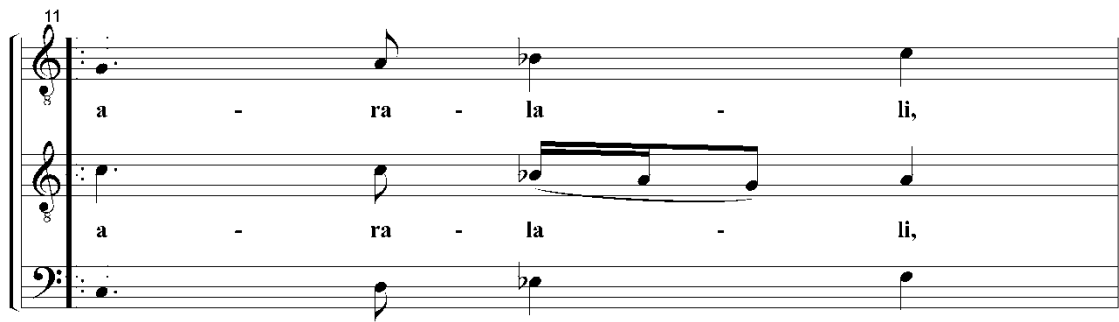
1
vo - i, di - la, voi di -

sha-vi sha shvi chi-o - da, vo - i, di - la, voi di -

6
lo, di-la o-de-la-u-da, a-la - lo, a-ra-la - li, a-ra-lo,

lo, di-la o-de-la-u-da, a-la - lo, a-ra-la - li, a-ra-lo,

da - a ra - la - li



Improvisation in western Georgian polyphonic songs

One of the most important and fascinating aspects that we must also discuss here is the principle of **improvisation** in western Georgian complex polyphonic songs. Unlike some monophonic traditions, where the performers have a well-classified system of scales and melodic types, there are no (or almost no) so-called “native theories” of music in most of the polyphonic traditions in Georgia. (We will discuss this trend of polyphonic cultures in the second part of the book.) Therefore, although I believe there are some implicit “native principles” of improvisation, these principles are not articulated and consciously followed. The principles of improvisation, that I am going to discuss (from Jordania, 1989:144-146), are only acquired by traditional singers through the practical process of listening, learning, singing and improvising.

So I suggest that improvisation in western Georgian polyphonic songs is based on the simultaneous use of two principles:

- (1) The principle of **melodic (horizontal) development** of each part. Or, what is each singer singing melodically, and where he can improvise? This principle is based on the use of **consonant intervals** (thirds and fifths) in the melodic development of each part. This means that the key melodic notes are exchangeable by other (related) notes thirds or fifths above or below.
- (2) The principle of **harmonic (vertical) coordination** between the parts. This principle is based on the use of **dissonant intervals**: seconds, fourths or even sevenths.

So, each melody has its tonal centre, axis, and the performer can improvise from this centre thirds and fifths (**consonances**) above and below. Simultaneously with this, each of the three (or four) parts of the polyphonic texture has their tonal centres in a vertical coordination on **dissonant** intervals (for example, as in the four-part harvest song above, the tonal centres of different parts were: F, B flat, C, and F). After this the simple

mathematical principle of putting together the negative and positive elements is constantly at work. You may remember the old principle “My friend’s friend is my friend. My friend’s enemy is my enemy. My enemy’s friend is my enemy. My enemy’s enemy is my friend”. As the vertical coordination is based on dissonant intervals, the resulting chords during the improvisations will also be dissonances. This “double standard” (consonants for the melodic development and dissonances for the vertical coordination) works very well for Georgian music, where the sharp dissonances are very much appreciated.

Therefore, each of the participating singers has their axis, a specific pitch, and the performer improvises within a fifth up or down from this axis, using the “exchangeable” notes (third or fifth from the main axis) on the **strong beats**. If you have a look at the melodic development of individual parts of the Gurian working song “Naduri”, and then have a look at their vertical coordination, you will understand what I mean:

Fig. 4. Separate parts from “Naduri” coda

The musical score for the coda of "Naduri" consists of four staves. The first staff, Krimanchuli (yodel), is in treble clef and features a rapid, repetitive melodic line with many beamed eighth notes. The second staff, Mtkmeli (leading melody), is also in treble clef and shows a more melodic line with some rests. The third staff, Shemkhmobari (few singers), is in bass clef and contains a single, sustained note with a long horizontal line above it, indicating a yodel or a long hold. The fourth staff, Bani (basses), is in bass clef and shows a melodic line with some rests. The key signature has one flat (B-flat), and the time signature is common time (C).

I dedicated a special publication to the relationship of **scale steps** in Georgian traditional polyphony (Jordania, 1983). According to this publication, melodic and harmonic notes can easily exchange with notes a third or a fifth above or lower.

The final element of the western Georgian polyphonic style that we are going to mention here might already be evident to some readers – unlike European professional polyphony, Georgian polyphony does not use the principle of **imitation**. Each part of western Georgian counterpoint polyphony uses melodic phrases from the existing melodic and rhythmic “vocabulary” of their own parts. As a matter of fact, most of the traditional polyphonic cultures do not use the principle of imitation. So, except for the

exclusively rare element of imitation, Georgian polyphony is mostly based on three or four contrasting parts.

As in the case of eastern Georgian polyphonic singing, there are many more polyphonic songs and simpler styles in western Georgia than this very complex tradition of counterpoint polyphony. In simpler songs much more drone is used (predominantly the rhythmic drone), as well as ostinato formulae in the bass. In these “simpler” songs no individual bass, no yodel, and fewer improvisations are used as well. Many features unite these two (complex and simpler) styles as well: the use of the antiphonal alternation of two choirs, overlapping cadences, simple metre (almost the whole Gurian and most of western Georgian singing is based on the 4/4 metre), simple non-ornamented melodic lines, dissonant chords, cadences into unisons or fifths.

During our 1999 fieldwork in Georgia we (Nino Tsitsishvili and myself) specially recorded one of the most popular and not-so-difficult songs “I am going to Guria” from two of the brilliant improvisers of Gurian song, Anzor Erkomaishvili from the famous Erkomaishvili family (leader of the famous “Rustavi” choir), and Vazha Gogoladze from Chokhatauri. Nino and I provided two parts and the Gurian master-singers were asked to perform a few versions of each part of the song: easier, moderately improvised and very improvised versions. For those particularly interested in the improvisational techniques of Gurian singers, a comparison of all these versions could be highly interesting. Here is the very simple version of the song to give the reader an idea of it:

Ex. 34. Mival Guriashi. [I am going to Guria] Simple version
(transcribed by Joseph Jordania)

The musical score is written in staff notation with a key signature of one sharp (F#) and a common time signature (C). It consists of two systems of music, each with a treble and bass staff. The first system starts with a treble staff containing a series of chords and a bass staff with a simple rhythmic pattern. The lyrics are: "Mi - val Gu - ri - a - shi ma - ra, sul - ma tsin - tsin ge - i - pa - ra,". The second system continues the melody in the treble staff and the bass line in the bass staff. The lyrics are: "miv-di - c da ar mob-run - da da arts mi - i - go krta - ma - ad pa - ra da.".

10
8
A-ba-de-lo de-lo ov-di-la de-la da a-ba-de-lo, ov-di-la ra-ni-na

18
8
da.

Here are only four versions of the **bass part** that can be performed with this song. Although we did record the variations of two top parts as well, it is obvious that the bass part has the most improvisational freedom, the largest number of versions (here are only two from each singer), and the biggest differences between the versions:

Fig. 5. Mival Guriashi, simple high parts with four different bass versions performed by Vazha Gogoladze and Anzor Erkomaishvili (only the first part of the song – bars 1-9. Transcribed by Nino Tsitsishvili)

top parts (simple versions)

8

Vazha 1
Mi val Gu ri a shi ma ra sul tsin tsin

Vazha 2
Mi val Gu ri a shi ma ra da sul ma tsin tsin

Anzor 1
Mi val Gu ri a shi ma ra sul ma tsin tsin

Anzor 2
a-ba-de-la - va-a-he e-da he va he vo he a

2/4

V 1
ge i i pa ra — miv di e da ar da a bru — nda — da

V 2
ge — i pa ra miv di e da a — rda brun da da

A 1
ge i — pa ra ha ru di la mi vdi e da ar da brun — da

A 2
vai di la da da a ba de lo de lo de lo de lo di la vo da

7

V 1
arts mi i gho krta — mad — pa ra — da

V 2
arts mi i gho krta — mad pa ra — da

A 1
arts — mi — i — gho — krta — ma ad pa ra — da.

A 2
a ru di la va ha he he he va he i da a da

Interestingly, as Anzor Erkomaishvili told us after singing the most complicated contrapuntal bass version (version “Anzor 2” – “A2”) for the song “I am going to Guria”, “I sang this because I wanted to show you that it is technically possible to sing this kind of very complex and active bass, but this does not fit this song aesthetically. So I would not sing such a version of the bass part in this song with Gurian singers” (interview from 9 July, 1999). As a matter of fact, in this very complex version Anzor used the elements of the trio bass from one of the versions of the famous Gurian contrapuntal song “Khasanbegoura”. This was the only version where no song lyrics were used

by the bass singer, instead, Anzor performed it using only the typical, for the bass part meaningless vocables (like “abadela, vahe, arudila,” etc). Both singers strongly agreed that it would not fit the song if all three singers tried to do much improvisation simultaneously. According to both of them, a singer needs to listen to the other singers, and when others sing the simple way, you are allowed to improvise. Then you will start singing the simpler version in the next section and allow others to do the improvising. It is not only improvisational skills that are valued. Good taste as to when and how much improvisation to use is the most valued characteristic for “master-singers”.

The idea of “master singers” (the term was suggested by N. Jordania, 1985) seems to be very important for an understanding of the extraordinary development of Gurian traditional polyphony. Singers who were experts of both folk and church singing traditions were called “*momgeral-mgalobeli*” (lit. “Singer and church-singer”) and held a very high status in society. Most musically talented children would be sent from their homes to learn the church-singing tradition (of course, if the parent could afford this). Master singers would usually be part of a long-running trio (mostly with two other master singers), and would often try to be at different public gatherings together with the members of their trio (to be able to sing together).

The Gurian traditional singer Vazha Gogoladze, who died recently during a tour of Paris, told us during the 1999 fieldwork (and repeated again in 2003 during our meeting in Melbourne) about the musical evenings when the members of such a trio of “master singers” would create a new song or a new version of a traditional song. According to Vazha’s words, that would usually happen around a table at night. “They would take some food and wine, of course, but not much, because they mostly wanted to enjoy singing, not drinking. Then someone might have an idea for a song, so he would sing a new phrase. The others would join in, trying to harmonize and to continue the idea. Sometimes they would stop singing and start discussing what would be the best way to go in this or another section of the song. This process could go well into the morning hours, and as a result they would have a new song or a new version of an existing song, to sing publicly for the next public gathering” (personal communication from 5 August, 2003). According to folklore tradition, a famous Gurian trio song with the atypical for trio songs yodeling and amazing contrapuntal mastery “Adila”, must have been created as a result of one of such “musical night”, and was perfected by dawn. The main creative force that night was the brilliant Gurian singer (bass) Varlam

Simonishvili (1884-1950), and the song is credited to him. Here is about half of the song “Adila”:

Ex. 35. Adila. Gurian trio song (first half) (Transcribed by Nino Tsitsishvili)

Krimanchuli

Mtkmeli

Bani

8

8

8

8

15

15

15

15

21

21

21

21

Different western Georgian dialects also feature elements that give them a special place in the tapestry of Georgian polyphonic tradition. The Imeretian dialect (the biggest region in western Georgia), for example, is famous for its riders' songs and for the flourishing tradition of European-style urban polyphonic songs (we'll discuss Georgian urban singing traditions a bit later); the Megrelian dialect is known for its combination of sharp dissonances with a very soft manner of singing (Megrelians also speak their own language); the Acharian dialect (the only region with Moslem Georgians in western Georgia) has two very different styles: (1) the so-called Kobuleti region is very close to the Gurian style of complex three- and four-part polyphony (according to some scholars, residents in this part of Achara are Gurians who were under Turkish rule and changed their religion), and (2) the so-called Shavsheti region with a two-part polyphonic singing tradition (the only region with two-part singing in western Georgia. Garakanidze, 1991). And of course, there are two very important mountain regions in western Georgia apart from the plain regions discussed above: Svaneti and Racha. Some researchers also separate the Lechkhumi dialect (for example, Garakanidze, 1991).

Traditional polyphony in Svaneti

Svaneti (particularly the so-called "upper Svaneti") holds a special place in Georgian ethnographic literature. This is the most mountainous region of Georgia (the mountains here are over 5000 metres high), completely cut off for a good half of the year from the rest of the world. Svanetians are the tallest people in Georgia (and one of the tallest in Europe) with their own linguistically very archaic Svanetian language, archaic non-rhythmic poetry, impressive 8-12th century family towers, and a fiercely egalitarian society (they have never been under anybody's rule, including any of the local noblemen). Together with this variety of archaic features, Svanetians have quite outstanding polyphonic traditions (Araqishvili, 1950).

The following set of features will give the reader a general picture of Svanetian vocal polyphony:

- (1) all Svanetian songs are three-part (except for a few solo monophonic genres, sung mostly by women);
- (2) the great majority of Svanetian traditional songs are (or grow into) round-dances;
- (3) starting relatively slowly, Svanetian song-dances usually get faster by the end

(4) unlike many other traditions of Georgian dialects, the melodic range of Svanetian songs is very narrow (usually within the fourth);

(5) although dissonances are one of the most characteristic features of all regional styles in Georgia, they play a particularly important role in Svanetian polyphonic songs;

(6) ostinato formulae and the parallel movement of the voices (“chordal unit polyphony”) leads in Svanetian polyphony, although a rhythmic drone is also important;

(7) unlike most other Georgian singing traditions, where the men’s and women’s singing is gender-segregated, in Svaneti the men and women often sing and dance together;

(8) the singing volume in Svaneti is extremely loud;

(9) most Svanetian songs are performed as the antiphon alternation of two choirs (sometimes competing with each other in loudness and endurance);

(10) syllables and words that do not have any meaning are very widely used in Svanetian songs (some songs are completely built on nonsense syllables).

If we add here that some of the geographical names from the Upper Svanetian region and mythology that do not have any current meanings, are mentioned in written sources from the ancient Sumer from Mesopotamia (creators of the first written language in the history of civilization, a language which was already dead about four millennia ago), the range of archaic features of Svanetian culture will be clearer for the reader. Here is an example of a Svanetian round dance, which starts slowly and finishes very fast, and is performed as an antiphon, and a big part of the famous “Lile”, a ritual song dedicated to the cult of the Sun:

Ex. 36. Svanetian Round Dance (Garakanidze, Jordania, 2004:96)

o - re-ra - i - u do, o - re - ra do, o - i, o - re-ra, o - re-ra.

Il coro

o o - re - ra - i - u do, o - re - ra do, o - i, o - re-ra, o - re-ra.

I coro

o o - re - rai da di - la, va - di - la, va - di - la, o - re - rai da o, o.

II coro

o o - re - rai - da di - la, va - di - la, va - di - la o - re - rai - da o, o.

I coro **II coro**

o o - re - rai - da ra - mai da, o - re - rai da ra - mai da. o o - re - rai da ra - mai da,

I coro *poco a poco Agitato*

o - re - rai da ra - mai da, o o - sa re - ra, re - ra, - o - re - ra, o - re - ra, o - re - ra, do

II coro **I coro**

oo - sa re - ra, re - ra, o - re - ra, o - re - ra, o - re - ra, o o - sa re - ra, o - re - ra da,

II coro

oo - sa re - ra, o - re ra.

o - sa re ra, ra - mai da, - o - sa o - ru - di - la, ra - mai - da, - o -

Ex. 37. Lile. A Ritual song dedicated to the cult of the sun. The first half. (Garakanidze, Jordania, 2004:80)

The musical score is written for a vocal line (treble clef) and a bass line (bass clef) in 3/4 time. The key signature has one flat (B-flat). The score is divided into four systems, each with a measure number (8, 8, 15, 22) at the beginning of the vocal line. The lyrics are in Georgian and are written below the vocal line.

System 1 (Measure 8):
 O, Li-le o, Is-gva mi, di-da - bi

System 2 (Measure 8):
 o, bin-go - ia, shi-le - da - i, voi-di - vo - o,

System 3 (Measure 15):
 li - le (oi) Voi-di-vo - o, li - le - o, di-da - bi,

System 4 (Measure 22):
 di - da - bi - o, tar - le - ia, zer - si - da - i

Racha, neighbouring Svaneti, is another very interesting region, although archaisms are not as evident and as deep in Racha as in Svaneti. Rachian men and women also often sing together like Svanetians (and unlike people from most of the other Georgian regions), and melodies of the so-called “mountain Racha” group (geographically and ethnographically closest to the Svanetians) also have a small range. But, unlike Svanetian singing, at least some Rachian songs have obvious influences of the eastern Georgian singing style (pedal drone, mildly ornamented melody and specific modulations). Unlike the Svanetians, who still widely use dialects of their own mostly unwritten Svan language, Rachians use the Georgian language.

Religious music

The East Georgian state Iberia was among the first states of the world to officially become Christian in 337. Georgian historians and musicologists believe that in the first few centuries the Christian rites were performed in Greek with monophonic singing. At around the 7th or 8th centuries the Georgian language and polyphonic singing tradition must have penetrated the church. According to the written sources polyphonic singing must have been well established in Georgian liturgy by the 10-11th centuries (Javakhishvili, 1990, Iashvili, 1977). In the 11th century, when the Greek orthodox canonic liturgy was translated into Georgian, special professional help was sought to make them polyphonic (possibly three-part). The Georgian linguist Zurab Chavchavadze made a brilliant suggestion that the term “Organ”, used in medieval Georgian literature to describe the expertise of the knowledgeable person who was put in charge of making the “alien Greek sound closer to Georgian”, was denoting not a musical instrument, but “Organum”, the medieval term for the early European type of vocal polyphony (Chavchavadze, 1986, 1993:34-36). Interestingly, the term “*Organa*” from the well-known medieval literary source of Giraldus Cambrensis (1200) was an enigma for British musicologists as well. Lloyd Hibberd’s interpretation that “*Organa*” was not an “Organ or “Instruments”, but “polyphony” – “Organum” (Hibberd, 1955) was gladly accepted by most music historians. The closeness of the medieval British and Georgian use of the term “organ” is obvious.

In the works of the Georgian philosopher Ioane Petritsi (11-12th centuries) the author makes symbolic parallels between the Christian Trinity and the three parts of the Georgian church singing tradition, and mentions the then-existing names of three parts: “*Mzakhr*”, *Zhir*”, and “*Bam*”.

The religious music of Georgia, like traditional music, has been traditionally divided into two – eastern Georgian and western Georgian branches, although today Georgian scholars prefer to speak about different local schools, rather than east-west differences (Shugliashvili, 2000). After the “Golden Age” of the Georgian state and culture (11-12th centuries) hard times brought numerous invasions during the 13th-18th centuries. Maybe the hardest time for the Georgian church-singing tradition was the first half of the 19th century, when Georgian singing was banned in Georgian churches by Russian authorities. By 1860, with the rising of nationalist movements throughout European countries, a special committee was created in Georgia to look after the Georgian church-singing tradition. According to available information, by the 1860s representatives of one school in eastern Georgia

and three schools of western Georgian church singing were still alive. Out of these three western Georgian schools one (the Khundadze school) was closest to the eastern Georgian school. Another school, mentioned sometimes as the Shemokmedi school (according to the name of a village), or Erkomaishvili school (according to the family of the tradition bearers) continued the church-singing tradition the longest (until the 1960s). One of the last survivors of this school, the famous Artem Erkomaishvili (grandfather of Anzor Erkomaishvili), was still using the specific neumatic signs to enhance his memory remembering thousands of church songs (neumatic notation was an early medieval system of music writing in Europe, invented around A.D. 800, and indicating the approximate movement of melodic lines, without precise reference to pitch). This school-singing tradition was the most complex and most distant from the only eastern Georgian tradition recorded by the end of the 19th century by the Karbelashvili family members. According to the important study by David Shugliashvili, both eastern and western Georgian church songs are based on the same set of canonic melodies, and the difference mainly arises in the way the melodies are harmonized by the second and third (middle and bass) parts (Shugliashvili, 2000).

Traditional and professional (religious) polyphony in Georgia have always influenced each other. It was traditional polyphony that influenced the initial monophonic tradition of early Christian church singing and turned it into polyphonic (as in many other countries of the Europe, see Collaer, 1960). Good church singers were experts in traditional music as well and would sing both in the church and at social events. Church songs were always performed at these social events (usually at the beginning of the *supra*-feast). The most active interaction between the church and traditional polyphony must have occurred during the 19th century, when Georgian church singing was officially banned from Georgian churches by the Russian authorities, and for a few decades the tradition of church singing was kept alive in the families of church singers. Nugzar Jordania proposed the idea that the extremely developed polyphonic tradition of the ensemble of three individual singers in Guria was the result of the influence of the church-singing tradition and was initially created by church-singers (Jordania N., 1985).

[Readers might be a bit confused by my mentioning the works of different Jordanias, so maybe I need to explain to readers that I come from a family of ethnomusicologists. Nugzar Jordania is my younger brother, and Mindia Jordania (1929-1979) was our father. Luckily, in Georgia wives

usually do not change their names after marriage; otherwise two other ethnomusicologists from our family – Nino Tsitsishvili and Marina Kvizhinadze – would have increased the number of Jordania-ethnomusicologists to five.]

The slow melodic development of most of the trio songs, the very elaborate non-couplet form with asymmetrical musical sentences, specific cadences finishing the musical sentence on two interlocked fifths (F-C-G) – all point to the closeness of the trio tradition to the church-singing tradition of western Georgia.

Here are typical examples of West Georgian and East Georgian church-songs:

Ex. 38. Zhamta da Tselta. [Epochs and years] West Georgian church song (Garakanidze, Jordania, 2004:110)

Maestoso ♩ = 84

z'a - mta da ts'e - lta xel - mts'i - p'e - bi - ta g'mert -

mta - vro - bi - sa she - mo - k'me - do, u - p'a - lo. sa - mgva - mo - vne - bit

di - de - bu - lo, k'e - bu - lo, er - ta sa - ta - khva - i - a - nis - tse - mu - lo.

a - tsxo - vnen k'mnil - ni shen - ni, a - ts'tsa mo - ts'e - vni - li. da -

sa - ba - msa mo - su - li - sa - i - a, *rit.* z'a - mi - sa mo - k'tse - vi - sa - sa

**Ex. 39. Romelni Kerubinta. [Cherubs] East Georgian church song.
(Garakanidze, Jordania, 2004:107)**

Adagio ♩ = 50

The musical score is written for a vocal line and piano accompaniment. It is in G major (one sharp) and 3/4 time. The tempo is marked 'Adagio' with a quarter note equal to 50 beats per minute. The score is divided into six systems, each with a measure number in the top left corner of the vocal staff: 8, 5, 10, 14, 19, and 24. The lyrics are written below the vocal staff, with hyphens indicating syllables that span across measures. The piano accompaniment features a steady eighth-note bass line and chords in the right hand. The key signature changes to E major (two sharps) at measure 19.

ro - mel - ni k'e -
ru - bin - t'a
sa - i - dum
lod
ve - msga vse
nit'

Urban music

The urban singing style in Georgia must have started with the creation of the first cities on the territory of Georgia. Tbilisi became the capital of Georgia in the 5th century, and from the 11th century up to the first half of the 20th century became the economical and cultural capital of Transcaucasia with its multicultural and cosmopolitan population. Being on the crossroads between Asia and Europe, Tbilisi harbored an array of extremely talented

musicians from different backgrounds (mostly of Middle Eastern ethnic origin, and particularly Armenian musicians, including the famous Sayat-Nova). As a result of this interaction with Middle Eastern music, eastern melodies with ornamented melodies and augmented seconds appeared in Georgian cities. Part of these traditions remained very close to the Middle Eastern original style and had a somewhat smaller circle of admirers, but part of this music became very popular among a wider range of Georgians. These Middle Eastern songs, originally monophonic melodies, became polyphonic (three-part) when performed by feasting Georgians. This style was (and still is) distributed in Tbilisi and a few other cities of eastern Georgia.

**Ex. 40. Patara Gogo Damekarga [I have lost a little girl]. Urban song
(Transcribed by Joseph Jordania)**

The musical score is written in 6/8 time and consists of three systems of staves. Each system has a vocal line (treble clef) and a basso continuo line (bass clef). The lyrics are written below the vocal line.

System 1: The vocal line begins with a rest for 8 measures, followed by a melodic phrase. The lyrics are "Pa-ta-ra go-go - da - me - ka - rga tsi - te - el". The basso continuo line provides a steady accompaniment.

System 2: The vocal line continues with a melodic phrase, followed by a repeat sign. The lyrics are "pe - ran - ga. an av - li - li - a - an cha -". The basso continuo line continues with a steady accompaniment.

System 3: The vocal line continues with a melodic phrase, followed by a repeat sign. The lyrics are "vli - li, khom a - ar gi - na - kha - avt". The basso continuo line continues with a steady accompaniment.

Besides this style, known under the name of the “Eastern branch of Georgian urban music”, there was another urban singing style in Georgia, influenced by European professional music. This style appeared much later, with the first contacts of Georgia with European music with the guitar-accompanied Russian romance and performances at the Opera House, which opened in Tbilisi in 1850 and became very popular almost overnight. Georgians from both the eastern and western parts of Georgia became very

enthusiastic about this new music and new harmonies. Many of the popular arias of Italian operas were rearranged in three-part urban a cappella style and are still sung (with Georgian lyrics) as a part of the Georgian urban tradition.

Two sub-types of the western branch of urban music became popular very quickly: (1) guitar-accompanied lyrical songs, and (2) a cappella choral songs. Both of these traditions are mostly three-part (sometimes the fourth part can be added as well). The two top parts move mostly in parallel thirds (and sometimes sixths), with the main melody in the middle part, and the bass mostly follows the European TSD harmonic system. Here is an example of the three-part a cappella urban “*Mravalzhamier*”, and often a guitar-accompanied lyrical song “*Suliko*”:

Ex. 41. Kutaisi Mravalzhamier [a good wishes song from Kutaisi, the second largest city of Georgia, the centre of western Georgia] (Garakanidze, Jordania, 2004:45)

Grave

mra-val-z'a-mi er, mra-val-z'a-mi er, mra-val-z'a-mi er, mra-val-z'a-mi er,

Ex. 42. Suliko. An Urban love song. (Garakanidze, Jordania, 2004:8)

Sa-kva-rlis-sa-plavs ve-dze-bdi, ver vna-khe da-kar-gu-li-ko.

gu-la-mo-skvni-li vti-ro-di, shen-xom a-ra-khar su-li-ko.

Araqishvili wrote at the beginning of the 20th century that the urban singing tradition was having a negative influence on Georgian traditional polyphony. This influence was mostly felt in the increase of parallel thirds between the two top melodic parts (instead of the traditional more adventurous and often dissonant coordination between the melodic parts).

The scale systems

Before starting to read this section, I would advise non-musicians to skip this section due to its excessive technical nature. Although, if you can follow the argument, you need to know that although scales generally are a theoretical abstraction, they are as important and as interesting “building blocks” for musical styles, as perhaps DNA is for genetic studies. So let me briefly discuss the scale systems that are used in Georgian polyphonic songs.

Scales were traditionally one of the most popular topics for Georgian ethnomusicologists. Starting from the works of Araqishvili (1905, 1954), followed by Aslanishvili (1954), and particularly in numerous publications by Gulisashvili, M. Jordania and Chokhonelidze, scales were always of special interest to Georgian musicologists and ethnomusicologists. In the 1970s scales were the leading topic of research, overshadowing even the study of traditional polyphony. Scholars noted the existence of several most important diatonic scales (Araqishvili, Aslanishvili) and some rare scales, like anhemitonic pentatonic, tetratonic, Locrian, altered (chromatic) scales (Jordania, M, 1959, 1971, 1971a, 1979), or Locrian, Hypolocryan, Lydian and Hypolydian scales (Gulisashvili, 1971, 1971a).

In my opinion the biggest contribution in the studies of scale systems of Georgian traditional polyphonic music came from Vladimer Gogotishvili, a purely “armchair” music theorist, who has never conducted fieldwork. In his few publications (for example, see 1983, 2003) Gogotishvili put forward the idea that Georgian scales are not an octave (octave meant “eight”, and octave scales have an eight note repetitive structure) scale. Instead, in Georgia they are based mostly on the repetition of five-note scale units (pentachords) or four-note units (tetrachords).

Tetrachordal (four note), or fourth diatonic systems of the scales are very well known from ancient musical manuscripts from ancient Greece and the Arabian world, but of the discovery that the scale system was based on five notes (pentachords), or “fifths diatonic scales” was crucial for a correct understanding of Georgian traditional and medieval professional polyphony. Let us compare these three systems of scales: (1) eight, (2) fifths, and (3) fourth systems:

Fig. 6. Scales of eight, fifths and fourth diatonic



According to the intrinsic nature of the scales and intervals, out of these three so-called “perfect” intervals (eight, fourth, fifth) only one can remain perfect in any system of scale. If the musical style is based on the eight (octave) diatonic system, only eights are always perfect, in the fourth diatonic system only fourths are always perfect, and in the fifths diatonic only fifths are always perfect. In the eight diatonic system the augmented fourth and diminished fifth are present, in the fifths diatonic system both the fourth and eight are sometimes augmented (e.g., see C-F# and C-C#), and in the fourth diatonic system both the fifth and octave are sometimes diminished (e.g., see B-F, E-Bflat, or B-Bflat, E-Eflat and A-Aflat).

All our music education is firmly based on octave scales. Even the names of the notes and keys on the piano are based on octave scales, as we use only seven notes, and the eighth note is considered to be the same note as the first one (remember seven notes from school music lessons: A,B,C,D,E,F,G and then again A,B,C,D,E,F,G etc). If we were to use only the “fourth” scale systems, we would have to learn only three notes: A,B,C, and again A,B,C (as the fourth note would be the same as the first one). In fifths scales, accordingly, we would have a string of A,B,C,D, and again A,B,C,D (the fifth note being the same as the first one).

These three types of scales are interestingly linked with different styles of music in different major regions of the world. To generalize, we may say that the “fourth” (or tetrachordal) scales are more prominent in Middle Eastern monophonic traditions. In these traditions the interval of the fourth is paramount and this is clear from ancient Greek and medieval Arabic musical theoretical writings.

The “fifth” (or pentachordal) scales seem to be more prominent in polyphonic traditions. At least, this scale system is obvious in such widely separated polyphonic cultures as Georgian and Icelandic (we’ll discuss Icelandic music later in this chapter).

In Georgian traditional polyphonic music the dominant scale system is the “Fifth Diatonic Scale”. This scale dominates in all branches of western Georgian music, and in most of the musical genres of eastern Georgia as well. In eastern Georgian “long” table songs the presence of this scale is obvious only *under* the central tone (pedal drone. Gogotishvili, 2003).

The “Fourth Diatonic Scale” system in Georgia is more regionally restricted. In its pure form it exists only in solo monophonic working songs of eastern Georgia. In polyphonic songs it exists in “long” table songs of eastern Georgia, but only *above* the central tone (pedal drone). Therefore, eastern Georgian table songs have a very interesting mixture of different – “fourth” and “fifths” - scale systems, “working” respectively above and below the tonal centre (the tonal centre in these songs is expressed by the pedal drone).

Melody in polyphony

Melody is popularly known as the “soul of the music”. We may have all heard complaints how the music is losing the beauty of the melody, or even worse – losing the melody per se.

Analyzing Georgian traditional polyphonic songs, I came to a very strange (for me, and shocking for some of my Georgian colleagues) conclusion, that Georgian polyphonic songs are not built around the “main melody” of a song. Even such brilliant songs as “Chakrulo” or “Khasanbegoura” are not built around the main melody. That’s why, for example, you cannot sing the melody of “Chakrulo”. The musical texture consists of more than one melodic line, and none of them carries the important function of being the main melody of a song. Georgian polyphonic songs are usually built on relatively short musical phrases that can be the same in many different songs. Of course, there are Georgian songs that have their own distinct melodies (to name only a few: “Chela”, “Imeretian Rider’s Song”, or “Iavnana”), but the majority of the most complex polyphonic songs have no one leading melody. The song is usually a combination of all parts and not the one leading melody accompanied by other parts. The combination of these three parts represent the “soul of music” in Georgian polyphonic music. I guess a few representatives of other polyphonic cultures would agree that in their cultures also there is no such thing as a “main melody of a song”, and rather that the combination of all parts delivers the main musical idea of a song.

Unlike polyphonic traditions, in monophonic cultures the melodic line of a song is usually strictly personalized and represents the very soul of the music.

Singing men and singing women

Gender differences are one of the great subjects of traditional music (and not only music). The subject is so vast that at some point I was thinking not to tackle this subject in this book at all. (As a matter of fact, as I am writing this text, in another study Nino Tsitsishvili is working on a book mainly dedicated to this incredibly interesting and important subject in Georgian music). At the same time, to avoid this theme completely would not be fair. At least, we should remember that Alan Lomax wrote about the incredible importance of women's singing and women's role in society for the origins of cohesive group polyphonic singing in traditional societies, so it is obvious that we cannot avoid this question. So in just a few words I want to discuss this subject in regards to Georgia.

The general popular perception of Georgian traditional polyphony is that it is exclusively a men's tradition. Men sing the most complex polyphonic songs – from eastern Georgian “long” table songs to western Georgian complex contrapuntal songs, including the four-part harvest songs “Naduri” and the incredible “Trio” songs. As you would expect, women sing family-circle songs: lullabies, dirges, and some older ritual songs. Georgian women's singing is polyphonic as well (two and three-part drone polyphony), although not as complex and technically developed as the men's tradition. Because of this concerts of Georgian traditional music are always heavily dominated by men's ensembles, some of my non-Georgian friends have even had the impression (after listening to a few Georgian CDs) that only men sing polyphonic songs in Georgia.

The strict gender division in Georgian singing is generally considered to be an ancient trait, but there are facts that should be taken into account as well. (In family singing occasions, of course, mixed performances were usual for most regions, but we are talking now about major social events and ritual performances.) Most importantly, the most archaic musical dialect of Georgia, Svaneti, displays mixed performances of traditional polyphonic songs and round dances (Garakanidze, 2007:48). Both Araqishvili and Paliashvili noted in the very beginning of the 20th century that Svanetian men and women always sang together. In mountainous Racha the same occurs. So why should we consider the strict gender segregation of the mostly plain regions of Georgia more archaic than the mixed performances of the most

isolated, archaic and mountainous regions? Would it not be more plausible to propose that social factors (and most importantly – the pressure of the Christian religion) had the greatest role in segregating the singing traditions of men and women?

We must also remember that men were almost the sole carriers and beneficiaries of the professional medieval tradition of Georgian church singing, and women virtually did not have access to this, the only available professional education of the epoch (Tsitsishvili, 2004). Musically talented women were mostly appreciated as the carriers of good musical genes for their children (Erkomaishvili, 1988:11-12), whereas musically talented men would become professional musicians. Even by the end of the 20th century you can still come across this attitude when the father pushes his son's professional musical education despite the fact that, according to his (father's) own words, "the daughter is much more talented" (Tsitsishvili, 2006).

Conclusions

To conclude this section about Georgian music, I would like to say that despite the huge amount of research still needed in different areas of Georgian traditional music, Georgian traditional polyphony is perhaps among the best-researched polyphonic traditions in Europe. Several generations of Georgian musicologists and ethnomusicologists from the end of the 19th century, as well as non-Georgian scholars contributed to this process. Some of the works of European scholars will be discussed in the second part of this book, when we will talk about the comparative aspects of Georgian traditional polyphony. More than 20 years of scholarly tradition of organizing international conferences and symposia on traditional polyphony, held in Georgia (from 1984 onwards) and the establishment of the International Research Centre for Traditional Polyphony (with the help of UNESCO) in 2002-2003 greatly contributed to the flow of finances, technical equipment and renowned international scholars, experts in traditional polyphony, to Georgia.

Vocal polyphony in Balkans

The Balkans are one of the most polyphonic areas of Europe and possibly the world. All the countries represented here have polyphonic singing, although the proportions do vary. In some countries only a part of the country practices polyphonic singing (as in Romania, Bulgaria or Greece). In other countries (for example, in more than half of Albania and virtually all the countries of the former Yugoslavia) vocal polyphony is very widely spread. Let us have a brief look at each of the Balkan countries.

Romania

Most Romanian traditional vocal music is monophonic (solo or unison), although there are some “rudimentary forms of heterophony and polyphony” in some regions in some particular genres, as Valeriu Apan mentions. He names the following exceptions: “funeral songs sung by two groups of women (in some parts of Banat, Transylvania, and Oltenia); laments sung by a woman leader and a group of women (Banat); songs sung by mixed groups of men and women during the nights of death vigils (Moldavia); wedding ceremonial songs sung by men (Bihor) and mixed groups (Hunedoara-Transylvania); carols sung by men (south Transylvania); quatrains sung by girls during evening working parties (Bihor); and children’s songs connected to different dance-games, found all over the country” (Apan, 2000:879).

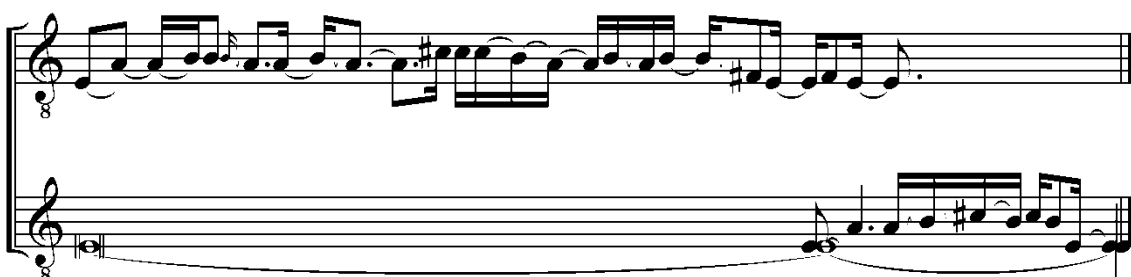
And of course, the so-called “Aromanians” (Macedonians) who came to Romania from different regions of the Balkans have the most developed traditions of polyphonic singing in Romania. Their songs are always performed by two groups in antiphon, either in unison or in polyphony. G. Marcu distinguishes two vocal polyphonic styles among Macedonians in Romania: the first one is connected to “Pinderi” (Macedonians from the Pindul mountains) and “Gramusteni” (mostly from Epir - northern Greece), and the second one is connected to “Farsheroti”, a shepherd population from North Greece and the Albanian district of Corcea. In the first style most of the singers sing the main tune in unison (or heterophonic) style. The rest sing the second part (often the drone). In both styles the vertical coordination of parts is often based on dissonant “barbarian” intervals (Dumitrescu, 1977:12). The tradition of polyphonic singing is particularly strong among the Farsheroti Macedonians, who constitute the second polyphonic style: “The Farsheroti Macedonians can hardly accept the idea of singing individually or homophonically. If you happen to ask one of them to sing by himself, he will answer that he cannot unless he has someone to ‘cut his

voice' and at least one more to accompany him. And this is true, indeed. The tunes of the Farsheroti are built in such a way as to make them unable to achieve the complete musical shape unless sung by a group" (Marcu, 1977:41-42). Another specific feature of the Farsheroti singing style is the wide use of melismas and the rubato-style free flow of the musical composition. Polyphonic singing is mostly three-part, with two main melodic lines, singing against a background of a drone bass sung by a big group of singers. Here are typical examples of Macedonian polyphony from Romania:

Ex. 43. Romania (Marcu, 1977:127-128)



Ex. 44. Romania (Marcu, 1977:206)



Bulgaria

Bulgarian traditional polyphony is one of the best known in the world, reaching the commercial music market in the 1980s and involving popular mega-star artists and producers (like Kate Bush, Joe Boyd, or George Harrison. Buchanan, 2006). Of course, it was mostly the superb arrangements of Bulgarian composers that became extremely popular (and not the original unarranged traditional songs), but the Bulgarian traditional singing style with dissonant seconds and the cutting open style of singing was the crucial element and the real star in the great success of Bulgarian traditional polyphony in the 1980s.

Bulgarian polyphony is one of the best studied in the world by several generations of Bulgarian ethnomusicologists. Starting from the end of the 19th century, when the traditions of vocal polyphony were brought to attention by Angel Bukoreshtliev, and then in 1925, when Vasil Stoin wrote

about the possible Bulgarian origins of two-part singing in Europe (at that time almost none of the other Balkan polyphonic traditions were known) Bulgarian ethnomusicology went a long way and rightfully boasts an array of important works on Bulgarian traditional polyphony (Kaufman, 1963, 1968; Katzarova-Kukudova, 1962; Kaufman, Todorov, 1967, Stoin, E., 1970). The earlier part of Bulgarian scholarship was reviewed by Barbara Krader (1969).

Heavily supported during the Communist regime in Bulgaria, the polyphonic singing style with dissonant seconds became a symbol of national music in Bulgaria, although in recent “post-communist” years the popularity of other genres (for example, wedding instrumental ensembles) has increased and the popularity of choral polyphonic singing, devoid of state support, somehow dropped (Rice, 1994). One of the possible reasons for this could be the fact, that despite the international success and the status of a national musical symbol, the tradition of vocal polyphony is spread through only a relatively small part of Bulgaria – in the Southwestern quarter of the country. Therefore the tradition of polyphonic singing does not represent the majority of the population of Bulgaria.

The “polyphonic corner” of Bulgaria (the Southwestern part of the country) is traditionally divided into four regions: Pirin, central-western Bulgaria, Velingrad, and the Pazardjik-Ihtiman region (for a slightly different regional division see Rice, 1977, 2003). Drone polyphony leads throughout the polyphonic traditions. The drone is usually performed by a few singers, and the melodic line is performed by a soloist (or soloists). Most of the polyphonic songs are performed by women. The men’s tradition of vocal polyphony is known from the village Nedelino in the Rhodope Mountains. Men mostly play instruments at weddings and, as professionals, have a good income (unlike the singing women). Antiphonic performance is very widely spread. Maybe the best-known feature of Bulgarian songs is their sharp dissonant sound, based on the frequent use of dissonant intervals (particularly seconds). Here are some examples from the Pirin region, where the rhythm can be free:

Ex. 45. Bulgaria, Pirin. (Kaufman, 1968:90, #123)



Ex. 46. Bulgaria, Pirin. (Kaufman, 1968:75, #92)



A different character is present in central-western Bulgaria. This region is better known as the “Shop Region”, or “Shopluka” in Bulgarian. The art of clashing seconds is brought to its highest point here, and the rhythm is usually relentless. Although most Bulgarian polyphony is based on two-part singing, there have been examples of three-part singing recorded in the “Shop Region” (see the last Bulgarian example). Another tradition of three-part singing, known from earlier publications as two-part singing, was discovered and studied independently by Gerald Florian Messner and Tim Rice (Rice, 1977; Messner, 1980). Katzarova-Kukudova (1962) studied three- and four-part polyphonic elements when two antiphonic groups merge together. Here are few more polyphonic examples from Bulgaria:

Ex. 47. Bulgaria. (Kaufman, 1968:15, #42)



Ex. 48. Bulgaria. (Kaufman, 1968:24, #3)



Ex. 49. Bulgaria. Three-part singing. (Kaufman, 1968:130, #205)



Serbia

Unlike the Bulgarian traditions of vocal polyphony that are spread through only the Southwestern part of the country, a big part of Serbian ethnic territory is quite homogenous in terms of the distribution of the

tradition of vocal polyphony. The only region where vocal polyphony has not been documented is Southwest Serbia (Forry, 2000a:953).

Two main regional styles of vocal polyphony can be distinguished in Serbia: eastern and western. The difference between them is mostly expressed in the position of the main melody and the accompanying part. The eastern Serbian polyphonic style (or more precisely, the Southeastern style) is quite close to the Bulgarian and Macedonian styles, with the drone in the lower part and the predominance of sharp secondal dissonances. Only two-part singing has been documented here. Songs are always performed by the soloist and a group of basses. The soloist always starts the song and the group (drone) joins the soloist with a drone. The lead melody usually has a small range (third or fourth). The drone is often pedal (sung on “a”). The rhythm is free (rubato). Serbs sing with open voice, with a tense sound, emphasizing and obviously enjoying dissonant intervals.

Unlike the Southeastern style of Serbian polyphony, according to Forry, the western style positions the accompanying part higher than the main melody (Forry, 2000a:942-943). In the western (or Northwestern) Serbian polyphonic style, unlike the Southeastern style, both parts move, so it is not as easy to label them easily as “main” and “accompanying”. The lower voice of the western Serbian polyphonic style is more melodically active, mostly because of the downwards jumping performance style. Despite melodic activity, this part still might be the accompanying part. This part is closer to the specific accompanying part in some Balkan polyphonic styles (for example, among the Labs from Albania). Among the Labs this part sings a repetitive downwards-jumping melody just under the drone. In Serbia this part behaves in the same way, although there is no drone in this Serbian style and this part follows the top part in a more heterophonic manner. The cadences are of particular interest, as here heterophony changes into a drone-like section with the sharp second. The scale system is very specific for this region. It represents an interesting mixture of elements of chromatic and diatonic scales (for example: F, Gflat, and Adouble flat in some songs). The same type of scale is spread among the neighbouring Bosnian and Herzegovina polyphonic songs as well. Here is an example of small-range dissonant two-part singing from Serbia:

Ex. 50. West Serbia. (Kaufman, 1968:#263)



As in many other parts of Europe, there is a late polyphonic style in Serbia as well, based on the use of parallel thirds, and finishing on a fifth at the end of the musical phrases. The bass makes a specific final movement from the initial tonic a fourth downwards. Interestingly, this late style sometimes also uses the drone in the accompanying part:

Both the more archaic style (with the use of dissonant seconds) and the recent style (based on parallel thirds) are based on two-part polyphony (Golemovich, 1983):

Ex. 51. Serbia. Recent polyphonic style. (Golemovich, 1983:#58)



Montenegro

Montenegro, a small mountainous country, is a part of Serbia and Montenegro state unity. The Montenegrins still mostly live in predominantly agricultural societies and retain many elements of their traditional culture. Unfortunately, although scholars of a few other countries did a series of fieldwork and publications, due to the lack of a national school of ethnomusicology, the traditional music of Montenegro is possibly the least studied among the Balkan peoples.

Ethnomusicologists note the existence of four regional musical styles in Montenegro (Petrovich, 2000:957). According to the available incomplete information from Montenegro, unlike most of the Balkan countries, the Montenegro singing tradition is mostly monophonic (solo). The tradition of vocal polyphony has been documented only in the Southwestern part of Montenegro, on the border with Herzegovina. Here on both sides of the border the same “Balkan” style of polyphony is documented, based on the wide use of drone and the coordination of parts in major seconds. This kind of polyphony, according to Petrovich, “occurs in shepherds’ and wedding songs of the Southwest region of Montenegro” (Petrovich, 2000:958). Interestingly, Albanian migrants from the mountainous area of Malesi (the Montenegro-Albanian border), the so-called “Malisori”, also sing polyphonically in Montenegro. Here is a rare published example of Montenegro two-part singing with almost constant sounding seconds:

Ex. 52. Montenegro. (Messner, 1980:356)



Bosnia and Herzegovina

The Bosnian and Herzegovian rural areas were mostly isolated from the major developments of social and economical infrastructure and retained a big part of their traditional culture. Their culture represents a mixture of the elements of the pre-Islamic and Islamic periods. As a result of the efforts of visiting Czech folklorist Ludvik Kuba (in 1889) and native scholars (particularly Cvjetko Rihtman a few decades later) the tradition of vocal polyphony was brought to the attention of European ethnomusicologists relatively early. Polyphonic singing is widespread throughout Bosnia and Herzegovina. The main type of polyphony is drone. The drone is usually performed by a group of singers, and the main melody is performed by a dominates, although a three-part singing tradition has also been documented.

In eastern Herzegovina the melodic line often uses special techniques: shaking of the voice (“*potresanie*”) and exclamations on “oi” (“*oikanie*”). These techniques are used in table songs, which survived despite the hostile attitude towards the table (and drinking) traditions of the official Moslem religion. The drone often consists of two components: the so-called “straight voice” (the pedal drone) and the ornamented drone with added small ornaments. This added ornamented drone is traditionally mentioned as a “sobbing” (*jekanie*) or “cutting” (*sjecanie*) voice. Melodies develop in a specific manner as a “crawling” across often the half-tone intervals. The range of each part is often very narrow (minor third),

Ex. 53. Bosnia and Herzegovina. (Rihtman, 1953:#25)



The new style of vocal polyphony (called *na bas*), influenced by European professional polyphony, has been documented in Bosnia and Herzegovina from the beginning of the 20th century. This style is based on

parallel thirds and specific cadential fifths. Interesting examples of the mixture of old and new polyphonic styles has been also documented: “Older versions of Bosnian *na bas* singing sometimes use seconds in alternation with thirds” (Petrovich, 2000:964)

Ex. 54. Bosnia and Herzegovina, a mixture of the elements of the old and new polyphonic styles (Rihtman, 1953:#117)



Croatia

Vocal polyphony plays an important part in Croatian traditional music, although there are differences in regional styles.

The Dinaric Alps arguably represent the most ancient layers of Croatian singing style. The reason for this long survival is well known for countries with mountains: “When the lowlands were depopulated by war and the coasts harried by invaders, Dinaric communities retained their integrity” (Forry, 2000:927). The earlier layers of this region are based on the local traditions of polyphony with narrow-interval scales.

Ex. 55. Croatia. Older style polyphony (Zganec, 1958, pg. 356, # 16)



The tradition of a specific “shaking” (throat thrill) style is characteristic, for example, for the district of Sinj: “the initial singer ‘drives’ (*goni*) the opening syllabic recitation and ‘sing voj’ (*voika* – “holds a long note”), while the second voice ‘shakes’ (*trese* – ‘performs a glottal ornament’)” (Bezic, 1967-1968, cited from Forry, 2000:926).

Another Croatian polyphonic style, widely distributed in other areas of the Balkans, is a more contemporary singing style “*na bas*”. In this style (which is believed to have been introduced to Croatia from Slovenia) the melody range is wider (often a sixth), the accompanying part often moves in parallel thirds with the main melody, and in the cadences goes a fourth down in a final sound of the fifths. Another element of polyphonic music in this

region is the abundance of polyphonic aerophones (double flutes and reeds). The music played on them is closely connected to the vocal singing style.

Another interesting region is the Istrian Peninsula and a few islands (including the island Krk). The traditional scale here is so specific that it is known as the “Istrian scale” (this scale represents a very peculiar succession of a tone-semitone combination within diminished fifths: C, D, Eflat, F, Gflat). Polyphonic singing here is mostly based on the parallel movements of minor thirds (or the reversed interval – major sixths).

Musical instruments are a very important element of local polyphonic traditions, playing two-part music based on the above-mentioned Istrian Scale. In some other regions (for example, Dalmatia) monophony prevails. Generally, the new style of polyphonic singing (*na bas*) is much more widespread throughout Croatia than the old traditional style with narrow intervals. A relatively new polyphonic style known as *Klapa* has become very popular in Croatia (Primorac, 2007). Pannonia is thought to be one of the centres of distribution of the singing style *na bas*, (Forry, 2000:931). Here “the songs are usually diatonic, but a few have scales with augmented seconds, suggesting an Islamic influence” (ibid, 931). A very interesting specific type of bagpipe (*duda*) was produced to play the new style (*na bas*) songs. The bass has only two notes – the tonic and the dominant. The “dominant” note is a fourth lower than the tonic, and as in the same style of singing, the lower note is used to finish the musical phrases.

Slovenia

Polyphonic singing is an important feature of this country, which consists mainly of forest-covered mountains. A few regional styles are distinguished in Slovenia. As in most of the other Balkan people’s musical traditions, older and more contemporary styles of traditional polyphony are present here as well. The tradition of contemporary polyphonic singing is spread wider than the tradition of the older style. The regions of Resia and Bela Krajina retain the older forms of vocal polyphony. This style is based on two-part singing with a drone. The ancient tradition of singing in dissonant seconds is disappearing and is being replaced by singing in thirds with cadences in unison: “In Bela Krajina in some Midsummer Night songs and in Istria, two-part singing emphasizes the interval of a second, with some thirds and fourths and unison cadences” (Omerzel-Terlep, 2000:913). This style is an interesting combination of the earlier singing style (singing in seconds) combined with the later polyphonic style (singing in thirds and the cadences in fifths or unisons). Most of the polyphonic songs are performed in two

groups, as an antiphon, sometimes with an interesting overlapping of both groups in different harmonies as in the following example:

Ex. 56. Slovenia. (Kumer, 1976:#238a)



Contemporary style polyphony is based on the European classical musical language and traditional European four-part arrangements. This style is taking over the older style of drone polyphony. According to Omerzel-Terlep (2000: 913) there are several styles of contemporary polyphonic styles in Slovenia, ranging from two-part singing up to five-part singing. The most popular style of contemporary polyphony among young people is three-part singing with the main melody in the middle.

Macedonia

Speaking about Macedonian music we should remember that the ethnic Macedonian territory is divided between several Balkan countries, and only Macedonians living in Yugoslavia have political unity (first within the Yugoslavian Federation and from 1991 as a fully independent country). As the singing traditions of ethnic Macedonians seem to be one of the most polyphonic in the Balkan region, we have already discussed the polyphonic traditions of Macedonians living in Romania and Bulgaria.

According to T. Bicevski, different types of polyphony exist in Macedonian traditional songs. The most prominent is the Balkan traditional singing drone-type vocal polyphony (both pedal and rhythmic) with dissonant intervals:

Ex. 57. Macedonia. (Bicevski, 1986:26)



When the main melody has several (and often ornamented) pitches, the drone polyphony seems to be “in between” the pedal and rhythmic drone

types. The drone can be on one pitch only, or can change (usually by a major second up, although it can move a third and a fourth as well). These movements of the bass often cause the appearance of more seconds.

Heterophony is another type of polyphony among Macedonians. There are also very interesting examples where heterophonic and drone types of polyphony alternate:

Ex. 58. Macedonia. (Bicevski, 1986:#36)



According to Tim Rice: “polyphonic singing occurs in three zones. Female singers in the east employ a two-part melody-and-drone style similar to eastern Serbian and Southwestern Bulgarian styles... Male and female singers in the Northwest sing an accompanying part that moves in relation to the melody to emphasize the interval of a second. Macedonians from the areas around the town of Kostur (in Greek, Kastoria) near the Greek-Albanian border sing in two- and three-part styles resembling southern Albanian singing” (Rice, 2000a:974). The melody range of polyphonic songs is narrow. Part of the polyphonic songs are non-metrical, and the other part (particularly those that accompany dances) has a precise metre. Together with the symmetrical simple metres (like 2/4) there are some of the well-known Balkan asymmetrical “limping” metres as well (like 7/8).

The tradition of contemporary polyphony, based on the use of parallel thirds, is popular throughout Macedonia. On the other hand, a major part of the tradition of the old drone singing with dissonant seconds disappeared between the 1950s and the 1980s (Bicevski, 1986). State politics, declaring the old traditions and traditional singing style old-fashioned and backward in the 1950s, played an important role in this process.

Albania

Albanian polyphony was very late to come to the attention of European scholars. It was only during the 1950s that Ramadan Sokoli brought the southern Albanian part-singing tradition to the attention of scholars. Soon scholars from the then- East Germany, with the help of Ramadan Sokoli, recorded and then published one of the best collections of post-war Europe

(Stockmann et al., 1965). Soon it became clear that Albanian polyphony is one of the richest in the Balkans.

Albania is traditionally divided (by the river *Shkumbin*) into two roughly equal parts – North Albania and South Albania (called respectively *Gegs* and *Tosks*). Polyphony is found in both regions, although the distribution is unequal. In northern Albania polyphony is relatively rare, and is mostly found in the western part of northern Albania, among the high mountains. This region is known for the survival of older singing styles, with narrow-range melodies and strained styles of singing, common to most of the singing styles of the central Balkans (Sugarman, 2000:994). The population of this region is known as *Malisori*. Characterizing northern Albanian music and particularly polyphony, Jane Sugarman wrote: “Though most older styles of women’s singing are monophonic, women in Southwestern Kosova and western Macedonia also sing two-voiced polyphony. Against a narrow-ranged melody sung by a soloist, one or more women sing a lower vocal line that sometimes duplicates pitches of the melody and sometimes strikes a pitch a second or third below it. Men in the same districts in Kosova sing only in unison, but in western Macedonia men have their own polyphonic styles of singing, consisting of a melodic line sung against a drone” (Sugarman, 2000: 995).

Southern Albania is one of the richest regions of vocal polyphonic singing in the Balkans, and possibly in Europe or even the world. Southern Albania is divided into four main regions: *Toskeri*, *Myzeqe*, *Chameri*, and *Laberi* (Ahmedaja, 2005). These four regions are sometimes grouped into two styles: *Toskeri* (containing *Myzeqe* and *Chameri* styles) and *Laberi*.

The *Laberi* style (the most mountainous part of south-central Albania) usually has three or four different parts. The polyphony is based on a drone (*iso*), and together with *iso* three other soloists participate. The range is usually not wide (within a fifth, sometimes reaching a seventh), and sometimes there is a very small space for clashing four parts within the fifth. Dissonances are quite common. The scale is mostly pentatonic. The songs are rhythmically and metrically quite strictly organized. The drone is mostly rhythmic, although it can be pedal as well:

Ex. 59. Albania. Laberi style polyphony. (Shituni, 1989:270-271)



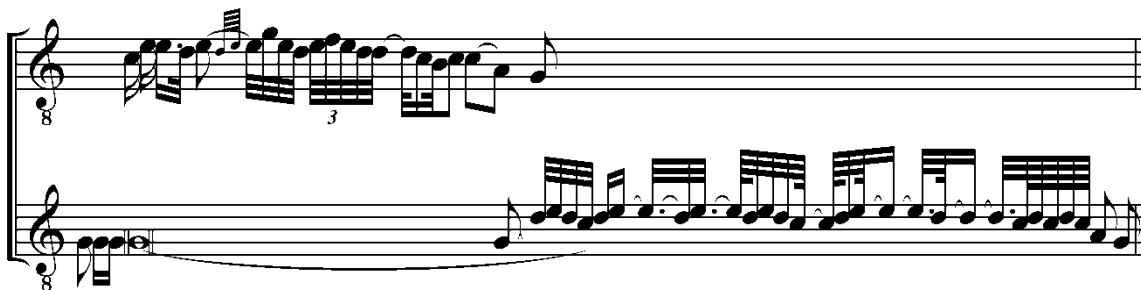
Ex. 60. Albania. Laberi style Polyphony (Shituni, 1989:175)



The style *Chameri* (the border region with Greece) was particularly well researched by a group of German scholars (Stockmann, Fiedler, and Stockmann). This style has quite a few differences from the *Laberi* style. Two leading melodies are sung against the background of a pedal drone. The melodies have quite a wide range (usually an octave). The mastery of the performers is mostly shown in the rich ornaments and glissandos in the lead melodies. Rhythmically and metrically the polyphony of *Laberi* and *Chameri* is also different. *Chameri* songs are mostly in *rubato* (free rhythm). This style consists almost exclusively of three-part polyphonic songs, although as

the two leading melodies are often sung in a responsorial way, the real sound is often two-part:

Ex. 61. Albania. Chameri style polyphony (Stockmann et al, 1965;101, #3)



Two other polyphonic styles (*Myzeqe* and *Toskeri* – Southwestern and Southeastern parts of Albania) are closer to the *Chameri* style. *Myzeqe* and *Toskeri* polyphony has some common traits with the polyphonic styles discussed above. The first is the type of polyphony – a drone (on “E”). Another common feature is the wide use of dissonances. Besides *Myzeqe* and *Toskeri* polyphony is also mostly three-part, and the top melodic lines are always sung by the soloists.

Two-part polyphony plays a more important part in the polyphony of *Myzeqe* than *Toskeri*. They are mostly performed by women in the following way: the first part is sung by a woman soloist, and then the group responds. The responding group usually consists of another soloist and a group (drone) (Ahmedaja, 2005). Ahmedaja differentiates the polyphonic types of *Myzeqe* and *Toskeri* according to the relationship between the top parts. The role of the second soloist (second top part) is particularly important, as it may follow the first soloist, or may gain independence. In some rare types of songs every part (drone and the leading melodies) are performed by groups of women in unison. Three-part songs constitute the main part of women’s singing as well. In contrast to the *Chameri* and *Laberi* songs, in the three-part songs of *Myzeqe* and *Toskeri* the two top parts often move in parallel thirds. The term *iso* is widely used for the drone part throughout Albania, but there are more local terms as well (for example, “*mbajne kaba*” – “they hold *kaba*” among *Myzeqe* and *Toskeri*).

Sugarman notes interesting differences between the singing styles of Albanian men and women (Sugarman, 1997). The men’s songs are more energetic, rhythmically free and more ornamented. Women’s singing is more subdued, rhythmically more strictly organized, and less ornamented. Interestingly, as they age, their behavior changes: “as women age, better

singers may adopt virtuosi features of the men's repertoire, whereas older men often sing in a more subdued, dignified manner" (Sugarman, 2000:991).

Contemporary Europeanized styles of polyphony, mostly based on two-part polyphony, where the parts move in parallel thirds and sixths, are particularly popular in southern Albanian cities.

Greece

Like many other polyphonic traditions of Europe, the Greek tradition of vocal polyphony became known only after the Second World War, during the 1950s. One of the reasons for this could be the fact that Greek music is mostly monophonic. As a matter of fact, together with Romania, Greece could be considered to be one of the most monophonic countries in the Balkans. At the same time, unlike Romania, where the major part of polyphonic tradition seems to be mostly brought there by Macedonian migrants from other parts of the Balkans, Greek polyphonic traditions seem to be an autochthonous survival of the musical culture of the Balkans.

According to the common view of ethnomusicologists, most Greek traditional music is monophonic, both solo and unison. Only in two regions, geographically situated on opposite sides of the country, are vocal forms of traditional polyphony found. These two regions are Epirus (Epir), the Northwestern corner of the country, and the Dodecanese islands (island Rhodes) – the isolated Southeastern island part of the country. Most interestingly, these polyphonic traditions, isolated from each other, retained some important common features.

Mountainous Epirus has traditionally been considered to be the region with the most archaic element of culture and ethnography in Greece, and one of the richest regions in musical traditions. A good description of the three-part polyphonic tradition of Epirus is given in an article by Cowan: "This musical style, with a pentatonic structure, involves at least three vocal parts: a melodic line, a fixed drone (*ison*) sustaining the tonic, and a *klostis* 'embroiderer', who alternately leads the song and embroiders the melody with a yodeling voice" (Cowan, 2000:1010). We could add here the predominance of the vertical coordination of the parts on seconds and fourths.

Ex. 62 Greece. Two-part polyphony (Schneider, 1969:#274)



Ex. 63. Greece. Three-part polyphony with “klostis” [yodel] (Baud-Bovy, 1983:#57)

The similarity between the polyphonic traditions of Epirus with the polyphonic traditions of other regions of the Balkans is quite obvious.

Another polyphonic tradition from Greece (the island Rhodes from the Dodecanese group of islands) also shows the same common features of Balkan polyphony, with the drone, dissonances between the parts, the small range of the main melody, and the pentatonic scale. According to the available information, the tradition of three-part singing with the third part, the yodeling *klostis*, is not known on Rhodes Island.

The later European style of polyphony became popular on the island of Corfu, where the basis for such influences was created by long-standing political and cultural relationships with Venice (these islands became part of Greece in 1864). According to Cowan, “Romantic serenades (*kantadhes*), still popular, are the only Greek folk music that uses western harmony: men singing triadic three- and four-part harmonies, accompanying themselves on mandolins and guitars” (Cowan, 2000:1014).

Vocal Polyphony in North Europe

North Europe represents a very interesting and somehow problematic picture of the distribution of the tradition of vocal polyphony. Traditional polyphony exists only in two opposite regions of contemporary North Europe – the east (the Baltic region) and the west (Iceland). At the same time, there are very important and clear historical sources of information about the distribution of vocal forms of polyphony in many regions of North Europe. We will review first the live traditions of polyphonic singing (the Baltic states and Iceland) and will then discuss historical sources from a few other regions.

Baltic Region

Located geographically between the eastern and northern parts of Europe, the Baltic region could be a part of both northern and eastern Europe. The Baltic region comprises three countries: Lithuania, Latvia and Estonia. Out of them Lithuania and Latvia are closely related cultures with related Baltic languages. Estonians are a part of a larger Finno-Ugric family of languages. Most importantly for our subject, all three countries of the Baltic region are known to have interesting vocal forms of traditional polyphony. We shall first discuss two Baltic peoples, Lithuanians and Latvians, and then Estonians.

Lithuania

Lithuania is the biggest out of all three Baltic countries and historically held a leading role in medieval Eastern Europe. Another interesting historical fact is that Lithuania was the last country in Europe to officially adopt Christianity in the 14th century.

Lithuania is particularly well known as a homeland of the unique polyphonic singing style known as *sutartines*. Although the term *sutartines* means “agreement”, or “cohesion”, *sutartines* is well known as the “kingdom of the dissonances”. To be more precise, we need to know that there are a few different styles of *sutartines*, based on different principles of polyphony (such as unison-heterophonic, canonic and drone types of *sutartines*). Among all these types of *sutartines* the most well-known and truly unique type is the so-called “secondal *sutartines*”. The most important feature of secondal *sutartines* is the abundance of secondal dissonances. More precisely, in this type of *sutartines* seconds sound almost constantly:

Ex. 64. Lithuania. Example of two-part secondal *sutartines*, performed by three singers (Slaviunas, 1972:64, #4)



The technical means to achieve constant singing in seconds is very interesting. Singing in parallel seconds is always challenging for singers. So if you try to sing two parallel melodies with the distance of a major second between the parts all the time, you will soon find out how difficult this is to do.

In *sutartines* the constant singing in seconds is not achieved by the parallel singing of the same melodies in seconds. Instead, constant seconds are achieved by a clever combination of the ***type of the melody*** and the ***type of polyphony***.

Let us look at the melodic line of the typical secondal *sutartines* given above. The melody often consists of two sections of mostly equal length. In our typical example there are three bars in each section, making the whole melody a six-bar structure (3+3 bars). In both of these three-bar sections the melody moves on the notes of the simple triad. But there is a crucial difference in these two three-bar sections: in the first three bars we have the simple triad-based melody, say, on the notes of the triad of A-major: (A-C#-E), (sometimes only two notes out of the triad are used, as in this example: C#-E). Then, in the next three bars the melody suddenly modulates a major second up, into B-major, and now there is the same kind of melodic movement on the triad notes of B-major: (B-D#-F#). Let us look at a typical *sutartines* melody:

Fig. 7 Typical melody of secondal polytonal *sutartines* (from the previous example)



Now let us have a look at what happens to this melody when it is performed in a polyphonic way. This kind of polyphony, when both parts sing the same melody, but the second part starts singing a bit later, is called *canon*. “This looks like a *round*,” some readers might say. That’s correct. Generally, the term “Round” is another, more popular English name for the same kind of musical composition when performers sing the same melody in two groups, the second group starting a bit later. There can be more than two groups, of course, and they would all sing the same melody after each other. As the first part finishes the melody, it starts singing the melody over again (at the right point, of course), and the other parts do the same. This goes on and on and on. Canons usually have no “legitimate” ending, that’s why the cohesive ending of a canon (round) is often the most difficult part of the performance. The starting moment for the second (following) group is different. Sometimes the second part joins in after just a couple of notes, more often a bar or two, but sometimes it comes even later.

In *sutartines* the starting moment of the second part is crucial. **The second part comes in when the first half of the melody is finished and the melody is moving to the modulated section.** As a result, we have two parts, singing simultaneously the triad notes of different triads ([A]-C#-E and B-D#-F#) all the time. As both phrases are of the same length, exactly when the first part moves from (A)-C#-E into B-D#-F# triad, the second part moves from B-D#-F# into a (A)- C#-E triad, so constant sounding of dissonant seconds is guaranteed.

As we can see, two tonal centres (in our case, “A” and “B”), sound simultaneously. This is a very interesting and clear case of **polytonality** in traditional music, obviously used long before the revolutionary use of polytonality in 20th century music by Ives, Bartok, Stravinsky and other composers who revolutionized musical-harmonic language. No wonder that at the beginning of the 20th century the singing style of *sutartines*, based on the constant use of sharp seconds, sounded “horrible” to some educated musicians. Some educated Lithuanians even compared this singing style to “a crocodile, singing in parallel second accords...” (Rachiunaite-Viciniene, 2002:31).

Although *sutartines* is actually always two-part polyphony, it can be traditionally performed by two, three or four performers. These forms of *sutartines* are appropriately called *dvejines* (“dve” means “two”, “*dvejines*” means “twosome”), *trejines* (threesome), and “*keturines*” (foursome). There are plenty of different types and sub-types of *sutartines*. Slaviunas, whose three-volume work in Lithuanian remains the most inclusive research about

sutartines (Slaviunas, 1958-1959), distinguished nineteen types of polyphonic singing, and Rachionaite-Viciniene added nineteen more types in her recently published first English-language book about *sutartines* (Rachionaite-Viciniene, 2002).

Sutartines polyphony is not present throughout the whole of Lithuania. It has a rather small area of distribution – the Northeastern part of Lithuania, a region called *Aukstaitia*. Some elements of the *sutartines* singing style have been found in neighbouring Latvia as well (Boiko, 1992, 1992a).

As happens sometimes, when there is one distinctive “national” style of traditional music, it occupies the mainstream interest of scholars and leaves very little space for other research topics. This was the case with *sutartines* polyphony in Lithuania. Dazzled by the uniquely Lithuanian *sutartines* singing style (particularly the secondal polytonal *sutartines*), neither Lithuanian nor international scholars mention the existence of another polyphonic type in Lithuania – drone polyphony. It was Daiva Rachionaite-Viciniene, the author of the recently published book on *sutartines*, who brought the phenomenon of drone polyphony in Lithuania to light. At the 2004 conference on Traditional Polyphony in Tbilisi (Georgia) she delivered a special paper dedicated to the drone polyphony in Lithuanian music.

Interestingly, examples of Lithuanian drone polyphony were recorded and published with the publication of the collection of Northeast Lithuanian songs prepared by A. Sabaliauskas (1916). Many other drone polyphonic songs were recorded throughout the 20th century, but they were all known as sub-types of the same *sutartines* style polyphony. Really, the name matters! For example, in the recent English-language book on *sutartines* (Rachionaite-Viciniene, 2002) the examples of drone polyphony appear under the name of “collective *sutartines*” (styles 38, 39), and symptomatically, the term “drone” is not used in descriptions of this singing style (Rachionaite-Viciniene, 2002:198-200). This unification of different forms of polyphony under the term *sutartines* does not mean that there is no traditional term for the “drone” in Lithuania. The term for the drone in Lithuania is *tranavimas*, and the performer of a drone is called *tranas*. Unlike the “classical” *sutartines*, which were always performed by from two to four singers, “collective [drone] *sutartines*” are performed by a big group of people (from four to twenty). Also unlike the *sutartines* (where the polyphony is always only two-part), Lithuanian drone polyphony has three- and even four-part examples.

The influence of European harmonic triadic style on Lithuanian examples of drone polyphony is evident. Maybe because of this, Slaviunas considered them to be a late, “new-fashioned” style in Lithuanian music. Rachionaite-

Viciniene expressed a different point of view on this topic, arguing that drone polyphony could be an archaic phenomenon in Lithuanian music (Rachiunaite-Viciniene, 2005). Interestingly, the region of the distribution of drone polyphony (the eastern tip of Lithuania) is known in Lithuanian ethnography, dialectology and musicology, as the region where the most archaic elements of Lithuanian (and possibly Baltic) culture has survived. Another interesting difference between secondal canonic *sutartines* and drone polyphony (or “collective *sutartines*”) is, that the secondal *sutartines* style has died out (it gradually disappeared throughout the mid 19th century – mid 20th century, and now exists only in amateur and professional ensembles, mostly in cities), but drone polyphony, on the contrary, is still popular in some east Lithuanian villages (for example, in the village Nibragalis in the Penevezhis region). Let us have a look at the “best-kept secret” from Lithuanian polyphonic culture – an example of drone polyphony:

Ex. 65. Lithuania. Drone *sutartines*. (Rachiunaite-Viciniene, 2002:200)



Heterophonic (or variant-heterophonic) *sutartines* with almost unison singing is another polyphonic style in Lithuania. Unlike drone polyphony, the existence of the heterophonic style has been long-since recognized.

The ubiquitous contemporary polyphonic style (obviously influenced by European professional music) with characteristic parallel thirds and cadencial

fifths is spread through the same polyphonic region of Lithuania (Northeast region Aukštaitia)

And finally we should say that the Lithuanian polyphonic singing style *sutartines* (and particularly the best-known type, the secondal polytonal *sutartines*) became a trademark of Lithuanian musical culture and a potent sign of national identity in the struggle against the USSR policy of Russification.

As a unique polyphonic style, *sutartines* has been discussed in numerous scholarly articles, and different points of views are expressed in the scholarly literature regarding the archaic features and the chronology of the emergency of this singing style. We will have a special section in the second, “comparative” part of this book, fully dedicated to a discussion of different existing points of view on the origins of *sutartines*.

Latvia

Another Baltic country, Latvia, could be considered the most polyphonic among the Baltic States. Although Latvian polyphonic traditions are not as internationally known and as dazzlingly unique as the Lithuanian canonic polytonal *sutartines* style, and although there is no such variety of polyphonic styles as in Lithuania, the Latvian tradition of polyphonic singing covers most of the ethnic territory of the Latvian state. The only region where no polyphonic recordings have been made is the Northeast part of the country. In the western part of Latvia the tradition of polyphonic singing is still well alive (as in the regions of Nica, Barta, Alsunga).

Interestingly, virtually the only type of polyphony recorded in the territory of Latvia (according to the works of Latvian ethnomusicologists) is drone polyphony. Written sources mention the tradition of drone polyphony in Latvia from the 16th and 17th centuries. The drone is mostly pedal, but there are instances of the rhythmic drone as well. There are different terms for the drone performer in Latvia: *vilceja* (“the one who drags”), *duceja* (“the one who gives a low, continuous droning sound”) and *ruceja* (“a grumbler, the one who murmurs”). The drone changes its pitch and moves always a major second up. The main melody is always sung by a solo performer, and the range of the main melody is very small (usually a third). The drone is always performed by a group of singers. Rhythmically Latvian drone polyphony is based on a simple duple metre (2/4). Two-part singing dominates:

Ex. 66. Latvia. (Vitolin, 1976:103)



A. Yurian documented a fascinating tradition of drone three-part singing in Latvia in the 1890s. This tradition of three-part singing was documented at two places – in central-Southeastern and Southwestern regions of Latvia. (I am very grateful to Latvian ethnomusicologist Villis Bendorf for making archive transcriptions of A. Yurian available to me while I was in Latvia in November 1988.) Some of these recordings were published in 1907. A fascinating tradition of drone three-part singing is represented on these recordings (see the last example from Latvia). The pedal drone is in the middle, the main melody (solo performer) sings a small-range (within a third) melody, and the third part mostly sings under the drone. The third part is also performed by a solo singer. It is very interesting that the third part is also based on a small-range melody and mostly sings (recites) on a major second below the pedal drone, thus creating plenty of sharp secondal dissonances with the drone. (I do not want to go into “comparative” discourses here, before the second part of the book, but the parallels between three-part Latvian drone polyphony and some three-part Balkan dissonant styles are quite obvious.) This tendency to create secondal dissonances is particularly evident at the very end of the musical phrases. Look at the second last note: there are the following notes together: “D” in the pedal drone, “C” in the lowest part, and “E” in the main melody. Therefore, at this moment there are two seconds sounding together (C-D and D-E). Most importantly, this sharp dissonance is not a result of a random coincidence of free melodic parts. The fact that this sharp dissonance has a special “fermata” sign on top [a semicircle with the dot inside] at this very moment means that singers were consciously trying to achieve this sharp dissonant harmony and held it longer [“fermata” means that these notes must be sung considerably longer, “drawn out”]:

Ex. 67. Latvia. Three-part drone polyphony (archive recording made by A. Yurian, from Villis Bendorf)



As I have mentioned before, Latvian ethnomusicologist Martin Boiko researched and found some interesting elements of *sutartines*-style singing in Latvia as well, although no songs of the unique “secondal polytonal *sutartines*” have been found in Latvia (Boiko, 1992, 1992a).

Estonia

Estonia is the smallest and the only non-Baltic speaking country in the Baltic region (actually, it was the smallest republic of the whole USSR). The Estonian language belongs to the Finnish group of the Finno-Ugric family of languages. Hunter and fisher ancestors of the Estonians (and Finns) migrated to North Europe from the region of the Ural Mountains in the middle of the third millennia B.C. A few centuries later they were joined by the first Baltic tribes, who made their way to the Baltic region by the end of the third Millennia. According to publications of Estonian ethnomusicologists concerning the distribution of the traditional vocal polyphony, Estonia is the most monophonic out of the three Baltic countries. However this does not mean that there is no polyphonic singing at all. Two different types of vocal polyphony have been documented in Estonia (both in the southern part of Estonia, closer to Latvia. Sarv, 1988):

(1) The first type of polyphony is present in the singing traditions of the specific ethnic group Setu. Setu live in the Southeastern corner of Estonia. The polyphonic style of Setu can be characterized by: (1) two-part singing (mostly), (2) the variant-heterophonic performance of the main melody by a big group, and (3) the top harmonic part, performed by a soloist (Sarv, 1988). This top melody (the native term for it is “kill’a”) has an obvious element of a drone. If you look at the top part, it is easy to see that Kill’a usually changes only slightly – it goes to the next note and then comes back to the same note again:

Ex. 68. Estonia. Setu polyphony (from Vaike Sarv)



Ex. 69. Estonia. Three-parts singing with elements of drone (from Vaike Sarv)



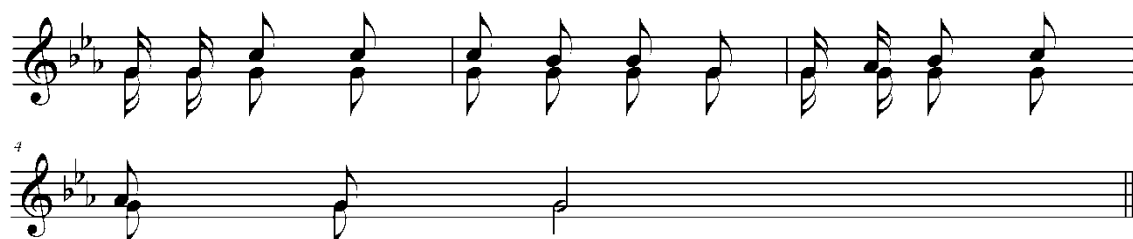
(2) Another polyphonic style in Estonia is drone. Drone polyphony is present in two regions – among the same Setu, and in the Southwestern corner of Estonia. The drone in Setu is not very clearly defined. In a few examples of traditional Setu two-part singing the texture is complemented by the third part. This is the lowest part, which has elements of a drone, and is performed by a soloist.

Another region with drone polyphony is situated in the Southwestern corner of Estonia, next to the Latvian border. Examples of drone polyphony were recorded here by Tampere at the beginning of the 20th century and published in the 1930s. This is a typical example of two-part drone polyphony. The drone character is very well defined, with both pedal and rhythmic versions of the drone. The melody has a small range and is performed by a soloist. There are characteristic repetitive dissonant clashes of the drone and the melody on the sharp seconds (Tampere, 1938). This style does sound very similar to the Latvian drone singing style. As this tradition of Estonian drone polyphony is not very well-known to European readers, let us have a look at a three examples:

Ex. 70. Estonian drone polyphony (Tampere, 1938:5, #14)



Ex. 71. Estonia (Tampere, 1938:5, #7)



Ex. 72. Estonia (Tampere, 1938:7, #16)



Finland

According to the available information, Finland is the only state in North Europe where we do not have any historical sources or later information about the presence of a polyphonic singing tradition. But as we may agree, “the absence of data does not mean the absence of the phenomenon”, so at least some forms of late pan-European style of simple polyphony with at least occasional parallel thirds might well be characteristic of Finnish social singing as well. At least, I remember myself, how a group of my Finnish friends were singing at a wedding of my Georgian friend Nasi and Finnish Laif on February 23rd 1988. They were singing in unison, but steadily finishing all the musical phrases with the major third.

Iceland

Finding a live tradition of polyphonic singing in Iceland was one of the highlights of the study of European polyphony – both professional and folk. A live tradition of polyphony in Iceland was particularly important for musicologists studying medieval European polyphony, because of its clear connections to the earliest types of *organum* [*Organum* was the first type of European professional polyphony, that appeared at the end of the 9th – beginning of the 10th centuries].

Angel Hammerich published a pioneering article about the Icelandic two-part singing tradition *twisongur*, then Biarni Forstain published 42 examples of *twisongur*, and finally John Laif recorded on phonograph the examples of *twisongur*. The phonograph recordings proved the correctness of the transcriptions made by Forstain. The term *twisongur* literally means “two-singing”, and it is a **traditional technique** of the two-part performance of secular and sacred melodies. Hornbostel’s description of *twisongur* as “fifths organum with crossing parts” is quite accurate (Hornbostel, 1986 [1930]). Most of the time the parts move in parallel fifths in *twisongur* style, and at certain moment the parts shift places (the top part goes lower and the low part goes higher than the top part). Therefore the second part usually finishes with the note that the first part started at the beginning of the song. The leading genre of Icelandic traditional music, *Rimur* (epic songs), was also

performed in *twisongur* style. Here are two typical examples of the earlier type of *twisongur*:

Ex. 73. Iceland (Hornbostel, 1986:310, #36)



Ex. 74. Iceland (Hornbostel, 1986:311, #4a)



The tempo was usually very slow, and the sound of “empty” parallel fifths is very specific. Interestingly, in late medieval Europe parallel fifths were considered the biggest compositional mistake that a composer could make in composing polyphonic music. By the way, parallel fifths were considered a very serious mistake not only by Medieval European music theorists. I remember myself doing very much feared harmony tests at Tbilisi State Conservatory in the mid 1970s, and parallel fifths were still the most feared mistake for the students.

Another feature of the *twisongur* style is a very specific scale with a range of more than an octave:

Fig. 8. Twisongur scale



The appearance of F and then F# an octave higher is particularly interesting. From the point of view of European scale systems the note F# cannot be a part of the scale. It just does not make any sense. The eighth step of the scale (F#) must be the “octave repetition” of the first step of the scale – F (“tonic”). And the tonic is the most important and stable step of the scale. Therefore, within the basic rules of the European classical musical system the Icelandic scale F, G, A, B, C, D, E, F#, G makes as much sense as a three-eyed human face. But of course, this is simply because the Icelandic scale is not based on the octave (eight note) scale system.

The presence of the augmented octave points to the scales of the fifths diatonic system in Icelandic polyphonic singing (you may remember this

scale from our discussion of the scales of Georgian traditional polyphonic music). This scale is created by two five-note rings, tied together (F, G, A, B, C, tied to C, D, E, F#, G. See Gogotishvili, 1982, 2004). The most important feature of this type of scale is that the fifths must be always perfect. Perfect fifths always cause the appearance of augmented fourths and augmented octaves (this is unavoidable). This is exactly what happens in the Icelandic *twisongur*.

Another very interesting feature of the Icelandic *twisongur* is the wide use of the Lydian scale. In its “classical” understanding the Lydian scale is a string of white keys on the piano from F to the next F. This scale was never used by the greatest European classical composers (until the romantic style composers of the 19th century, like Chopin). The augmented fourth step of the Lydian scale (B) was particularly avoided as it was considered to be the “ugliest interval”. In some cultures (for example, in many Middle-Eastern cultures) this interval is traditionally considered the harshest and is very much avoided. In medieval European professional music this interval was also very much avoided, and was given a special name “Triton” (“three” “tones”, as it consists of three full tones, instead of the “normal” two full tones and a half tone to make a perfect fourth).

So, the Lydian scale for the European musical system, although it is the “ugliest” scale, is still an octave scale with “proper” seven notes (F, G, A, B, C, D, E, and at the end, of course, again F). But in the system of the fifths diatonic scales, it is the perfect fifth that rules, not the perfect octave, so this troubling high fourth step of the Lydian scale (B) causes the appearance of the incredible F# in the *twisongur* scale. This is a fifth diatonic scale on a Lydian basis.

There could be more than two singers and two parts in *twisongur* as well: “More elaborate versions of *twisongur*, with doublings at the octave for other vocal parts, and a great variety of freer forms, were performed in sacred and secular settings” (Hopkins, 2000:403). In later forms of *twisongur* parallel fifths could be sometimes replaced by unisons. Gregorian Chants and psalms could be performed in *twisongur* style as well.

We know that the Church was not happy with the appearance of polyphonic singing in the churches in the first place. There is a well-known written record in the Iceland “Episcopal Sagas” that Episcopo Laurentius from Holar tried to ban polyphonic singing in the church in the 1320s (Grinde, 1982:15). As we can see, there was something totally unacceptable in Icelandic polyphonic singing for the Medieval European musical system.

England

To feel the enjoyment of the informal group singing of the English, one needs to go to one of the famous “singing pubs” of England. “Traditional singing in harmony has been recorded extensively” (Gammon, 2000:327). Unfortunately, the singing styles that have been documented during the last 100 years bear obvious traces of the influence of European professional polyphony. Fortunately, historical sources provide very important information about the wide distribution of the tradition of polyphonic singing in medieval England and other countries of the British Isles. One of the earliest and certainly the most important information about polyphony in England (and in fact, in northern Europe) comes from Giraldus Cambrensis from around 1180-1200. He described in detail the part-singing traditions in northern England and Wales. Cambrensis believed the British islanders learned the part-singing tradition from the Danes and Norwegians. After this interesting bit of information (as there is no live tradition of vocal polyphony in contemporary Norway and Denmark) there is very little information before the 18th century.

Before going further let us listen to Cambrensis himself, as citing his famous passage became a common place in the books on music history, and would be shame not to have it in a book wholly dedicated to vocal polyphony. Readers, who have read this passage many times, can omit it, but those who will be reading it for the first time, I would suggest to remember that we are listening to a highly educated thinker who is talking about the musical life in Wales and England at the end of the 12th century:

“As to their musical euphony, they do not sing uniformly as this is done elsewhere, but diversely with many rhythm and tunes, so that in a crowd of singers, such as is the custom among these people, you will hear as many different songs and differentiations of the voices as you see heads, and hear the organic melody coming together in one consonance with the smooth sweetness of B-flat.

“Moreover, in the northern part of Great Britain, that is across the Humber and on the border of Yorkshire, the English people who inhabit those parts employ the same kind of symphonious harmony in singing, but in only two parts: one murmuring below and the other in a like manner softly and pleasantly above. Both nations have acquired this peculiarity not by art by long usage, which has made it, as it were, natural. Moreover, it prevails in both countries and is now so deeply rooted there that nothing musical is performed simply, but only diversely among the former people and in two parts among the latter. And what is more remarkable, children scarcely

beyond infancy, when their wails have barely turned into songs observe the same musical performance.

“Since the English in general do not employ this method of musical performance but only the northerners, I believe that it was from the Danes and Norwegians, by whom these parts of the island were more frequently invaded and held longer, that they contracted this peculiarity of singing as well as their manner of speaking” (cited from Hibberd, 1955:8).

From the later historical sources we know that an interesting style of polyphonic singing – *glee* singing - existed in England. It was a non-professional tradition of singing in three or more parts, without instrumental accompaniment. The famous Copper family of Rottingdean, Sussex, is believed to be a continuation of the earlier *glee*-singing tradition. Their songs have been recorded and documented. There were also other forms of polyphonic activity in the 18th and 19th centuries: “Church and military bands played in harmony in the eighteenth and nineteenth centuries, and were widely heard and sung to” (Gammon, 2000:327).

According to the available material, popular forms of harmonic singing in England are based on the common European classical system with parallel thirds and triad chords. However, some examples of early English professional polyphony presents another polyphonic singing style, based on the use of a drone, a small range of the melody, and secondal dissonances. Here is a rare example of earlier drone type professional polyphony:

Ex. 75. England. (Schneider, 1969, part 3, #35)



Here we need to mention that besides the direct quite and detailed information about the vocal polyphony in England by Cambrensis, chronologically earlier sources from England also mention polyphony. Johan Scot Erigena, the great Irish thinker of the 9th century, speaks about the simultaneousness of the sounds for the idea of musical harmony (Handschin, 1932:513). Handschin mentions even the earlier source from the 7th century, an Anglo-Saxon writer Aldhelm, who, according to Handschin “is the first medieval writer who distinctly refers to part-singing” (ibid, 513).

Wales

In the writings of Giraldus Cambrensis about part-singing in the British Isles Wales occupies the central place (Hibberd, 1955). Cambrensis' claim that "you can hear in Wales as many voices [parts] as there are singers" might be an exaggeration, but there can be little doubt that a well-developed tradition of traditional polyphony existed in 12th century Wales.

An interesting folk tradition of reading the biblical texts in two parts (at a fifth interval) has been described by Kinney: "Declamation in the Welsh folk tradition is still to be heard in *canu'r pwnc* 'singing the text'. As now practiced in southern Wales, the tradition is connected with reciting biblical scriptures at catechismal festivals, which became prevalent in the early 1800s. The style of sung recitation may, however, be much older. In a typical example, a passage from the Bible is announced, and the precentor sounds the note. One group enters immediately on the same note, a second part comes in at a fifth above, and the two parts chant together at that interval. The rhythm of the chant is clear, the tone firm and rather staccato, the diction clear. Phrasing is according to punctuation: the reciting tone dips slightly on each strong accent; but at cadences on commas or periods in the text, the dip may reach as much as a fourth. These cadences are snapped sharply, in a sixteenth-and-dotted-eight rhythm. The alternation of voices adds variety, as children chant in unison, then women in unison, then men, and the entire congregation once more in two parts" (Kinney, 2000:345).

The tradition of choral singing today is something of which the Welsh are rightly proud. The roots of this tradition can be found in the ancient predilection of Welshmen towards part-singing, described by Giraldus Cambrensis at the end of the 12th century, but more immediate connections should be made with the growing popularity of choral singing in the 18th and 19th centuries. The widely popular festival of choral singing "Gymanfa Ganu" has been regularly held throughout Wales for more than a century.

Scotland and Ireland

Not much evidence is available about polyphonic singing in Scotland and Ireland. Of course, Cambrensis' information is interesting in regard to the singing traditions of Ireland and particularly Scotland (as Cambrensis mentions, the northern regions are more polyphonic). Interesting singing traditions from the Shetland Islands, Hebrides and Orkney Islands (including the famous polyphonic hymn to St. Magnus) support the suggestion that both Ireland and particularly Scotland must have had traditions of vocal polyphony during the Middle Ages. Another reference to the existence of the

tradition of polyphonic singing comes from the Irish Sagas. In a “Saga on the Sons of Usneh” there is mention of the tradition of three-part male polyphony. The Saga contains the names of all three parts as well: *andord* (tenor), *coblach* (baritone) and *dord* (bass) (Gruber, 1941:507).

On Tory Island, off the Northeastern tip of Ireland, the tradition of part singing is still alive. According to an article on Irish music in the “Garland Encyclopedia of World Music”, Tory islanders “favor duet or even loose choral singing more than singers elsewhere” (Shields & Gershen, 2000:381).

Sweden

Information on polyphony in Sweden is mostly connected to polyphony in church music: “Some extant liturgical books used in Swedish religious institutions from 1300 to 1400 and containing music notations give evidence for polyphonic singing at the cathedral of Uppsala in 1298. King Gustav Vasa (reigned 1523 – 1560) eliminated papal control of Christianity in Sweden and introduced the Protestant faith. The reformation resulted in many handwritten hymnbooks that reflected local traditions; in 1697, the first official collection of hymns was published” (Ling et al., 2000: 443-444). According to Ling, the tradition of folk choral singing (both in unison and polyphony) is still alive in Sweden (Ling, 1981:42). From the 1800s choral singing became widely popular and many major choral societies were established throughout Sweden. During this period “choral and solo vocal music dominated the local production and reception of music” (Ling et al., 2000:444).

Denmark and Norway

According to Giraldus Cambrensis, Denmark and Norway were two of the most important and influential centres for the dissemination of vocal polyphony throughout medieval northern Europe from Scandinavia to Iceland (Hibberd, 1955). Unfortunately, there is almost no other information on this topic from subsequent centuries. Although, interestingly, “The building blocks of Norwegian music – augmented fourth, parallel fifths and octaves, pedal points, asymmetrical rhythms” (Hopkins, 2000:425) has some remarkable similarity with the main features of the singing traditions of *twisongur* polyphony from Iceland (see above). Considering the deep ethnic and cultural connections between Iceland and Norwegians, this is hardly surprising.

Vocal Polyphony in Central Europe

Poland

According to the available materials, the main region for traditional polyphony is the Podhale region in the Tarra Mountains, southern Poland. Two-part polyphony with parallel thirds, and more interestingly, fifths, with the elements of the Lydian scale has been documented here:

Ex. 76. Poland (Elschekova, 1989: 191)



Survival of the tradition of polyphonic singing in the mountains is also evident according to Dahlig: “Only in the Carpathian area is polyphonic singing found. There, one singer initiates a song and after a few notes others join in: some take the main melody while the rest add a voice below” (Dahlig, 2000:703). According to this description this polyphonic style has elements of two-part heterophonic polyphony, with groups singing both parts and the number of parts changing from two to three. Some influence of European professional music is also evident in parallel thirds and a specific “leading” seventh step (giving the music the feel of a European Dominant chord).

Slovakia

According to available data, the tradition of more contemporary polyphony is spread quite widely throughout the territory of Slovakia. It is mostly two-part singing in parallel thirds (mostly in Northwestern Slovakia). In the northern part fifths have a greater importance, and in the western part – thirds and sixths (Elschekova, 1963, 1981). Both parts are usually performed by groups of singers. At the very beginning of the songs (as in virtually all polyphonic cultures), the individual performer starts singing, joined later by others. In some cases the group starts together in unison, which is possibly a later tradition, as with folk music it is very unusual to coordinate the pitch and rhythm of the songs beforehand and to prepare for the beginning. Musical phrases usually finish on one note, in unison. As both parts are

performed by groups of singers, the heterophonic division of parts is possible. In such cases a few three- or four-part chords appear in the musical texture. Perhaps the most developed form of heterophonic polyphony has been recorded in the mountainous central part of Slovakia:

And finally, in a few villages of the Northwestern part of Slovakia a tradition of drone polyphony with secondal dissonances and small-range melodies has been documented. The drone is rhythmic (it moves a major second up and down):

Ex. 77. Slovakia (Elschekova, 1981:174)



Czech

Part-singing is quite usual for this Slavic country, although the eastern part of the Czech republic (Moravia) is more polyphonic than the western part (Bohemia).

The polyphonic traditions of Moravia are connected to the late influence of European melodies and harmonies. As in most European polyphonic traditions of later origin, leading of the main melody in parallel thirds (and sixths) is dominating. Both parts can be performed by groups of people primarily in parallel thirds and sixths, usually in two parts, but sometimes in three.

According to Zelinska and O'Connor, one of the most developed traditions of part singing exists in Chodsko. Besides two parts singing in parallel thirds and sixths, two other parts also hold the double drone, apparently imitating the pedal sound of the bagpipe.

In some two-part songs in Chodsko the melodic lines are so intertwined that it is difficult to tell which part leads the main melody (Zelinska, O'Connor, 2000:719-720).

Germany

Although the tradition of vocal polyphony is not represented very well in the historical sources of Germany, group singing is without a doubt one of the important elements of German traditional culture: "Viewed in terms of action, folk music lives not as a performance by a few musicians for many (as in concert halls), but in collective performance with a high degree of

participation and interaction by all present (Klusen, 1975). Most of the audience members are also performers: they sing, hum, sway, dance, or clap together. Most participants are only nominally interested in the origin and type of musical material. It is insignificant to them whether it is ‘art’ or ‘folk’ music, or derived from a subculture; whether it is composed for instruments or for voices; whether it is traditional or contemporary, or ‘inferior’ or ‘superior’ quality, already popular or freshly written, from an unknown or celebrated hand, or is transmitted orally or from printed or electronic media; and whether the text suits the situation or function at hand. The determining factor is whether the music or the dance provides the opportunity for performers and audience to participate in the immediate situation” (Schepping, 2000: 648).

There are a few hints about the presence of a polyphonic tradition in medieval Germany. In one of them, a monk from Salzburg, whose name was Hermann, in the second half of the 14th century wrote a few polyphonic pieces based on drone polyphony, intending to create a new type of composition based on folk traditions, and in another similar case Oswald von Wolkenstein, who was also very much involved in traditional polyphonic traditions, used canonic polyphony in his compositions (Gruber, 1941:232; Bukofzer, 1940:48).

During the 1700s and 1800s the new pan-European harmonic system appeared, heavily based on the TSD (tonic-subdominant-dominant) progression, and during the 19th century this became popular throughout the European countries. The 1800s saw a great number of male choirs (*Liedertafel* – lit. “table song”) forming in factories, schools etc. (Schepping, 2000:652).

Austria

Austria represents one of the most important vocal polyphonic cultures of Central Europe. As Goertzen and Larkey wrote, “No country in Europe has folk music more thoroughly wedded to the diatonic major mode and the fleshing out of harmony than Austria” (2000:671).

In popular imagination Austria is the country of the yodel, an extraordinary style of singing with wide melodic jumps, when the singer rapidly changes his voice back and forth from the usual (chest) voice to the falsetto (head) voice. Of course, the Tyrolean yodel is by no means a unique singing tradition throughout the world, but perhaps because of its location in the centre of Europe, the Austrian yodel is the best known. The popularity of the yodel ousted the polyphonic singing style of Austrian the Tyrolean Alps.

Therefore, not everyone realizes that the yodel-singing style is primarily connected to the group polyphonic singing tradition in the Alps region (Haid, 2005).

All styles of Tyrolean yodel and particularly the supporting harmonies bear the obvious influence of European professional major-minor harmony (Haid, 2005). I am not aware of any Tyrolean yodeling examples that are not based on the TSD harmonic system. Maybe that's why "It is difficult to distinguish between older yodeling styles and several recent waves of commercial yodels" (Goertzen & Larkey, 2000:672).

Although the polyphonic style and the tradition of the yodel are best known from the mountainous central and western parts of Austria, these traditions exist throughout most of the country (including the vicinity of the capital city – east and north of Vienna).

Salzburg, the birthplace of Mozart – is part of the spectacular mountainous region, together with the Salzkammergut region, famous for its lakes, Styria and part of Upper Austria. They are all stylistically close. These spectacular regions are the home of very rich polyphonic traditions and yodel: "Its most typical forms of vocal music respond to this geography. There are three- and four-part homophonic yodels, other multi-part mountain pasture songs, and the *Almschroa*, a solo dairymaid's yodel" (Goertzen & Larkey, 2000:673).

According to Messner, one of the most famous styles of the Austrian Alps was in Carinthia in southern Austria. Five part male singing still exists in this area, although the original hexachordal polyphonic character changed into more usual late 19th century harmonic style. Three-part singing is characteristic for women's singing style, and a mixed four- and five-part singing style also exists (Messner, 1973)

Different bordering regions of Austria feature singing styles of the bordering countries as well. Besides, part of the Tyrol with its characteristic singing style is found in neighbouring northern Italy as well.

Switzerland

Switzerland is another extremely important region of the polyphonic traditions of Central Europe. With polyphonic choral singing based on European classical harmony and yodel, many regions of Switzerland (particularly of the Swiss-German areas) are close to the Austrian style of vocal polyphony.

The Swiss-German regions are perhaps the most polyphonic, with several regional styles of the yodel and traditions of vocal polyphony, and with a

tradition of festivals of singers, organized from 1825 onwards. Perhaps the most archaic style of yodeling exists among several families of Muotatal (under the name *juuz*, *juuzli*). This three-part singing tradition is still based on European classical harmony, although the singing style is not refined and is based on glissandos and uncertain and sometimes non-tempered pitches during singing (Zemp, 1990).

In Appenzell special yodeling competitions are traditionally held. Here the tradition of polyphonic singing also features yodeling (in a local style the yodel is lower in range), and is accompanied by two or three other parts – drones (*gradhabe* “to keep it straight”) (Hoffman & Delorenzi-Schenkel, 2000:691). Another yodeling style (*schnelzer*) in the same region (Appenzell) is known for its acceleration. Lucerne polyphonic singing also includes long drones with European harmonies and the use of yodel (Hoffman & Delorenzi-Schenkel, 2000:691). In still another region, Solothurn, “singing was formerly accompanied by clapping hands, slapping thighs, or drumming on a table. Other movements – holding the hand or little finger to the ear, pressing the throat to manipulate vocal quality, and other techniques – were commonly associated with singing in many areas. Tight closed circles, in which singers held their heads close together, commonly occurred” (Hoffman & Delorenzi-Schenkel, 2000:691).

The Italian-speaking area is also represented by the contemporary polyphonic singing style in parallel thirds. This polyphonic style is widely spread throughout the alpine region.

A big part of the folk repertoire of the Romansh-speaking area is religious songs. The information about their singing style (metallic high and loud voice) comes from the 18th century. Their singing style was described as “an ugly yelling and screaming” (Hoffman & Delorenzi-Schenkel, 2000:692). The tradition of two-, three- and four-part singing with European major-minor harmonies is still well alive in this region.

According to the available information, the French-speaking area is the most monophonic in Switzerland (not unlike France itself). Hoffman and Delorenzi-Schenkel mention only the tradition of group unison singing from this region.

Belgium and Holland

To complete the review of the Central European region, we need to mention that two-part singing of the typical late European style has been recorded sporadically in Belgium and Holland as well (Bosmans, 2000:520).

Vocal Polyphony in Western Europe

France

Generally speaking, central France is the largest territory of non-polyphonic singing traditions in Western Europe. As Hugh Shields put it, “centuries of classical polyphony have made little impression on the monophonic popular tradition and its realization mainly as solo performance” (2000:542). Elements of polyphony and harmony are usually confined to the use of accompanying instruments, or, in vocal music, to the use of heterophonic singing.

Breton. Heterophonic elements had been documented in Breton (a specific historical region in western France) dance songs. Historical sources about the musical traditions of Breton society documented the staunch resistance of their pagan rituals, songs and dances. For example, the ritual dancing around a fire on St John’s Eve has survived, despite a religious ban from the 600s (Kuter, 2000:561). The singing style *tuilage*, where two voices (“singer” – *kaner* and “countersinger” – *diskaner*) alternate and sometimes overlap, exists in Breton (and neighbouring regions).

Another region with the elements of polyphony is Southeast France and particularly the Southwestern corner of France. Here (mostly in Bearn) there is a tradition of two-part singing mostly in parallel thirds, although the use of traditional modes (for example the use of natural 7th step) suggest older origins of this type of polyphony:

This tradition of vocal part-singing could be connected to the influence of the traditional musical culture of the neighbouring Basques. Basques are known to be the only survivors of the pre-Indo-European population of old Europe. This unique position of the Basques is chiefly a result of the isolation of their language, the oldest and the only non-Indo-European language in Western Europe. Therefore, the presence of the tradition of vocal polyphony is particularly interesting in this mountainous region. Basque traditional music widely uses the tradition of vocal polyphony, which has some traces of the late influence of European harmonic language. This influence is mostly heard in the wide use of parallel thirds. Both Spanish and French parts of the ethnic territory of the Basques are known to be regions of distribution of this kind of two-part singing. (See musical examples of Basque polyphony later, in a section dedicated to Spanish traditional polyphony).

Corsica. Interestingly, one of the most developed traditions of vocal polyphony of Western Europe (and the Mediterranean basin), Corsica, is a part of mostly monophonic France.

Although *paghjella* was often mentioned in 19th century accounts of travelers, as it was the case with many other polyphonic traditions of Europe, Corsican polyphony was not recorded until after the 2nd World War. Felix Quilici and Wolfgang Laade recorded this tradition in the 1940s and the 1950s. As soon as the Corsican tradition entered the scholastic circle, it became clear that it was one of the richest and finest traditions of vocal polyphony in Europe.

Polyphony is mostly spread through the inland, far from the coastal regions, often representing the forest-covered mountains of the central and northern parts of the island. By the end of the 1940s, when this tradition was finally recorded and documented by ethnomusicologists, it was mostly performed by local shepherds at informal gatherings. Its status was not very high and the tradition seemed to be fading. From the 1970s Corsican polyphony became a musical symbol of the Corsican political movement and made a big appearance on the international scene of world music (Bithell, 2000b; 2007).

The traditional polyphonic repertoire of Corsica consists of three main types of songs: the *paghjella*, the *terzetti* and the *madrigale*. *Paghjella* is the best known and the “most Corsican” local style. The term *paghjella* is connected to the term *paghja* (“pair”). Laade suggests this term could “refer to the pair of half verses, which together make one line of the poem and a sung strophe” (Laade, 2000:569). *Paghjella* is a three-part singing tradition with a few distinguishing features:

- (1) All three parts – two melodic lines and the bass - are performed by individual singers. The bass is the only part that can feature more than one performer (Laade, 2000:569);
- (2) The two top melodic lines sing highly ornamented melodies (melismas – *ricucetti*), first following each other, then joining and concluding the musical phrase together;
- (3) The two top parts sing mostly in the same range, and there is no agreement between ethnomusicologists of which to consider the highest or the middle part: *secunda* or *terza* (interestingly, there is no part called *prima*!). Laade considers *secunda* (the one that starts singing) the highest and *terza* the middle (Laade, 2000:569), but Bithell considers *secunda* the middle (although the leading) voice and *terza* the highest (Bithell, 2000:6). According to the stratification of

the voices in the cadence, as well as the stratification of parts in other three-part polyphonic European traditions, *secunda* seems to be the middle part.

(4) *Paghjella* is mostly performed by males, although two brilliant female singers (Patrizia Poli and Patrizia Gattaceca) were leaders of the internationally renowned group Les Nouvelles Polyphonies Corses;

(5) Dissonant chords and intervals play an important role in the *paghjella* tradition;

(6) Links with the European major-minor harmonic system are obvious, particularly in the bass movements on T, D and S, and in the final chord, based on the major tonic chord;

(7) The *paghjella* often starts in a minor key and concludes in the same, but major key (reminiscent of the endings of many polyphonic compositions of J.S. Bach).

(8) The rhythm, known among professional musicians as *parlando-rubato*, is free, which makes precise coordination between the voices challenging. Smooth rhythmic coordination of singers is considered crucial for a good quality performance;

(9) The singing style is harsh and strained, particularly in the top voices, and the bass is more relaxed. While singing, performers usually stand close to each other, with hands cupped around their ears, and they often sing with closed eyes.

Each village usually had their own *versu*'s (the basic model of musical realization) and they were referred to as “u versu di Russiu”, “u versu di Tagliu” according to the village or region (Bithell, 2000:7). The central and most important region of the *paghjella* tradition is the forest-covered mountainous region of Castagniccia in central-eastern Corsica.

Another part of Corsica's polyphonic tradition is connected to the influence of Italian music. Corsica belonged to the Italian cities Pisa and Genoa from the 11th to the 18th centuries. This influence is felt in such polyphonic genres as *Madrigale*, *sirinati* (serenades), *barcarole*, *brindisi* and dance songs (Laade, 2000:570-571). Their performance style sometimes is referred as *a paghjella* (“in a paghjella style”, Bithell, 2000:5). “Songs of Italian or French origin are always sung in a relaxed voice, and many village and urban singers sing Italian and modern Corsican songs in an operatic *bel canto* [‘beautiful singing’ in Italian, a famous operatic singing style in Italy] voice” (Laade, 2000:571).

Portugal

According to the expert of Portuguese traditional music and polyphony, Castelo-Branco (2000), vocal polyphonic singing occurs in a few isolated pockets of northern and southern Portugal. In the mountainous north part of Portugal these are the districts of Viana do Castelo, Braga and Aveiro. In the central part of the north of Portugal there is the district of Viseu, and in central-east Portugal the district of Castelo-Branco. Another important region of traditional polyphony is in the district of Beja in the southern part of Portugal.

The polyphonic traditions are mostly connected to the European major-minor harmonic system. Two-, three- and four-part singing in Portugal is based on European triadic harmonies and parallel thirds. Another characteristic is that melodies in the southern part of Portugal are often embellished by melismas (northern regional styles do not have melismatic embellishments).

The scales are mostly European major and minor, but in the Beja and Castelo-Branco districts older scale systems are also used. The melodies in the central, eastern and south Portugal polyphonic traditions use melismatic ornaments (but not in the Northwestern districts). In North Portugal women sing polyphonic songs. In southern Portugal (in the district of Beja in Alentejo) polyphony is primarily a part of the male repertoire.

Spain

Vocal monophony with oriental ornaments and the brilliant tradition of flamenco is so dominating in Spanish musicology that Garland's article on the music of Spain fails to mention the presence of vocal polyphony in the traditional music of any of the regions of Spain.

According to the first comprehensive study of the traditions of vocal polyphony in Spain (Ayats & Martinez, 2008), vocal polyphony is still present in several regions of Spain: Valencia, Balears, Catalonia, Aragon, Murcia, Navarra, and particularly among the Basques. According to Ayats and Martinez, "In these regions, oral polyphony was sung in the non-religious repertoire (i.e. ballads) but above all, it was related to religious brotherhoods; they were sung during processions to praise the patron saint through the 'goigs' [chant to a patron saint]". The musical language of the polyphonic traditions of most of these regions is heavily influenced by the late European harmonic style.

According to Ayats and Martinez study, "Examples of more complex forms of multipart singing can be found in a few specific areas. These cases

can be grouped into four main patterns themselves subject to wide variations and combinations depending upon the region and repertoire. The first of these consists of a few rare patterns of strict parallel fifths alone, so far only found on the island of Majorca. The second follows a much more common patterns of parallel thirds which spread into triad chords in the cadances. A third pattern consists of the same parallel thirds, this time sung *over the bourdon* or *drone*, so far found in various regions of Valencia, Catalonia and Mursia. Finally, the last pattern displays parallel thirds and fifths simultaneously. In this case the few examples known to us are localized in the south of Valencia and Murcia, with traces remaining in old Catalanian examples” (Ayats & Martinez, 2008:43)

The tradition of vocal polyphony in the province of **Albacete** in eastern Spain features interesting characteristics: a long pedal drone, a richly ornamented melodic line with descending undulating melody, development in free rhythm, and scales using chromatic elements:

Ex. 78. Spain, Albacete (Schneider, 1969, part 3, #64)



Basques. The oldest inhabitants of Spain (and arguably the whole of Western Europe), the Basques speak their own unique pre-Indo-European language and demonstrate tremendous historical and musical continuity. For example, the ancient, 22.000-year-old bird-bone flute with three holes, found in the city of Izturitz in France, a part of the Basque country, demonstrates quite clear connections with *txistu* – the contemporary three-hole flute of the Basques (Laborde, 2000: 314, 316).

In the notes to “The World Collection of Recorded Folk Music” (1984) Constantine Brailoiu mentions the predilection of Basques for singing in two parts (in thirds) as a widely known fact. A special article on Basque music in the Garland Encyclopedia fails to mention this fact, and only the presence of a CD “*Polyphonies Basques*” in “Audiovisual Resources” gives the reader an idea about this fact. Two-part singing among the Basques, as in most other Spanish regional styles of vocal polyphony, does have obvious traces of the influence of the European major-minor system. Parallel thirds and sixths are prevalent here. The music flow is strictly organized metro-rhythmically and the major scales dominate:

Ex. 79. An Example of Basque polyphony (Gvacharia and Tabagua, 1983:210)



Italy

With its internationally renowned opera traditions and *bel canto* singing style so universally popular, Italy has long been a symbol of “beautiful singing”. Unlike some other European countries, where folk singing styles became the symbol of national musical identity, “rarely shared at the national level, folk song in Italy never became a national symbol. Instead, during the second half of the nineteenth and part of the twentieth century, opera and so-called Neapolitan popular song served such purposes” (Sorce Keller et al. 2000:604). Four main regions are distinguished in Italy: (1) North Italy, (2) central Italy, (3) the Mediterranean south and Sicily, and (4) Sardinia. The tradition of vocal polyphony is distributed in three out of the four regions: in north and central Italy and on Sardinia. Although the southern part is mostly monophonic, geographically more isolated Sicily has vocal polyphonic traditions. As a matter of fact, central Italy is more of a transitional region between the polyphonic north and monophonic south, so polyphonic singing decreases from north to south of Central Italy.

“Choral singing belongs mainly to the alpine area and the north, where a variable number of singers sing two, three, or four parts. The accompanying part sings below the leading part or, less commonly, above it. This type of polyphony, structures in thirds or sixths, is widespread from the southern German territories to the valley of the river Po, and into Slovenia, Dalmatia, and northern Croatia. In playfulness and intricacy of texture, the richest polyphonic forms include the *tiir*, from the town of Premana in Lombardy; the *trallalero*, in the area around Genoa, in which five (sometimes six) vocal parts imitate various instruments; and the *bei* in Tuscany. These styles are neither song forms nor song types, but polyphonic procedures applied to different kinds of songs” (Sorce Keller et al, 2000:610).

The singing style in north Italy is open and relaxed and the metre and rhythm is strict. As in many other polyphonic cultures, the performance of choral music in north Italy often involves the listeners as well. “The

atmosphere of the singing event encourages active participation, and men and women, as they sit at table with a bottle of wine, join the performance” (Sorce Keller et al, 2000:611). The presence of choral societies in the Alpine region is a good indication of the widespread popularity of polyphonic singing in the Italian Alps. “Even though their members [of choral societies and choirs] are not professional musicians, and do not depend on musical activities in order to make a living, the Alpine choirs are in a way professional or, at least, semi-professional organizations. Through concerts, the release of records, the publication of songbooks, and occasional subsidies, they support themselves and survive as an institution. Their music is widely appreciated in Trentino. In the countryside, as with commercial songs in the cities, it is this type of popular music that people like to listen to. Such choral groups, therefore, are Alpine, popular, and professional at the same time” (Sorce Keller, 1986:449).

Plenty of polyphonic examples are represented in Leydi’s 1973 book “Italian Folk Songs”. According to this book, singing in parallel thirds and sixths is very widely distributed in north Italy from Venetia to Genoa.

Apart from the later style of polyphony, based on European harmonies and parallel thirds, Italy is the home of more archaic polyphonic singing styles as well. First of all, some very interesting sources are available from medieval Italy. According to them, for example, by the end of the 15th century, a specific type of dissonant polyphony, based on the use of seconds, existed in a local burial liturgy in Lombardy (see the discussion in Ferand, 1939). At the same time (the end of the 15th century) we have another very interesting piece of information about very specific two-part singing in Milan where instead of “correct” and accepted consonances of fifths and fourths, “the sharpest dissonances – major and minor seconds, ninths, and sevenths – predominate” (Ferand, 1939:314). This information is contained in the tractate *Practica Musicae* (1496) of the famous Italian music theorist Franchino Gafori. From this region today we have only late style part-singing, based on the use of consonant thirds and European harmonies. Even the earlier source of the 1020s and 1030s, Guido d’Arezzo (in “Micrologue”, XIX) gives musical examples of polyphonic two-part singing with drone, with fourths and seconds between the parts:

Ex. 80. Medieval Italy (Kartsovnik, 1988:28)



It is very important to know that a similar kind of specific dissonant polyphony has been documented in contemporary central Italy. The central-eastern Italian regions Abruzzi (east of Rome) and Marche (north of Abruzzi) feature two-part archaic polyphony with the drone, small-range melodies and dissonant seconds in the specific genre *canto a vatoccu* (“song in the manner of a bell clapper”).

Ex. 81. Italy (Sorce Keller et al, 2000:607)



According to Macchiarella, this type of polyphony is gaining more local popularity in recent years (personal communications from October 7th, 2007). The same style of two-part polyphony with a narrow range and secondal dissonances is also known in Tuscany in western Italy. This style of polyphony here is a specific genre *canto a dispetto* (“song of the despised”. Sorce Keller et al., 2000:610). Roberto Leydi noted the recent tendency towards an increase of choral performance in North Italy. For example, the solo performance of ballads has been replaced by choral performances (Leydi, 1977).

Only minor elements of polyphony (unison and heterophony) have been found in the southern part of Italy, or south of Naples. Solo singing dominates in this region. Polyphony is seldom choral (in which participants join and try to blend), but instead is unison singing that borders on heterophony, or two or three parts carried by single voices (Sorce Keller et al., 2000:611). The singing style in southern Italy is very close to the Middle Eastern Arabic singing style with a nasal timbre, embellished melodic line, and rubato (free) metre and rhythm.

Sicily. On the other hand, Sicily, which is considered a part of southern Italy, is very polyphonic. Written sources testify to the presence of vocal polyphony in Sicily at least from the 17th century. According to Ignazio Macchiarella’s 2005 report on Sicilian polyphony at the polyphonic conference in Vienna, vocal polyphony is known in more than 120 Sicilian villages and it is spread “...over the entire island with the exception of the westernmost area where, however, it was documented in the past, before the strong earthquake in 1969 that disrupted life in the area” (Macchiarella, 2008:142).

According to Macchiarella, European type parallel thirds, chordal singing, two- and four-part drone singing and polyphony with counterpoint elements are all present on the island. Most of the time polyphonic singing is connected to sacred ritual singing during the Holy week feasts. Apart from the sacred genre, polyphony is an important part of the "...heritage of an ancient peasant repertory. Today, these *lamenti* are performed outside their traditional contexts, mainly within private festive banquets and gatherings, rarely in Eastern provinces, and during a few village's feasts" (Macchiarella, 2008:148).

Sardinia. The fourth region of Italy, the island of Sardinia, has historically and culturally been the most isolated region of Italy (and possibly of Western Europe). Italy annexed Sardinia only in 1861, and in 1948 it became an autonomous region. Sardinia has a very different set of cultural elements, including language (derived straight from old Latin), and a very distinct and interesting polyphonic style (probably the oldest and the least influenced native polyphonic style in Western Europe). Sardinia has been known in European musicology also as possibly the oldest region of Europe where polyphony was documented. This highly interesting supposition was due to the presence of the oldest known European polyphonic blown instrument – *launeddas* in Sardinia (see Handschin, 1932).

Sardinia is divided into four provinces: north, central, southern and western. The centre of the island is mountainous. This region, together with the eastern region of the island, known as Baronia, was referred to by the Romans as Barbagia (from Latin "Barbaria" - "those who do not speak our language", and this is interesting, taking into account the most obvious and direct connection of the contemporary Sardinian language to the language of the Romans throughout Italy). Barbagia is the main region of distribution of the rich traditional polyphony known as *tenore*. This style is still widely spread among the local shepherds. The polyphony consists of four parts: the main melodic part is *boghe* ("voice"), the top harmony is *mesa boghe* ("high voice"), and two low parts – *contra* and the lowest part *basu*. Two low voices usually sing double drone a fifth apart (this can also be a fourth). The harmonic parts usually pronounce specific syllables that make good vibrating and blending sounds (like "mbo-mbo" or "bim-mbo"). The harmony is usually based on a single chord of a tonic major triad. Melodic activity in the top parts mostly happens within a very small range (about a third). They sing with a tense and nasal voice, creating plenty of seconds with the static triadic

harmony of droning parts. In more modern choirs the singers double or even triple the traditionally known parts in order to make the harmonies richer.

Sardinian traditional polyphony displays more ancient traits than the most of the western and central European polyphonic traditions. Most importantly, in Sardinian polyphony there is no characteristic resolution of the dominant chord (chord on the 5th step of the scale) into the tonic triad, arguably the most important element of European classical musical language, and very characteristic for most of the Italian, Swiss, Austrian and Pyrenean polyphonic traditions (including polyphonic traditions of Corsica and Sicily).

The northern part of the island is known for the religious polyphony performed by local brotherhoods (groups of men who serve the Roman Catholic Church) (Lortat-Jacob, 2000:627). This style of polyphony is also close to the *tenore* tradition, with a rich reverberating harmony of a tonic triad in four parts. Voices also have the same names, except the top part, which is called here *falzittu* (although it is not performed with falsetto). This singing style features unprepared modulations, relatively free metre and rhythm, and ornamented melodies.

The southern part of Sardinia is not known for its vocal polyphonic tradition, but the tradition of instrumental polyphony is central here. This region is the home of the triple clarinet *launeddas*, the symbol of Sardinian culture. Interestingly, *launeddas* also features drone polyphony (drone pipe and two melodic pipes). Small bronze statues from the eighth/seventh century B.C. depict a player of a double (or triple) blown instrument, an ancestor of the *launeddas*.

Conclusions

With the survey of Italy we have finished the survey of the vocal polyphonic traditions of the European continent. Although I have tried to present a complete list of the main regions and styles of polyphony in different European countries and regions (particularly of the peoples of Eastern Europe, much less known to western ethnomusicologists), I acknowledge that such a brief survey of the whole continent cannot cover the amazing variety of all practices of group choral singing in Europe. Another shortcoming of this survey is that certain countries and polyphonic traditions have received more attention than others. So, bearing all this in mind, and without repeating the few remarks about European polyphony that we discussed at the beginning of the review of the European continent, let us formulate a few general conclusions about vocal polyphony in Europe:

➤ Although in a certain sense we may say that the whole of Europe represents one big polyphonic region, unlike sub-Saharan Africa, different types of polyphony are spread here in certain isolated regions.

➤ Without going into a more detailed classification of the polyphonic traditions of European traditional polyphonic styles, I would like to distinguish three main types of polyphony here. The **drone** type of polyphony is definitely one of the dominating types of vocal polyphony throughout the European landscape. This is particularly evident in geographically more isolated (and supposedly more archaic) regions – in mountain ranges, islands and forests. The harmonic language of this style often features very specific secondal harmonies and small-range melodies. I suggest to call this type of vocal polyphony “**Drone-Dissonant**” (or D/D) polyphony. We will see later that DD style has a very wide distribution throughout different regions of the world.

➤ Another “pan-European” style we may call the “**late European type of polyphony**” as it seems to be connected to the later influence of European professional polyphony and harmonic system. The movement in parallel thirds and sixths, triadic chords and tonic-subdominant-dominant harmonic relationships characterize this polyphonic style.

➤ The third widely spread type of vocal polyphony in Europe is **variant heterophony**. Although variant heterophony can be potentially present in every singing style where any of the parts is performed by more than one performer (for example the bass part), I use the name “variant heterophony” as a name for a type of polyphony only in cases when the main melody is performed by a group of singers in a variant-heterophonic texture. Rich and varied forms of variant heterophony are particularly widespread in eastern Europe.

Vocal Polyphony in Asia

Asia is by far the biggest and the most populous continent on our planet, with two thirds of the world's entire population living there. The immense size and the number of peoples, languages, religions, and cultures make it nearly impossible to generalize about Asian musical cultures. The only factor that makes my task (reviewing vocal polyphonic traditions) easier is that, according to the available information, there are not so many polyphonic cultures in Asia. But again, this is only "according to the available information". I am quite sure that there are more vocal polyphonic traditions in Asia that have not reached mainstream western ethnomusicology. There are few good reasons for this belief:

(1) From the late medieval times when contact between Europe and Asia (mostly with China and India) became more consistent, the opposition between "East and West" came into existence. This opposition, that still haunts the desire of humanity to come closer to each other, was expressed by music writers very clearly: *The west is polyphonic and the East monophonic*. It is clear today that some Asian peoples have vocal polyphonic traditions (as found amongst the peoples of southern China, south and northeastern India, eastern Afghanistan, or Taiwan), and some European peoples have monophonic singing traditions (as in almost the whole of France, Finland and Hungary), but stereotypes are still alive. Even the Garland Encyclopedia of World Music, the best ethnomusicological encyclopedic publication, out of four special volumes dedicated to the different regions of the Asian continent, two do not mention in the index such a basic term as "harmony", and one does not mention the term "polyphony".

(2) Despite the fact that the above-mentioned generalization is not always correct, it seems quite safe to say that vocal polyphony is not a mainstream element of musical culture of at least some Asian countries. This might be the main reason that research of traditional forms of polyphony was (and still is) very much marginalized in local ethnomusicological studies;

(3) Western scholars, specializing in traditional musical cultures of different Asian countries, likewise mostly study the most important and representative elements of the given culture (for example, raga in India, or gamelan in Indonesia).

According to currently available information (as inferior as it is), many Asian traditional musical cultures contain some **elements of vocal polyphony** (group singing in unison and octaves with heterophonic elements). In instrumental music different forms of polyphony are widespread (particularly heterophonic polyphony). More elaborate forms of vocal polyphony have been documented in a few regions of Asia: in the Persian Gulf, in some parts of India (among the tribal peoples of southern and Northeastern regions of India), in the Northeastern part of Afghanistan (Nuristan), among southern Chinese ethnic minorities, among Vietnam mountain minorities and a few other regions of Southeast Asia. Vocal forms of polyphony also exist among the aboriginal populations of Taiwan, and among the enigmatic first population of the Japanese islands – Ainus. The phenomenon of solo polyphony, or overtone singing (when one singer can produce two sounds simultaneously) is a fascinating vocal tradition of several Central Asian peoples.

I am not going to discuss each Asian country separately (as I mostly did in Europe). Vocal polyphonic and monophonic traditions are interspersed in Europe and most of the European countries have islands of live traditions of vocal polyphony. Historical sources reveal the presence of such traditions in the past in some other countries (as in most of northern Europe). This was the main reason for the detailed analysis of polyphonic traditions in European countries. In Africa, by contrast, the polyphonic and monophonic regions are not so interspersed, and this makes it possible to divide Africa into several big regions and to discuss vocal polyphonic traditions according to these regions. Unlike Africa or Europe, the majority of regions of Asian countries mostly practice monophonic singing with deep traditions of professionalism, a more important role for instrumental music, and elaborate theoretical works on their music. We shall start our survey from the Middle Eastern region.

Vocal Polyphony in the Middle East

The region of the Middle East, according to the main elements of its musical cultures, unites a vast region, which comprises parts of three continents: parts of western and central Asia, northern Africa and a small part of Europe (the European part of Turkey). The Garland Encyclopedia frames the Middle East within the regions from Northwestern Africa (Morocco) up to Kazakhstan and Northwestern China.

As imperfect as most generalizations are, we can characterize the Middle Eastern region as having the following features:

- Vocal polyphony does not play an important role in most of the musical cultures of this region;
- Traditions of very developed instrumental polyphony (particularly of the string instruments) are quite usual for many Middle Eastern musical cultures;
- Despite the absence of vocal polyphonic traditions, group singing (mostly in unison or in octaves, sometimes with heterophonic elements) is quite common in folk-singing traditions of this region;
- The Middle East is one of the most advanced regions of the world in terms of early professionalism and the role of the solo performer in musical culture;
- Although vocal music has primary importance in a musical culture (this idea is clearly expressed in the classifications of one of the greatest thinkers of humanity Al-Farabi), musical instruments, and particularly string instruments, play an important role. This idea is also clearly expressed in the writing of another great thinker of the Medieval Middle East – Ibn-Sina (Avicenna);
- Following a great tradition of writing about music from Ancient Greece, many of the Middle Eastern musical cultures have a great tradition of theoretical works about music, with lengthy discussions ranging from the role of music in society to specific scales and melodic models. The music of Ancient Greece itself is considered by many to be a part of the Middle Eastern family of musical cultures;
- Also starting from Ancient Greece, Middle Eastern thinkers have long discussed the value of different kinds of music. There were suggestions that certain scales, modes or musical instruments should be banned (for example, Plato suggested a ban on the *aulos*, a double-reed aerophone). This tendency was dramatized after the advance of Islam, and resulted in a general disapproval (and sometimes a strict ban) of non-religious-related musical activities in some of the Middle Eastern countries. (As a live example of such a ban, our friend and colleague from Monash University spent two years in an Iranian jail for performing European classical music.)

Pearl Divers of the Persian Gulf

Arguably the most prominent vocal polyphonic tradition from the Middle Eastern region has been recorded from the pearl divers of the Persian Gulf, around the island of Bahrain. Bahrain has never been an easy place in which to live. Water is so scarce that the Arabs used to dive into the gulf and collect

fresh water on the bottom of the sea from underground springs. Until the 1970s pearl diving in the Persian Gulf, and particularly around the Bahrain Islands, was a thriving industry. Pearls from this region were considered to be the best in the world. Most industry was connected to the sea: fishing and collecting pearl. The best time for collecting pearls is from June to October. Small one-mast boats carried several pearl divers (from 1 to 4). Each dive could be the last for each of them, as sharks and poisonous jellyfish were very frequent in the sea. Every diver would usually make 30-40 dives a day (Rovsing-Olsen, 1978:12, 2002:87).

The traditional polyphonic songs of pearl divers are called *nahma*. The most salient feature of *nahma* songs is the exceptionally low vocal drone – *hamhama* (two octaves lower than the main melody). Scholars think that *hamhama* might be connected symbolically to the voice of the whale (Lambert, 2002:651). The leading melody is performed by a professional singer *nahham*. *Nahma* songs were documented in Kuwait, Qatar and Bahrain. These songs are divided into two groups: working songs and entertainment songs. Working songs are rhythmically organized around short cycles (only one of the songs – *yamal* – is in free time). Entertainment songs (*fjiri*) are considered to be “prestigious forms, and their origin is the subject of rich legends” (Lambert, 2002:651).

Nahma is accompanied by clapping and the sounds of percussive instruments. No drone in instrumental music has been documented.

Polyphony in Jewish music

Polyphonic singing is not a very common feature of Jewish traditional music and liturgical service. “Despite efforts by German immigrants who introduced their choral tradition to synagogues in Haifa in the 1930s, and by Sephardi musicians such as Rahamim Amar (in Sephardi synagogues the choir sang in unison), few synagogues employ a trained choir. This lack of choral music can be traced to the fact that the orthodox establishment identified choral music with non-orthodox synagogues, and it has led to a lack of a native choral repertoire for the synagogue in Israel (unlike Europe and North America)” (Seroussi, 2002:205). As far as I know, the elements of vocal polyphony in Jewish music were first studied by M. Ravina, who delivered a paper at the Anthropological Congress in Moscow in 1964. This issue was specially researched in more detail by Gerson-Kiwi in her 1968 publication (re-published in 1980). Interestingly, despite the generally accepted fact that “choirs have not made an inroad into the Israeli synagogue” (Seroussi, 2002:205), polyphony is observed mostly in

synagogue singing. More specifically, Gerson-Kiwi discusses three regional styles of Jewish polyphony: Yemen Jews, the Samaritans and Corfu Jews (with plenty of musical examples).

Yemenite. part-singing is connected to the liturgical forms, and Gerson-Kiwi mentions them as “Psalm-polyphony or a prayer-polyphony” (Gerson-Kiwi, 1980:69). She distinguishes four forms of polyphony among Yemenite Jews:

(a) Vocal drone (exists in prayers). This is two-part singing with a drone. The melody has a short range – a third only (A-C). With the additional tone “G” the range increases to a fourth. Dissonant seconds are frequent between the drone and the melody. “As the diapason is so narrow, the main interval is the second, but the sharp dissonant clusters do not in the least irritate the singers: their auditive perception can only follow the horizontal path, and in this selective hearing the chords simply do not exist. But they do exist for the unbiased observer and they have to be registered as a definite style of part-singing” (Gerson-Kiwi, 1980:70). Generally, I am always skeptical about the idea that “singers do not hear these clashing intervals”, and Gerson Kiwi herself writes later in this article (see later) about secondal dissonances that they “seem to be so congenial to the Yemenite singers that there can be no question of haphazard intonation” (Gerson-Kiwi. 1980:72).

(b) Choral polyphony of acclamations in Organum Technique (in Asmorot). This is a massed response from the entire congregation (including children) singing in a loose organum of many different pitches. The author mentions that East African mass choruses have the same kind of “sound columns” as in the Yemenite Jews’ singing. According to Gerson-Kiwi this singing style must be very close to the real sound of the medieval organum (According to Riemann’s 1898 publication, parallel fourths and fifths from the medieval musical tractates were considered to be a theoretical abstraction. The appearance of the Icelandic tradition of two-part parallel singing in perfect fifths changed the attitude towards the early organum practice)

(c) Vocal ostinato technique (in psalm reading). This form is based on simultaneous singing of the main tune and accompanying short ostinato-motifs. The ostinato-motive is developed around the tonic, and Gerson-Kiwi considers it to be “another trend originating from a basic drone form”.

(d) Heterophonic part-singing (in religious hymns). Heterophonic singing starts as an organum, but “very soon softens down to a heterophonic singing in the narrowest possible space of a second.” These dissonances “seems to

be so congenial to the Yemenite singers that there can be no question of haphazard intonation” (Gerson-Kiwi. 1980:72).

(e) The style of parallel organum (in Yemenite wedding songs). In this style as soon as the leading singers starts a song, he is joined by the “chorus which adds the lower fourth to the principal melody and maintains this organal technique until the end” (ibid, 72).

Samaritans. The presence of vocal polyphony among the Samaritans is particularly interesting as the Samaritans have been in “nearly complete social and cultural isolation” (Gerson-Kiwi, 1980:73). Three forms of polyphony had been distinguished by the author:

(1) **The canonic diaphony**, based on a completely linear logic of development with strict rhythmic organization, and without clear harmonic connections to each other: “one could even venture to say that we have here an early example of atonality, though the canonic sections are thematically connected with each other and follow the same modality. But in this interchained fabric where one section overcrosses the other, these orders are no longer effectual, and the auditive impression is that of a complete disruption of tonality”. According to Gerson-Kiwi, this technique is designed to shorten the prayer by reciting two different verses simultaneously. The author draws parallels with the technique of motet of the ars antiqua (ibid, 75)

(2) **The organal homophony**, resulting from reciting the text of “The Song of the Sea” by the whole congregation. The thick sound consists of the low consonances (tonic, fifth and the octave) and the array of the dissonant sounds.

(3) **Vocal drone organum.** So, drone is present among the Samaritans as well: “The solid sound columns moving over the drone with perfect ease and brilliant tone color, provide one of the most advanced forms of a spontaneous polyphony” (ibid, 78).

The third polyphonic tradition, discussed by Gerson-Kiwi, is in Greece, among the Jews of the Isle of **Corfu**. Two distinct styles are distinguished:

(1) **Bourdonized Third Parallels.** As the name of the style suggests, the main melody is followed by a harmony-triad, and the drone is used to give support to the melody.

(2) **“Tenor-Motet” Style.** This style consists of the organum-like movements “of fifths, thirds and even seconds” with slight ornamentation in the refrain.

Then Gerson-Kiwi discusses the possibility of the external influence of traditional polyphony on Jewish polyphonic traditions from southern Albanians, Northwestern Greece and Albanians living in southern Italy and comes to the conclusion that there are clear signs of such an influence.

Syria and Yemen

Some other sources from the Middle East also suggest the presence of organum-type liturgical singing. H. Husmann discusses the singing in parallel fourths in Syrian Christian churches. He notes the closeness of the Syrian tradition to the medieval organum and suggests that the medieval organum has a Syrian origin (Husmann, 1966). Elements of drone are heard on the recording of family singers from Hadramawt, Yemen (see the audio track #5 from the accompanying CD of the Garland Encyclopedia, volume 6, Middle East, where the soloist and chorus parts are overlapping).

Armenia

There has been a long-running misunderstanding of information about Armenian traditional music in Western ethnomusicology. This misunderstanding started, I think, with Paul Collaer. In his widely known work on Mediterranean polyphony Collaer provides several polyphonic examples from two Caucasian peoples – Armenians and Georgians (Collaer, 1960:58-66). Although both Armenia and Georgia are from the same region (Caucasia), where they were the closest neighbors for at least a few millennia, sharing many elements of culture (including being the first two Christian countries in the world), according to the parameter of polyphony and monophony their singing traditions are drastically different. Georgian vocal music (discussed above) is entirely based on a polyphonic model, while Armenian vocal music is entirely monophonic. I remember this well-known fact has been discussed many times by Armenian and Georgian ethnomusicologists at various scholarly meetings while they were both part of the former Soviet Union.

So where did the examples of “Armenian polyphonic songs” come from? Both Armenian two-part songs with secondal dissonances, reproduced in articles by Collaer (“Akhalakri” and “Shallakko”, both on page 58) are in fact instrumental melodies, performed on blown instruments by two (or three) performers, one (or two) holding the drone(s) and one playing the improvised and ornamented melody. By the way, the second melody from Collaer’s article, “Shallakko”, (or “Shalakho” as it is best known in Caucasia), is in fact a dance tune, and a very popular one in the entire region

of Transcaucasia. It has been widely known in Tbilisi, the capital of Georgia, at least from the end of the 19th century, when Armenians constituted a major part of the population of the Georgian capital city. I remember myself playing “Shalakho” on a piano (or sometimes on a guitar) at many parties, to the great enjoyment of my clapping and dancing friends. The popularity of this dancing tune was so big that I remember somebody putting the madly swirling “Shalakho” melody together with the broken chords from Beethoven’s “Moonlight Sonata” in the 1980s, creating a new popular crossing between the oriental scale with augmented seconds with the “Neapolitan harmony” of Beethoven’s elegiac music.

The monophonic nature of Armenian musical culture is so well known that by far the best musicological work on the history of Armenian music is entitled “History and Theory of Armenian Monodic Music” (Kushnarev, 1958). Interestingly, cited in the “references” of Collaer’s 1960 article, the title of this outstanding book is translated without the word “monodic”. It is most likely that these errors in Collaer’s article were the responsibility of a person (or persons) who provided materials and translations for Paul Collaer.

I know of three papers which were dedicated to the polyphonic elements in Armenian music. To my knowledge none of them were published. All three papers were delivered at special conferences dedicated to traditional polyphony, held in Georgia (1972, 1986, 1988). A paper by Armenian ethnomusicologist Barsegian on polyphony in Ancient Armenia was delivered at the 1988 conference, held in Borjomi, Georgia, and the abstract was published (Barsegian, 1988). Barsegian analyzed the literary sources from the 5th (Favstos Buzand) and 7th centuries (Movses Kalankatuaci). According to Barsegian, the ancient Armenian terms “Bazmadzain” (“many sounds”, or possibly – “many different timbres”) and “chorekdzain” (“four sounds”) were used in regard to instrumental music and instrumental ensembles in ancient Armenia. Robert Atayan in 1972 delivered a paper “On polyphony in Armenian folk Music”, and Anaid Bagdasarian in 1986 delivered a paper “Elements of polyphony in Armenian monodic music” (the abstract of Bagdasarian’s paper was not published as the paper was included in the conference program late).

By the end of the 19th century two talented Armenian composers Kristofor Kara-Murza and Makar Ekmalian introduced harmonized (in European style) versions of Armenian folk and liturgical music and started performing them at concerts and liturgy (Manukian, 2000:725). More genuine polyphonic versions of Armenian monodic compositions connected

to the traditional singing style were created by the great Armenian composer, ethnomusicologists and choirmaster, Komitas (1869-1935).

The Bedouins, Egypt and Oman

The Bedouins have also been documented as having some forms of vocal polyphony. Roving-Olsen provides an example of Bedouin polyphony (see Roving-Olsen, 1978). An example of Bedouin wedding polyphony, recorded by Dieter Christensen, can be heard on one of the accompanying CDs of this book. The Garland article also mentions choral singing during the ritualistic combat dances among the nomadic tribe of Ababda (a branch of the Hamitic Beja tribes), who live between the Nile Valley and the Red Sea in Egypt. They are known to have “a display of martial dancing skills in which warriors are paired in freely improvised mock combats, a form both ancient and widespread, is accompanied by choral singing, clapping, stamping, and strumming on the *tanbur*” (Saleh, 2002:624). Oman is another interesting country for the research of the elements of traditional polyphony, as unlike many Arabian countries, in Oman everyone participates in music-making (including women and children). See the audio example of Oman group singing on the accompanying CD.

Turkey

Elements of polyphony were recorded in Turkey (Feldman, 2002:192-193). “...In the *zikr*, elements of polyphony permeated every musical moment. This polyphony, while rudimentary – it was based mainly on octaves – was so pervasive that the music of the *zikr* must be placed in a different category from other genres of Turkish urban music, which insisted on strict monody.” (Feldman, 2002:192). And of course, the official policy of the Turkish government to distance themselves from the Ottoman past and come close to European musical traditions, among other tendencies, resulted in the creation of classical choirs and a massive exposure of choral music on radio and TV (Feldman, 2002:117), although this seems to have had little impact on traditional singing practice in Turkey which is mostly monophonic.

Central Asia – Overtone Singing

The musical symbol of Central Asia is a unique polyphonic style, known by the names “overtone singing” or “throat singing”. A solo performer produces two different sounds simultaneously. This singing style has been

found on a wide territory comprising Tuva, western Mongolia and Altay and the Sayan mountain ranges. According to the information received from Yuri Sheikin from Yakutsk, there are a few different distinct styles of overtone singing in this region:

- (1) Northwestern Tuva is the most important region for this style, with 14 styles of singing (term – *khoomei*).
- (2) Unlike western Tuva, eastern Tuva is much less known for overtone singing traditions, and singers here are far apart. Three styles have been documented here (the term *khoomei* is used here as well).
- (3) Five styles of overtone singing have been recorded in Mountain Altay. Overtone singing is known here under the term *kai*.
- (4) Three styles have been recorded among the Mountain Shoria. They are also known under the term *kai*.
- (5) Khakassia has two styles of overtone singing, known as *khai*.
- (6) One style of overtone singing has been documented in Yakutia as well, under the name *khabarga*.
- (7) And finally, outside the Russian Federation, six styles of overtone singing have been documented in western Mongolia (under the term *khoomei*)

Overtone singing is positioned ambiguously between the polyphonic and monophonic singing traditions. From a musical point of view overtone singing is polyphony, as two functionally completely different parts (drone and a pentatonic melody) are heard simultaneously. From a social point of view, overtone singing is not polyphony, as this singing style lacks the crucial social element of polyphonic singing tradition – an active musical interaction between several (at least more than one) performers.

The singer produces a sustained pitch using a specific tense sound, then, using this sustained sound as a drone, he changes the mouth cavity shape with his tongue, lips and some other parts of the mouth to produce different harmonics (overtones) and construct melodies from these overtones. Interestingly, singers use only the selected set of overtones, carefully avoiding two overtones that do not fit the pentatonic scale (Levin, 2002:982). So, if the drone is on “C”, the singer will be using the overtones from “G” to the next “G”. This part of the overtones contain G, Bflat, C, D, E, F# and G. Out of these overtones “B flat” and “F#” are carefully avoided. This fact suggests that singers do not follow the naturally existing sound material. Instead they follow their aesthetic and cultural preferences. Overtone singing

was traditionally performed by men only, but now there are women singers as well.

There has been a diversity of opinion about the origins of overtone singing, ranging from the most archaic periods (30-40 000 years ago), the “pre-speech articulation” epoch of human history (see, for example, Ikhtisamov, 1984:180-181) to the first millennia A.D. (Vainstain, 1980). I will discuss this interesting question in a separate section (or “Case Study”) in the second part of this book.

There has been a great deal of interest in the overtone singing style, and many singing-loving westerners have learned this unique sound-production technique. I remember myself sitting together with my Georgian friend and colleague, late Edisher Garakanidze, under a big tree in Switzerland, near Geneva on September 26th, 1991, trying to learn the basics of overtone singing under the guidance of the brilliant performer of this style (and not only!) and ethnomusicologist Tran Quang Hai. After some time I came to the conclusion that, although I managed to produce a few audible overtones, singing Georgian polyphony was still much easier for me.

Tajikistan

Although Central Asia is justifiably known as a monophonic region, elements of “usual” polyphony (when polyphony is created by a group of singers) are present in some genres. I well remember the excitement among Soviet ethnomusicologists when an example of vocal polyphonic music was found in Central Asia. This example of rare polyphonic singing came from Tajikistan. I am very grateful to Zoia Tajikova who provided this information together with her own transcription of this unique version:

Ex. 82. Tajiks (from Zoia Tajikova)



Z. Rabiev recorded in 1964 this polyphonic version of the traditional *naksh* in Ura-Tiube, in Fergana Vale, northern Tajikistan. The song is performed as an alternation of the soloist (*sarnaksh*) and a mixed choir of 10-12 singers. The soloist singing sections (absent in this example) are in free rhythm, and the choir singing sections are metered. It is difficult to say whether all these spectacularly clashing dissonant chords were intended as they were performed, but it is clearly not a case of performers “not achieving the unison”, because the song actually starts with a long section where the choir does sing in unison (and octaves).

Kazakhstan

As I know, although the tradition of vocal polyphony has not been documented, strong vocal-instrumental polyphonic tradition is present in the solo epic genre (*zhylrau*) in Kazakhstan. In this genre solo singing is supported by *dombra* playing, which accompanies the vocal melody in parallel fourths and fifths. Quite interestingly, in virtually all the earlier transcriptions of the Kazakh epic tradition scholars were transcribing only the monophonic version (melody only), without the two-part *dombra* accompaniment. Singing in groups and antiphon between the groups of singers is another interesting tradition. “The most popular wedding song, “Zhar-Zhar,” which is found in different versions throughout Central Asia, constitutes a genre on its own, defined by an antiphonal performance style in which two choirs – one male and one female – sing responsorially” (Kunanbaeva, 2002:951).

Afghanistan: Nuristan

One of the world’s most isolated, rich and interesting traditions of vocal polyphony exists in the high mountains of East Afghanistan, among Nuristanians.

Hidden from the expansionist politics of Arabs, Mongols, and Persians by the high impenetrable mountains of the southern slopes of the Hindukush mountains in East Afghanistan, about 150 000 Nuristanians maintained their independence until the end of the 19th century. In 1896 Afghani Amir Abdur Rahman Khan finally incorporated Nuristanians into Afghanistan, turned them into Moslems and gave their region a new name “Nuristan” (“enlightened”). Prior to this event this region was known in Afghanistan as “Kafiristan” (“Land of Infidels”). As you would expect from the people who live in such isolation, Nuristanians maintain elements of pre-Moslem practices, most notably music with unique polyphony and dances. About half

of the Nuristanians also live in neighbouring Pakistan. Nuristanians speak Kafir and Dardic languages (which belong to the Indo-Iranian languages), are agriculturalists and physically differ from the rest of the Afghanistan population.

Singing traditions of Nuristanians represent an extremely interesting and isolated case of vocal polyphony. I was privileged to become acquainted with over forty polyphonic songs from Nuristan, recorded by Herman M. Pressl in 1968 and 1969 (I am grateful to the Viennese Phonogrammarchiv for making these recordings available to me). Together with the recordings made by Lennart Edelberg and Klaus Ferdinand in 1953-54 (and by Lennart and Margot Edelberg in 1964 and 1970), these recordings represent a variety of examples of Nuristan traditional polyphony.

According to these recordings, Nuristan polyphony was (at least in the 1960s and the 1970s) a rich and live tradition, fully functioning in Nuristan society. Both men and women sing in traditional polyphonic style. They mostly sing separately, but sometimes they do sing in mixed groups. Polyphony is mostly three-part. Rhythm is always precise. Metre is mostly triple (most popular being 6/8, although 4/4 and the peculiar 5/8 is also used). The Lydian scale is one of the main scale systems in Nuristan polyphonic songs. Melodies have a small range (mostly up to a fourth, or an augmented fourth in the Lydian scale). Polyphony is based mostly on the use of two principles: ostinato and drone. Drone is mostly rhythmic. Relatively uncommon three-bar repetitive structures dominate. Songs are often accompanied by drums, string instrument *wadzh* (harp), clapping and dancing.

Maybe the most important and salient feature of Nuristan polyphony is the amazing richness of dissonant chords and intervals. Nuristan vocal (and instrumental) music is a true kingdom of secondal dissonances. This abundance of seconds is often derived from the leading melodies “jumping” over the drone. If you think of three independent parts being squeezed in the space of the augmented fourth (or fifths), it is not surprising that in some songs seconds are virtually the only interval you hear during the whole song.

As transcribed examples of Nuristan polyphony are very scarce, I am including here a few examples, which I transcribed from the recordings made in Nuristan by Herman M. Pressl in 1968 and 1969. Not being available on multi-microphone recordings, these recordings are not easy to transcribe.

The “typical” Nuristan polyphonic song is a three-part composition, with two lead melodies (*mil-alol* and *at-alol*, “lead” and “support” parts) and a mostly movable drone (*asamchilog*, choir). 6/8 metre is the most widely

spread. A very peculiar string instrument – the *wadzh* (a four string bowed harp, tuned usually to a Lydian tetrachord with the augmented fourth and very characteristic chords, full of seconds) is also often used for the accompaniment of singing and drumming. The following excerpt represents these features:

Ex. 83. Afghanistan, Nuristan (Vienna, Ph. Archive, B13225)



I am presenting here only six bars from each song as three-bar structures dominate Nuristan polyphonic songs. The songs mostly consist of the ostinato-like repetition of these six-bar structures (3+3 bars). One of the voices (at the end of the repetitive three-bar phrase) is improvising the short motif that leads to the next repetition of the three-bar structure.

The next example is in 5/8 metre with the typical secondal clashes between two parts. This song is accompanied by drumming (on the first and fourth beats of the five beat cycle):

Ex. 84. Afghanistan, Nuristan (Vienna, Ph. Archive, B13220)



These are so far examples of male polyphony. Women's singing has the same features, and three-part singing is dominating. Here is an example of typical three-part polyphony from Nuristan women:

Ex. 85. Afghanistan, Nuristan (Vienna, Ph. Archive, B13242)



One of the songs from this collection is particularly interesting, as two versions of the same song (“Senkivar kasek”) – were recorded in the same village on the same day. The first version is performed by women and the second by a mixed group. Most of the songs are sung by men and women separately. This kind of mixed performance might not be usual for Nuristanians, because this particular performance shows a few uncharacteristic features, and possibly even a “confusion” of the singers. It starts with the male lead and in the first phrase both the man and the women are singing the second “supporting” soloist part (doubling each other). This is not traditional (to have more than one person singing any of the lead parts), and possibly that’s why after the first phrase none of the singers (male or female) are singing for a while the “supporting” part (they must be giving each other space), because for a while none of the “second soloists” are supporting the lead singer. Only about a minute later the female singer starts singing again the supporting lead part. A group of women also sing a drone in this version, and as women sing an octave higher, this version has an uncharacteristically wide range of more than an octave. The second lead part, sung by a woman to the male lead part is very interesting. Instead of singing, as usual, a second lower from the lead melody, she follows the lead melody a seventh higher (singing the same notes, but an octave higher).

Nuristan polyphony is definitely one of the most isolated and interesting traditions of polyphony on our planet. We will discuss the unique features of Nuristan polyphony and its possible links to other polyphonic traditions in the second part of the book.

North Asia

The peoples of North Asia, according to the available information, have monophonic singing traditions (solo and unison). There has been a kind of sensation that caused long-heated discussions among Soviet ethnomusicologists when a particular round-dance *osuokai* of the Yakuts with elements of polyphony was recorded in the 1980s. According to Sheikin, one of the Russian ethnomusicologists commented after hearing the recording: “they are singing as if they are not Yakuts, but some kind of Georgians!” (A personal communication from December 9th, 1986). On the recording you can clearly hear organum-like parallel singing, with most of the singers singing more or less in unison, and one voice (a female voice) singing the same melody a fourth higher. It is an example of Schneider’s “tonally unrelated parallelism”. It is not clear whether this polyphony was intended or if it was an unsuccessful attempt by a mixed group to sing in unison. According to the singers themselves, they were all singing the same voice. Eduard Alexeev dedicated an interesting article to this issue (Alexeev, E., 1967).

Many other peoples of Russian northern Asia have vocal genres with group singing where unison (and octave) singing is often performed in unison-heterophonic texture. Therefore, we may say that in the north and east of Central Asia (the region of the distribution of overtone polyphony), vocal monophony with minor elements of heterophony dominates. Of course, we should not forget here that I am talking about the indigenous peoples of northern Asia. Ethnic Russians living here do practice polyphonic singing. Among the Russians living in this region are the so-called *semeiskie zabaikal’ia* with one of the most developed and complex traditions of vocal polyphony among the Russians. We have discussed their singing traditions in the section dedicated to the vocal polyphony of Russians.

East Asia

Japan: Ainus

Arguably the most isolated tradition of vocal polyphony in the world is in eastern Asia, among the Ainus from northern Japan and the Kuril Islands. Ainu ethnic, linguistic and even racial origins are much debated. The first Europeans who met the Ainus wrote that they looked like Finns. Later scholarly research confirmed the unique features of the Ainu language and

race. As arguably the first dwellers of this region (Sakhalin, the Kuril Islands and particularly Hokkaido in Japan), the Ainu constitute the substrata of the Japanese.

About 20.000 Ainu live in northern Japan (mostly on Hokkaido) today. Only about one hundred of them can actually speak the Ainu language. After a five-year research program, conducted by the Japan Broadcasting Association in the beginning of the 1960s, about two thousand Ainu traditional songs were recorded. A 600-page volume “Music of the Ainu” containing about 500 transcribed pieces of music was published in Japanese with a small English summary (Kazuyuki, 1965).

The traditional polyphony of the Ainu is based on canonic imitation of relatively short musical phrases. According to Kazuyuki (1965, 1975), out of thirteen different genres two are the most important: *upopo* (a round, sung in a canon by elders sitting in a circle), and *rimse* (a round dance, only very rarely sung as a canon). There is an interesting and complex interaction between these two genres: “The way in which these songs are handed down is in disorder today, and many songs are sung equally as *upopo* and *rimse*. Even in such instances, however, *rimse* is rarely sung in canon. Imitation is a significant criterion for judging *rimse* and *upopo*. The latter is sung imitatively by several people seated round the lid of a chest, tapping the rhythm on the lid. Usually the lead is taken by the oldest member of the group. The leader turns his face towards a man sitting at his right, and on a cue this man starts singing a beat behind. This continues until the last man sings while the rest go on singing. Thus the whole sound becomes chaotic and the sounds comply with the etymology of the word ‘*upopo*’, noisy singing like birds twittering. The whole process is repeated several times, and then the leader starts another song in like manner. The falsetto (*pon*) singing at the beginning of the song is very distinctive, and its effect is like lighting candles one after another in the dark. *Upopo* and *rimse* were originally the same as their etymology suggests; they only gradually achieved separate identities. The *rimse* became a dancing song, and the *upopo* became an imitation sitting song” (Kazuyuki, 1975:63).

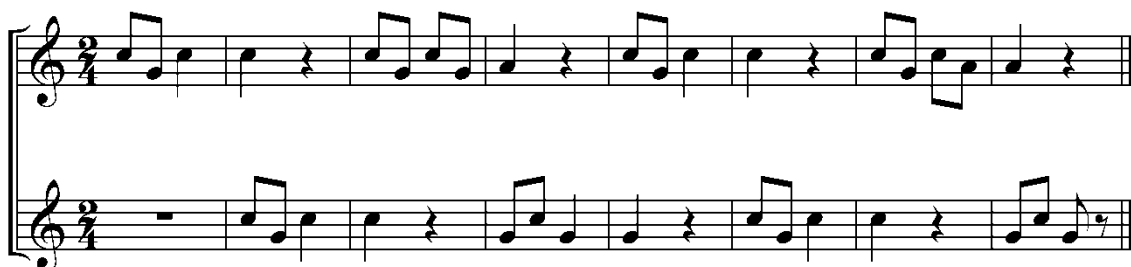
Canonic singing can vary from two parts up to six parts. Here is an example of a six-part canon:

Ex. 86. Japan, Ainus (Kazuyuki, 1965:22, #1)



In the following two-part song canon is not precise:

Ex. 87. Japan, Ainus (Kazuyuki, 1965:220, #247)



Precise canonic singing is the best known and the most characteristic of Ainu polyphony. As a polyphonic culture, mostly based on canonic singing, the Ainu tradition is unique among polyphonic cultures. The only other polyphonic tradition that uses canonic singing so widely is the Lithuanian *sutartines* from the Baltic region. Unlike Lithuanian *sutartines*, where you hear two-part singing, in Ainu *upopo* you can hear five- and six-part canonic singing.

Some songs have elements of drone polyphony, as in the following example, which starts as a loose canon and grows into drone two-part singing with dissonant secondal intervals:

Ex. 88. Japan, Ainus (Kazuyuki, 1965:16, #55)



Secondal dissonances are even more obvious in the following example, where two women sing in two parts (this is my transcription from the accompanying cassette, from Kazuyuki, 1965):

Ex. 89. Japan, Ainus (Kazuyuki, from the accompanying cassette)



Numerous influences between Ainu and neighbouring musical cultures had been noted (including Japanese, eastern Siberian peoples, peoples of the Kuril Islands, Kamchatka and Sakhalin. Kazuyuki, 1975:66), although the tradition of vocal polyphony seems to be a uniquely Ainu phenomenon in this vast region.

Ryukyu Islands. Not much is known about the other (southern) end of Japan – the Ryukyu Islands. According to the available information, group antiphonal singing (*uta kake*) and call-and-response forms are quite usual (Atumi, 2002:791). Particularly refined and rich are the antiphonal singing traditions on the Amami Islands (between the Japanese mainland and Okinawa). Atumi notes the closeness of *uta kake* and the antiphonal singing of southern Chinese minorities (the region known for its vocal polyphonic traditions – see below).

The Garland article on the musical traditions of the Ryukyu Islands does not mention whether the group antiphonal and call-and-response singing

traditions from the Ryukyu Islands are polyphonic or monophonic, but my own experience with the very interesting polyphonic traditions of the Vietnamese minorities (which are also not mentioned in the Garland Encyclopedia) suggests that there is a possibility of the presence of at least some polyphonic traditions on the Ryukyu Islands as well.

China

Alan Lomax united China with most of the countries from the Middle East to East Asia under the collective name “Old High Cultures” (Lomax, 1968). These “Middle East – East Asian Monophonic Belt” cultures are based on sophisticated vocal monophony, deep traditions of professionalism, highly developed musical instruments, instrumental ensembles of ancient origins, and sophisticated theoretical works about music. Despite this closeness, there are a few extremely important differences within this group. Most importantly, the scale systems (as I mentioned earlier, the “DNA of musical cultures”) are totally different. East Asian musical cultures are mostly based on pentatonic anhemitonic scales (scales without the semitone, the smallest interval for tempered music, although pentatonic with semitones are also present, most notably in Japanese music), while Middle Eastern music is known for the extensive use of semitones and even smaller intervals. The use of very specific microtonal melismatic embellishments and tense voice production in Middle Eastern music are other elements that are mostly absent in East Asian music. Even without mentioning other differences between Middle Eastern and East Asian musical traditions, it is clear that the group of “Old High Cultures” consist of at least two principally different groups of cultures – (1) The Middle Eastern group of cultures (from North Africa to North India and Tajikistan) and (2) The East Asian groups of cultures (China, Japan, Korea and part of the Southeast Asian cultures). And still, with regard to dividing the world’s musical cultures into monophonic and polyphonic groups, Lomax’s suggestion of uniting these cultures in a group “Old High Cultures” is justified.

China, geographically one of the biggest and the most populous country of the world, is home to a large number of ethnic minorities. The majority of Chinese are Han. According to the available information, although mainstream Chinese (Han) folk music is generally monophonic, interesting forms of group singing in call-and-response forms are an integral part of their traditional singing. For example, work songs – *haozi*, a loud outdoor genre accompanying different types of work - are performed by a leader’s call and group response. Another group song is *tian’ge* – a responsorial harvest song

from southern China, connected to the different processes of working in rice fields. *Tian'ge* helped to maintain the working rhythm and kept the workers' spirits up. Sometimes workers would just listen to the specially invited professional singer while working, or the "landowner would arrange for two competing groups of singers, who would take turns, trying to cap each other" (Jianzhong, 2002:153). According to available information, group singing among the Han is always monophonic (unison, or social polyphony only. For the elements of heterophony in Han classical and folk music, see Mok, 1966). Therefore, China is generally known among ethnomusicologists as a classical country of vocal monophony.

Chinese minorities

Now if we look at the musical traditions of Chinese minorities, we will find plenty of traditions of vocal polyphony that are mostly unknown to western scholars. Almost half of the Chinese minorities have been documented to have vocal polyphonic traditions. If we take into account that the number of Chinese minorities is over fifty, and that their combined population numbers around 100 million, we may get an approximate idea of how rich (and how unknown to western readers) these polyphonic traditions can be.

Let us listen on this matter to one of China's leading ethnomusicologists, Mao Jizeng, from the Central Institute for Nationalities from Beijing: "Although some foreign scholars believe that China has only monophonic folk songs, in fact more than twenty minority peoples in China have polyphonic songs. [Another Chinese scholar, Qia estimates a more precise number – 25 minorities, See later. J.J.] Some folk singers have a saying that indicates a deep-seated tradition of polyphony: 'A lamp has two wicks, because if there's only one the light isn't bright enough.' Polyphonic songs can be divided broadly into three groups: (1) part singing, found among the Zhuang, Yao, and Miao; (2) songs in which a continuous bass line with a fixed melody is combined with the main melody, found among the Dong and Mulao; (3) folk songs in canon or round form, such as the songs of the She. Looked at as a whole, the forms of the various musical lines are basically integrated, and their melodic movements, rhythms, supporting notes, and finals are the same ... The frequent appearance and prominent use of major seconds and the special progression of major seconds resolving to unisons are important characteristics of some polyphonic folk song" (Jizeng, 2002:449).

A very detailed and informative special section on multi-part music among Chinese minorities has been written by Shen Qia, another leading Chinese ethnomusicologist from the China Conservatory of Music, Beijing, for the Garland Encyclopedia of World Music. Here is most of the text of this very important section for our topic: “As far as we know at present, apart from the Han, twenty-five minorities have multi-part music. These include the Zhuang, Buyi, Dong, Maonan, Mulan, Dai and Wa of the Yue-Pu system; the Miao, Yao, and She of the Miao-Yao system; and the Qiang, Yi, Hani, Lisu, Naxi, Bai, Lahu, Iino, Tujia, and Jingpo of the Di-Quang system. Eighty percent of them are distributed within Guangxi, Guizhou, and Yunnan regions; the others are found in the Aba district of Sichuan, in southwest Hubei, western Hunan, and the Ningde region of northeast Fujian. Following are some important forms of multi-part music.

“*Galao*. The dong form *galao* ‘ancient and solemn suite’ is sung in a southern Dong dialect and flourishes in the countries of Liping, Congjiang, Rongjiang, and Sanjiang in the southeast Guizhou.

“*Wennai*. This is a generic name given by the Buyi to their multi-part folk songs. The Buyi *wennai* are often drinking songs for wedding celebrations. There are also some *wennai* called “double songs”. *Wennai* are mainly found in Libo, Sandu, and Dushan in south Guizhou.

“*Huan, bi, xi, and liao*. These are all names given to *shan’ge* folk songs in different Zhuang areas. These localized terms cover many different melody types, of which multi-part songs are only one:

“• *Huan* are found along the You, Hongshui, and Liu rivers in west and central Guangxi. They include many two-voice forms. *Gumeihuan*, named after Gumeitun, its place of origin, is now current in the countries of Tianyang, Debao, and Bose in western Guangxi. *Huanleng* is found in Shanglin in central Guangxi. *Huanliu* is named after the vocables used, and is found in Pingguo Country in west-central Guangxi. *Huanya* ‘song of the Buyayi’ is so named because of local people, the Buyayi branch of the Zhuang, call themselves the Ya; this last type of song is current in Tian’e, Guangxi. In the three-voice genre *sandunhuan*, current in Shanglin and Mashan countries in Central Guangxi, the middle voice is the principal one. The four-voice genre *huanyue* originated as a duo singing style in shamanic rituals; it too may be found in Shanglin and Mashan countries.

“• *Bi* are found mainly in northern and northwestern Guangxi. They are variable in form, and the melodies differ from place to place. Some forms of *bi* are multi-part. For example, in Luocheng there are *binongnai*, a women’s duo song; and *binongniang*, a men’s duo – both sung antiphonally. This

country also has *biyewan*, sung at night; *bijiang*, a narrative form; *biyou*, a fast *bi*; *biyan*, a slow *bi*; *bidan*, a *bi* with regulated vocables; and *bifuyin*, *bisangye*, and *bimaiwei*, among other forms.

“• *Xi* are found in Fusui, Daxin, Ningming, Longzhou, Jingxi, Debao, Napo, Chongzuo, and Tiandeng in Southwest Guangxi. *Xi* include many melody types, in which some are multi-part *shan’ge* folk songs.

“• *Liao* are also called *huanliao*, from *huan* ‘song’ and *liao*, a vocable – thus this class of songs is named for its vocables. *Huanliao* can be divided into three categories: *huanlei* (long song), *huanding* (short song), and *huanzhong* (medium-length songs). They are found mainly in Tiandong and Pingguo in west-central Guangxi.

“These multi-part songs include some characterized by harmony and some characterized by polyphony. Polyphonic songs are the most common and may use heterophony, imitation, or nonimitative polyphony.

“Over the past decade or so, Chinese scholars have collected a wealth of multi-part music and researched it in depth. The accumulated material proves that the multi-part music discussed here is an ancient and indigenous form of folk song, owing nothing to the multi-part music introduced by Western missionaries in the nineteenth century and the early twentieth century” (Qia, 2002:489-490).

To this amazing variety and richness of traditional polyphony, present among Chinese minorities, we could add the relatively recent (1995) fieldwork discovery of a quite sensational polyphonic tradition, made by a Chinese scholar Zhang Xingrong from the Yunnan Art Institute. In the mountain village of Puchun (a village without electricity and roads) of the Hani people, located on the borders of Honghe, Luchum and Yuanyang counties, they recorded five-part a cappella “Bridal Laments” and eight-part accompanied “Rice Transplanting Songs”, where all the parts are performed by individual singers and singing is also accompanied by traditional instruments – an end-blown flute *labi* and three-stringed plucked lutes *lahe*.

Tibet. Unfortunately very little information is available on traditional polyphonic singing in Tibet, although scholars note the presence of the tradition of table songs performed in big communal groups, and rich traditions of antiphon singing in Tibetan dance-songs, including antiphony between a soloist and a group, or between the men’s and women’s groups (Jizeng, 2002:477, 483). On the other hand, the famous Tibetan monks’ chant is in fact group singing (chanting), and should be considered among the different types of group singing, although it is hardly an ordinary type of vocal polyphony.

In his widely known book “Work and the Rhythm” Carl Bucher gives an interesting example of two-part drone polyphonic singing from Tibet. This is *tongskad*, a traditional work song:

Ex. 90. China, Tibet (Bucher, 1923:113, #90)



Incredibly interesting tradition of women’s polyphony from Tibet, unknown in ethnomusicological publications was screened recently on a CCTV (Chinese TV program). Three Aremai-Tibetan women performed so called “women’s love song” (not original name), and the singing was entirely based on the long drones and sharply sounding secondal dissonances (see CCTV, 2006). I visited Sichuan Province in 2011 and recorded their singing (you can listen part of this recording among the musical examples).

Taiwan is another very important region of traditional polyphony, and as a matter of fact, one of the centres of study of vocal polyphony in Southeast Asia (I am referring to the fact that Taiwan hosted a special conference on traditional polyphonic singing in 2002, the only such conference all of Asia. For more information about this and other conferences fully dedicated to the research of traditional polyphony see the special **Appendix** at the very end of this book).

Several indigenous peoples live in Taiwan: the Atayal, Amis, Bunun, Paiwan, Saisat, Tsou, Rukai, Puyuma, Shao. Several of them practice vocal polyphonic singing.

Atayal is one of the biggest aboriginal groups in Taiwan (numbering around 100 000). They mostly sing solo, although during the wedding ceremonies group singing, featuring two-and three-part canonic polyphony occurs.

Ami is the most numerous group in Taiwan (around 150 000 population). Their polyphony is mostly based on two-part singing, with the low part performed in unison (or solo) and the high part singing a wide-range pentatonic scale-based melody. Occasional three- and four-part sections also appear. Millions of western listeners have heard traditional Ami two-part polyphony without realizing they were listening to a Taiwanese traditional song, because when the British rock-band “Enigma” used the recording of an Amis’ two-part polyphonic harvest song (recorded in Paris in 1988 from native Taiwanese singers) as the main melody for their 1994 worldwide hit

“Return to Innocence”, they did not acknowledge the source of the song, singers, the original recording and even ethnic origin of the song.

Bunun are the most mountainous people on Taiwan, living in the central Taiwan mountain ranges. Their polyphony is the most “harmonic”. The drone has a prominent place in their singing. For example, in a song depicting the growth of the seed from the ground, Bunun singers use a unique gliding-up drone, starting very low and gradually going up, while other parts also go higher modulating, but without gliding. In Bunun songs you hear the sound of full chords most of the time. Drones are usually in the top or the middle of the texture. Harmony can be based around the major triad, or more adventurous sets of harmonies can be used as well, as in the next example (from the cassette, my own transcription), ominously called “Song of the Victory of the Head Hunters”. Here is the first half of the song:

Ex. 91. Taiwan, example of Bunun polyphony (from Bois, 1989)

♩ = 60

The musical score is written for two staves (treble and bass) in 3/4 time, key of D major (three sharps). The tempo is marked as ♩ = 60. The score is divided into three systems. The first system starts at measure 8, the second at measure 7, and the third at measure 12. The treble staff contains a melodic line with various note values and rests. The bass staff contains a drone line consisting of sustained chords. The melody in the treble staff is characterized by gliding-up patterns, while the drone in the bass staff provides a harmonic foundation.

The **Paiwan** live in the southern part of the island and number around 70 000. In their traditional singing they use two-part drone polyphony, and small-range melodies. Unlike Bunun, who use drone on top of the multiphonic texture, the Paiwan use drone as the lowest part. Secondal dissonances are also widely used in Paiwan drone polyphonic songs.

The **Rukai** are close ethnically and geographically to Paiwan, and this is clear in their singing style as well, although Paiwan polyphonic singing seems to retain more traditional elements than Rukai polyphonic singing.

The **Saisat** are one of the smallest groups numbering fewer than 10 000 people in Northwestern Taiwan. Their traditions are deeply influenced by the neighbouring Atayal, the most numerous and influential Taiwanese mountain people (see above). Regarding polyphonic singing, according to available data, they did have a tradition of vocal polyphony which was lost during the 20th century: "...at one time there was singing in parallel fourths, but no-one sings in this way anymore" (Tsang-houei, 2002:525).

The **Tsou** people are also very few (under 10 000). They live in the high mountains of the Central Ranges and are neighbors of the Bunun. Like the Bunun, the Tsou are known for their harmonic polyphonic singing, although two-part singing is prevalent here (unlike the three-part singing of the Bunun people). Unlike any other Taiwan peoples, who use only binary metres, the Tsou also use ternary metres (3/4 and 6/8).

Southeast Asia

Indonesia

The biggest country of Southeast Asia, Indonesia is a classic example of a general neglect of local polyphonic traditions. The most important reason for this neglect is the wonderfully developed and internationally renowned traditions of gamelan, the musical symbol of Indonesia. Another reason for the neglect of vocal polyphony in Indonesia is that you need to travel to very remote areas to reach the regions of vocal polyphony. As a result, local and international scholars rarely paid attention to the phenomenon of vocal polyphony in Indonesia.

Of course, this does not mean we do not have any knowledge of the Indonesian traditions of vocal polyphony (see, for example, Kunst, 1954, Messner, 1989, Rappoport, 2004). Philip Yampolsky presents plenty of polyphonic examples on the wonderful set of CD's «Music of Indonesia». The eastern part of the island Flores, and particularly the so-called "head of Flores", as well as a part of southern Sulawesi (region Toraja) have plenty of live traditions of vocal polyphony. At the same time it is very likely that at least some polyphonic traditions from Indonesia are still unknown to ethnomusicologists.

Vietnam

According to the available information, the traditional music of the Viets, the main ethnic group of Vietnam, has some interesting forms of group singing (particularly responsorial forms), although the group singing is based on unison (social polyphony). Therefore we can repeat what is generally known about Vietnamese traditional music, that it is based on a tradition of vocal monophony.

On the other hand, traditions of vocal polyphony are found in the singing traditions of several **ethnic minorities** of certain regions of Vietnam (Nam, 1988:41). More than 50 minorities live in Vietnam. Some of the minorities live in the lowlands, and others live in the uplands (mountain regions). As is often the case, the earliest population of Vietnam is preserved today as minorities in the mountain ranges (mostly in central Vietnam) (Nguyen, 1998:531). Another mountainous region of the country – the northern part – is mostly inhabited by groups that came from southern China between the 1300s and 1800s. The Vietnamese mountain peoples have different (from the Viets) origins, physical features, languages and musical cultures. Vocal forms of polyphony are documented among the central, and particularly the northern mountainous minorities. According to a few available examples of Vietnamese polyphony, two-part singing is prevalent, and heterophony and drone forms are present. Both of these examples are from the Kao-bang province of northern Vietnam:

Ex. 92. Vietnam (Do Ming, 1975:156)



Ex. 93. Vietnam (Belorusec, 1969:269)



Several extremely interesting drone polyphonic songs with sharp secondal dissonances are presented on a double CD “Vietnam: Music of the Montagnards” (Zemp, 1997). You can hear one example among the polyphonic examples attached to this book).

Unfortunately, the Vietnamese mountain minority’s traditions of vocal polyphony are still virtually unknown to western ethnomusicology. Brandl does not mention Vietnam in his very recent and detailed description of the regions of the distribution of the *Schwebungsdiaphonie* (Brandl, 2008:283). Even a special Garland article on musical traditions of Vietnamese minorities does not mention the fact of the presence of polyphony among them (Nguyen, 2002).

Nepal and Burma (Myanmar)

According to the available information, traditions of vocal polyphony similar to those of the Chinese and Vietnamese minorities are present in Nepal and Burma (Myanmar) as well. Unfortunately, these polyphonic traditions have not been studied sufficiently, and the only information I have are works about southern Chinese and Taiwanese polyphonic traditions. They mention the typological closeness of Southeast Asian polyphonic traditions (mostly existing in the forest-covered mountain regions of Southeast Asia) (Tsang-houei, 2002:523).

India

India has one of the world's biggest diversity of peoples of different physical types, languages, religious confessions and cultures. This applies to the musical traditions as well. Perhaps one of the reasons for the small national importance of folk music is the sheer diversity of the vocal and instrumental traditions of Indian peoples and ethnic groups, making it very hard for a folk tradition of any one region to become the national idiom of Indian music. Instead, contemporary Indian film music (the biggest film industry in the world) is recognized as the unifying national symbol of Indian popular musical culture. Songs from Indian films are actively put on cassettes and sold in their millions throughout the country. They create a background for social events and are learned and sung by villagers and city dwellers alike (Green, 2000:555).

Not all the traditions and musical styles of different regions and peoples of India have been studied sufficiently. The musical landscape of India is dominated by the magnificent North Indian (Hindustani) and South Indian (Karnataka) classical traditions. Although classical traditions are polyphonic, India is generally known as a country with monophonic vocal traditions, because in both North and South India this polyphony is instrumental (or vocal-instrumental). As a matter of fact it is quite amazing how Indian instrumental music is dominated by drone polyphony, the form of polyphony virtually absent in vocal group singing.

Dominated by the classical traditions of raga both in North and South India on one side, and the massive popularity of the film music industry on the other, very little attention has been paid to the folk music of the different peoples of India. The accepted stereotype of Indian music as "monophonic culture" also contributed to the very limited attention of scholars to polyphonic traditions of the different Indian peoples.

Assam. The work of Kauffmann and Schneider (1960) about the polyphonic folk tradition of the Assamese people is the only major study of traditional vocal polyphony in India that I am aware of.

Polyphonic singing of the mountain-dwelling Assamese has understandable links with the polyphonic singing traditions of neighbouring mountain peoples of Southeastern Asia. We find here several different forms of part-singing, although the parallel movements of fourths, fifths and octaves seems to dominate:

Ex. 94. India, Assam (Kaufman and Schneider, 1960:260)



Ex. 95. India, Assam (Kaufman and Schneider, 1960:#11)



Southern India. Another region with documented traditions of vocal polyphony is Southern India. Although cultures (and musical cultures) of different regions of southern India (Tamil Nadu, Kerala, Karnataka and Kota) are different, they are still united by a common Dravidian ancestry. According to Lomax, the singing traditions of the tribal communities of southern India contain different forms of polyphony (Lomax, 1968). Interestingly, all four articles dedicated to four main southern Indian regional musical traditions in *The Garland Encyclopedia of World Music* mention their strong traditions of group singing by both men and women (mostly in call-and-response form) and the popularity of circle dances, but they fail to mention whether they are monophonic or polyphonic. This must be the result of a general neglect of scholars towards vocal polyphonic traditions in India. As a matter of fact, the word “polyphony” is absent in the impressive index of this 1000+-page volume dedicated to the music of the Indian Subcontinent.

Conclusions

Following are a few general conclusions to sum up this brief review of the polyphonic traditions of the biggest and the most populous continent of the world:

- Generally speaking, Asia is one of the most monophonic continents of the world, although a few regions are known for their polyphonic traditions.
- In the Middle East vocal polyphony is present among the Persian Gulf fishing and particularly pearl-diving populations around the island of Bahrain. Vocal polyphony here is based on a strong

tradition of a very low drone with a highly ornamented melody. Polyphonic singing was also noted among some other Middle Eastern peoples, particularly among the Jews, Syrians, and Bedouins.

- Central Asia harbors the unique tradition of overtone singing, based on the use of a long drone sound and creating the melody using the natural overtones of the drone sound.

- The most isolated polyphonic traditions of the world also come from Asia. The first inhabitants of the Japanese and Kuril Islands, the enigmatic Ainus retained their tradition of canonic singing up to the 20th century. Another uniquely isolated polyphonic region is Nuristan, situated in the impenetrable mountains of the Hindukush in Afghanistan. The secondal polyphony was still thriving here in the second half of the 20th century.

- Probably the biggest and the most important (although not researched sufficiently) region of traditional vocal polyphony in Asia is Southeast Asia, stretching from Northeast India up to the Southern Chinese minorities, and the ethnic minorities of Vietnam, Burma, and Nepal, living in the forest-covered mountains of Southeastern Asia.

- One of the most important (and better researched) regions of traditional polyphony is Taiwan, where different mountain peoples practice different forms of polyphony.

Vocal Polyphony in North America

The musical traditions of Native Americans are stereotypically regarded as monophonic. Despite the presence of strong group-singing traditions in most American Indian traditional music, monophonic (solo, unison and often loosely heterophonic) singing predominates.

At the same time, unlike many of the other “monophonic” regions of the world, where the study of dominant monodic music totally pushed away any study of the elements of polyphony, quite a few American scholars (mostly musicologists and ethnomusicologists) contributed to the study of elements of part-singing among North American Indians (see the survey in Nettl, 1961).

According to the available sources, mostly summarized in a concise and very informative article by Bruno Nettl (1961), information about the polyphonic singing styles of different Indian peoples is quite abundant. Although some regions and peoples lack any references to polyphony, solid information is available on other regions and peoples. Most importantly, this information questions the existing general stereotype about the general monophonic nature of American Indian vocal singing traditions.

Among different regions of North America two regions are particularly rich in information about vocal polyphony: (1) the Northwest Coast, and (2) the East Coast.

Northwest Coast. Plenty of information indicates that the Northwest Coast Indians (particularly the **Nootka** and **Salish**) were familiar with a part-singing tradition, and often used drone polyphony. Drone could be the highest part (as among the **Makah**) as well as the lowest part (**Salish** Indians). Makah used a so-called “metal pitch”, a drone that sounded on top of the melody. According to Densmore’s informants, the “metal pitch” [high pitch drone] was sung by individuals, mainly women, who “either did not know the song or wished to improve its quality” (Densmore, 1939:130). It is very interesting that the Makah would use a “metal pitch” drone to accompany a stranger when he would sing his own song for them. Densmore provides some very interesting information about the additional harmonic tones that Salish singers used to place during the long notes in the melody (Densmore, 1943:31). Abraham and Hornbostel transcribed this example of drone polyphony from the **Thomson River Indians**:

Ex. 96. North America (Abraham and Hornbostel, 1922: #32)



Singers were divided into two groups (so both parts were sung in unison). Some of them sang a melody, and others occasionally repeated the same note, a third lower than the main tone of the melody (Abraham & Hornbostel, 1922:32).

According to Roberts, the Nootka had parallel three-part singing traditions, with men singing a melody and women singing together with them, some singing a fourth, and some an octave higher. They had special terms indicating the relationship of the parts. She indicates that the Nootka have known polyphony for a long time. Polyphonic elements in the singing of the **Nootka** and **Kwakiutl** were also discussed by Ida Halpern at the “Centennial Workshop on Ethnomusicology” in 1967: “There are slight polyphonic tendencies noticeable. However, to speak of polyphony when there is a slight momentary discrepancy of pitch should not be considered true polyphony, but unintentional polyphony. Some of the Nootka songs, however, have a more truly polyphonic feeling than those of the Kwakiutl” (Halpern, 1975:25). Later she notes that polyphonic moments “always occurred the same way in the same song” (pg. 42).

According to Keeling vocal counterpoint is particularly characteristic for the **Californian Indians**: “Throughout this area the various tribes also perform secular dances such as Shakehead Dance or the Pomo Ball Dance, and these illustrate the basic style of group singing in the region. This music resembles the Northwestern style in that it is contrapuntal, but the nature of the counterpoint is very different. In north-central California, the solo part is augmented by another basically rhythmic part known as “the rock.” This is an accompaniment, sung by one person, and the singing itself is called “holding rock”. In addition to the soloist and the “rock” there is rhythmic beating of clapsticks (played by the singer) and often the sound of whistles blown by dancers, so that the whole musical texture is fairly complex” (Keeling 2001:415-416). “...The presence of vocal counterpoint as a basic element in public singing is one of the most distinctive characteristics. While certain types of polyphony have been noted among tribes of the Northwest Coast, true rhythmic counterpoint is much more prevalent in California than in other regions of North America. Contrapuntal styles have been described here among the Northwestern and north-central California nations, but other

types of counterpoint are also evident in historical sources and archival recordings of music pertaining to certain earlier rituals of Southern California groups” (ibid :418).

Eastern Coast. Another important region for indigenous polyphonic traditions was the Eastern Coast. In the Northeast, the drone was mostly used. Roberts mentions polyphonic songs with several singers singing a main melody and others carrying a drone (Roberts, 1936:7). Menomini also used a drone “to help the singers” (Densmore, 1939:26). In another interesting case, “a female informant, wife of a medicine man, helped her husband to sing by standing beside him and singing a drone above his melody” (Nettl, 1961:359). Therefore, the drone could be a top part as well. The Delaware and Fox Indians also used drone in their traditional songs (Baker, 1882:14).

Southwestern USA. Information about polyphony from southwestern USA is more fragmentary and only mentions a couple of tribes from remote regions: the **Yaqui** women sang a very high drone (octave and fifths above the tonic) (Fillmore, 1889:306). The **Papago** women also used a drone above the melody “for the space of three or four measures” (Densmore, 1929:14). Call-and-response with the soloist and chorus “stepping” on each other (or overlapping) in a dance song of the **Creek** Indians has been eloquently described: “It is ... difficult to divide between where the leader stops and the chorus comes in . . . The more animated the dance becomes, the more merged and rapid are the parts. The effect of this is . . . bordering almost on harmony” (Speck, 1911:162. Cited from Nettl, 1961:360). The **Cherokee** and **Shawnee** are also documented to have the same kind of responsorial singing with parts “stepping” on each other (Nettl, 1961:360).

Plain Indians. Information on Plain Indian polyphony is also available. And again, we see the use of the drone, sung by women of the Pawnee Indians from the northwest and south west of the region (Densmore, 1930:659). According to Helen Roberts, the **Oglala Sioux** sang in parallel thirds and simple imitation-like call-and-response where the chorus starts while the soloist is still singing. Her general remark is “choral singing was common among the Oglala Sioux” (Roberts, 1936:7). The **Arapaho** are also noted for such cadencial two-part singing.

Nettl also discusses the very interesting tradition of the use of the instrumental drone in this region. Drumming on the kettledrum, partly filled with water (and accordingly specially tuned) accompanies singing with a

steady instrumental “rhythmic drone” in Peyote songs. It is very interesting that according to Nettl (who transcribed Peyote songs from the **Arapaho**), the kettledrum is tuned to either the tonic of the melody, or a fifth below the tonic (Nettl, 1961:358). Polyphonic elements in Peyote songs are also mentioned by Gooding (2001:445).

Summarizing the information on polyphony among North American Indians, Nettl writes that out of six musical areas, identified in his seminal work on Indian music (Nettl, 1954), “only two, the **Great Basin** and the **Athabaskan**, one an exceedingly simple style and the other represented only by the Navaho and Apache, **lack references to Polyphony**” (Nettl, 1961:360). In the concluding part of the article Nettl discusses different possibilities of the meager distribution of vocal polyphonic traditions among North American Indians, and suggests two different models: (1) vocal polyphonic traditions among American Indians existed earlier much more widely, and the isolated regions with elements of part singing are only the remnants of this old tradition, or (2) by the time of the first contact with Europeans American Indians were “on the threshold of developing an elaborate polyphonic style” (Nettl, 1961:362). I do not want to discuss these very interesting suggestions in this part of the book, dedicated to a **review** of the information available from various sources. We will discuss this topic in the second part of the book, in a special section (or “case”), dedicated to the vocal polyphony of American Indians.

Vocal Polyphony in South America

It became a commonplace in ethnomusicological publications to note that South American Indians' singing traditions contain much more polyphony than those of their North American counterparts. "In spite of the dearth of polyphony in North America, it has often been taken for granted that Central and South American Indians had complex polyphonic styles" (Nettl, 1961:354). According to Alan Lomax, "Polyphonic singing, which is frequently diffusely organized counterpoint, occurs in South America especially along the eastern slopes of the Andes. In this area too one encounters an unemphatic, soft-voiced, subdued, feminine-sounding style, with a frequent use of harmony. Such singing can be heard in the backwoods of highland Peru (Q'eros) and from the Campa of the eastern Andean slopes, through Venezuela and Colombia, into southern Mexico among the Tzotzil" (Lomax, 1968:85).

Q'ero. Probably one of the most interesting surviving musical traditions comes from the small tribe of Q'ero (about four hundred people only are left), who live in the Cusco region of the Andes in Peru. Although some consider Q'ero to be Inca survivals, scholars think that Q'ero musical culture "probable reflects an even earlier diversity with an Inca overlay" (Cohen, 1998:225). Most importantly for our topic, the Q'ero have interesting and sometimes unique traditions of polyphonic singing. According to Cohen: "The general Q'ero musical aesthetics allows different pitches, texts, and rhythms to sound at the same time. Though the Q'ero sometimes sing in perfect unison, their songs are structures to be sung individually. There is no sense of choral singing or harmony. A family, *aullu*, or community may be singing and playing the same songs at the point of starting and stopping. Yet the melodies sung at communal occasions have a sustained note at the end of a phrase, permitting the other singers to catch up and share this prolonged duration, which serves as a drone. When the new verse starts, the heterophony begins anew" (Cohen, 1998:230).

Cohen describes the singing of women during the Palchasqa festival among Q'eros (held during February or March): "... several families join together outside and throw flowers (*palcha*) at the alpacas while singing and playing *pinculu*. Five or more women sing at the same time, interspersing ritual phrases with complaints about their daily lives. Each tells her own story in song. At times, the musical texture consists of different people singing personalized songs simultaneously. Only occasionally do they meet

on ritual phrases or on final notes” (Cohen, 1998:228). Another interesting tradition is the big family singing sessions which have the elements of drone polyphony: “twenty people may be packed together inside, drinking, singing heterophonically, with conch trumpets blasting. Sometimes, late in the night, the individual qualities become less apparent as people find accord between them, reaching a degree of musical consensus. At this point, the sustained final note of a phrase provides a drone beneath the individual voices. Occasional multi-part texture occurs, and the whole event takes on a choral sound” (Ibid, 229). Another interesting tradition of big communal singing happens during the carnival, where a few groups of women sing in disregard of each other, together, while men play the musical instrument *pinucllu*. Cohen notes the closeness of this tradition to the celebration singing tradition of Amazonian Indians (ibid, 229).

The **Warao** from the eastern Venezuelan tropical forests of the Orinoco River Delta have very important ritual singing by shamans for curing. In particular, if the patient is an important person, singing in small ensembles (duets or trios of shamans) is required and it “results in a complex, multi-part texture like a free round.” (Olsen, 1998:184).

Amazonian region. Indians from the Amazonian region of Peru are known for their heterophonic singing. “Two-voice polyphony in intervals of fourths and canonic singing has also been observed” (Pinilla, 1980:384, cited from Romero, 1998:482). Rounding off the tropical-forest region of South America, A. Seeger notes that “most Indian music is associated with ritual; it has little harmony or polyphony, and what polyphony it has is unfamiliar to unaccustomed ears” (Seeger, 1998:135).

Interaction between the Christian missionaries and the Native American cultures was quite unidirectional – the missionaries “forbade traditional music and ceremonies and restricted musical activities” (ibid, 131). Later, missionaries of certain protestant sects intensified the process, some with such success that hymns are the only music performed today in certain tropical-forest Indian communities. Singing hymns may take unusual directions, however, as among the Waiwai, where communities compete by composing hymns.

With few exceptions, the music of the Christian church and traditional music of the Indians have apparently not mixed: the tunes for Christian services are hymns, and the Indian melodies continue without harmony where they are sung at all. In unusual cases, Indian communities employ some form of harmony that may have its origins in Christian music, as

among the **Kayabi** (strict parallel fifths) and the **Javae** of Brazil, and the **Moxo** of Bolivia (Olsen, 1976). In Guyana, among the **Akawaio**, the **Makushi**, and the **Patamona**, unusual music was developed for the syncretic religion known as Hallelujah (Butt Colson, 1971)” (Seeger, 1998:131).

The influence of European classical music, including the wide use of parallel thirds, is particularly evident in the singing traditions of the Europeanized **Mestizo** (Romero, 1998:483). Heterophonic and canonic singing is mentioned among the **Venezuelan Indians**. Free rhythm is quite common in solo songs, but polyphonic songs (particularly accompanying dances) have a strict rhythm and metre (Brandt, 1998:525).

In **Venezuela**, “In the plains and surrounding areas, especially in the states of Apure, Carobobo, Cojodes, Guarico, Lara, Portuguesa, and Yaracuy, the Holy Cross is venerated by performances of three-part polyphonic pieces (tonos) usually sung by men, sometimes unaccompanied, but more often accompanied by one or more cuatros. The music and texts came from Spain during the early days of the colony. Most harmonic singing in Venezuela is in two parts (usually an interval of a third), but plains wakes use more complex polyphony, unique in Latin America. The lead singer (guia ‘guide’) usually sings a solo phrase and is then joined by two other men improvising an harmonic response – a higher part (falsa, and contrato and other names), and a lower part (tenor, also tenorete)” (Brandt, 1998:534).

The profound influence of colonial Spanish music on highland **Maya** is felt in the survival of the “late sixteenth- and seventeenth-century style ‘falsobordone’ settings, in which a plainchant melody is transposed to a higher octave and harmonized below in three or four parallel parts – a texture still cultivated in Santiago Atitlan, Guatemala” (O’Brien-Rothe, 1998:652).

The influence of the African population on the musical traditions of South America was truly profound. Africans were brought from different regions of Africa as slaves to South American plantations, and they usually spoke different African languages, but they “shared general musical traits that transcended particular African communities – among them collective participation in making music, call-and-response singing, and dense, often interlocking, rhythms played on drums” (Seeger, 1998a:47).

Another very interesting feature of the musical cultures of South America is that archaeological records are full of references to **polyphonic blown instruments**. Panpipes, played in interlocking style, as well as double, triple and even quadruple flutes suggest that the peoples of the central and northern parts of South America were familiar with certain forms of instrumental polyphony before their contact with European civilization. In one of the most

important written sources from 1609, the Inca Garcilaso de la Vega speaks about the **Qollas**, an Aymara-speaking people from the **Titicaca region**, that they “played double-unit panpipes in interlocking fashion. His reference to different vocal parts (tiple, tenor, contralto, contrabajo) in Qolla panpipe performance may suggest that different-sized panpipes created polyphony (as they do today)” (Turino, 1998:207). We will discuss the problem of polyphony in a pre-contact Mesoamerica later, in a special “case study”, dedicated to the possibility of the presence of polyphony in ancient civilizations.

Conclusions. The following general conclusions can be formulated:

South American Indian music has a few interesting regions of distribution of group polyphonic singing, although in many regions these are only of loosely coordinated heterophonic singing traditions.

Among a few South American Indian peoples the tradition of polyphonic singing is particularly important (as among the Q’eros from the high mountainous Cusco region).

Generally speaking, the Andean region is the most important region for the distribution of polyphonic traditions. Here drone polyphony, unique throughout South America, was documented.

- Quite a few Amazonian forest tribes also actively employ group singing, resulting in heterophony.
- The abundance of polyphonic blown instruments raises a question about the presence of polyphony (at least, instrumental polyphony) among pre-contact South and Central American cultures.

Polyphonic singing on Pacific Islands

Covering about half of our planet (but only a fraction of the world's population), the Pacific Ocean is the home of an amazing richness of vocal polyphonic traditions. Both Marius Schneider in his 1934-1935 "History of Polyphony" and later Alan Lomax in his 1968 "Folk Song Style and Culture" placed the Oceania islands (particularly Polynesia and Melanesia) among the three most polyphonic regions of the world (the two others being sub-Saharan Africa and Europe).

Polynesia

Perhaps one of the most important historical lessons that Oceania (and particularly Polynesia) taught European musicology (in the 18th century) was the shock of the discovery that well-organized part-singing can exist far from European civilization. The very first encounters of European travelers with the Pacific Ocean Island communities brought to light their strong predilection towards vocal polyphonic singing. From 1773 records come the following descriptions: "This set most of the women in the circle singing their songs were musical and harmonious, noways harsh or disagreeable", or: "Not their voices only but their music also was very harmonious & they have considerable compass in their notes" (Beaglehole, 1962:246). Some descriptions are even more precise: "They sing in parts, keeping the same time and varying the four notes without ever going beyond them. So many singers and so few notes you always hear the whole together. The difference of Words & Voices makes some variety. The singers (that I heard) were all women. One confined herself entirely to the Lower Note which acted as Drone" – this eloquent description comes from Cook's second 1772-1775 voyage (Burney 1975:84. Cited from Kaeppler et al., 1998:14). Very clear information on the Oceanic people's part-singing capability came from Cook's third voyage as well: "Where there is a great number they divide into several parts each of whom sings on a different key which makes a very agreeable music (Beaglehole, 1967:2:944. Cited from Kaeppler et al., 1998:14). Early records even indicated the use of unusual chords as well: "We now and then remarked some discordant notes, with which, however, the ear of these people seemed very much gratified" (Labillardiere, 1802:133). These and many other travelers' notes did not leave a place for any skepticism about the wide distribution of a polyphonic singing tradition in Oceania before their first contacts with Europeans.

Quite amazingly, despite the overwhelming and clear information about the presence of part-singing traditions among Polynesians, some European professional musicians still doubted the ability of Polynesians to sing in different parts, as they believed it “a great improbability that any uncivilized people should, by accident, arrive at this degree of perfection in the art of music, which we imagine can only be attained by dint of study, and knowledge of the system and theory upon which musical composition is founded . . . It is, therefore, scarcely credible, that people semi-barbarous should naturally arrive at any perfection in that art which it is much doubted whether the Greeks and Romans, with all their refinements in music, ever attained, and which the Chinese, who have been longer civilized than any other people on the globe, have not yet found out.” (Cook and King, 1784:3:143-144. Cited from Kaeppler et al., 1998:15). It took more than a century and the discovery of many more vocal polyphonic traditions in different parts of the world untouched by European civilization (including the central African rainforests and Papua New Guinea) to subdue European arrogance and convince professional musicologists that at least not all polyphony was an invention of medieval monks. But let us leave this matter until the second and third parts of the book.

The great success of Christian hymns in Polynesia was the result of the natural closeness of European polyphonic traditions and the polyphonic traditions of the Oceanic peoples. According to Alan Lomax, “In one way, the singing of Oceania stands in marked contrast to that of other regions: many choral performances, though set in irregular or free rhythm, are nevertheless performed in excellent concert. The only other area in the world where choruses commonly sing in free rhythm, yet in good concert, is Old Europe. It seems likely that this peculiarity, along with a shared preference for text-heavy, polyphonic performances with drone chords, facilitated the adoption of the Central European hymn style, especially by the Polynesians” (Lomax, 1968:91).

Tonga. Polyphonic traditions are spread on all three groups of the Pacific islands: Polynesia, Melanesia and Micronesia. Although the late European polyphonic style became very popular in Oceania from the moment Christian hymns spread among them, more ancient, indigenous stylistic features of their traditional polyphony had been also documented. For example, despite their disagreement about several important issues, both Kaeppler and Moyle note the importance of drone polyphony among earlier layers of Tongan polyphonic traditions, one of the best preserved in Polynesia (Kaeppler,

1994:462-463; Moyle, 1987:149). Tongan *Lakalaka*, a symphony-long grand composition in four and five choral parts, divided into antiphonal groups, were specially composed by *punake* who created the skeleton of the new *lakalaka*. The skeleton mostly comprises the main melodies (*fasi*), and the harmonization of the melodies usually becomes a communal event. Kaeppler gives a fascinating detailed account of how one of the *lakalakas* was written: “On November 1975, Ve’ehala [the name of a composer, or *punake*] explained to me his compositional process for his 1975 *lakalaka*: first he had the overall idea; then he composed the poetry; next, using melodies he could remember from previous songs, he ‘twisted them around to form something new,’ which for his 1975 composition took about two hours; the poetry was written on a blackboard; then he sang the melody and ‘the people harmonized it by themselves’” (Kaeppler, 1994:463). Traditional terminology also clearly distinguishes the functions of different parts, like *fasi* (main melody), *laulalo* (second part, lower than melody, often a drone, particularly in earlier-style singing), and several decorating parts (*teuteu*).

Fasi and *laulalo* were the most important ingredients of the polyphonic texture, and the number of decorating parts could vary and even reach six. Kaeppler gives a good description of six-part singing still being remembered by older singers in the 1960s: “According to a few knowledgeable musicians in 1960, indigenous singing had as many as six parts. The leading part or *fasi* (i.e., the main melody of the poetry), was usually, but not always, sung by men. The two women’s parts, *fakapakihi* and *tali*, were described to me simply as high and low. *Lalau* was described as a high men’s part that was usually sung above the melody. *Ekenaki*, another men’s part, was sung lower than the melody, and finally, *laulalo* was a low men’s part, rather like a drone. According to the Tongan view, *fasi* (melody) and *laulalo* (drone) were the important parts, while the other parts were decorative... This traditional six-part singing is seldom heard today, having been replaced by more Western-sounding harmony with up to three parts each for men and women, who sing western diatonic pitch intervals” (Kaeppler, 1990:195).

Unfortunately, for different historical and political reasons polyphonic traditions did not survive in most parts of Polynesia so well as on Tonga. “Traces of indigenous polyphony survive in the central areas of Polynesia, including Tonga and the Society Islands, but are apparently absent on the periphery, in Aotearoa [known as New Zealand], Hawaii, and Mangareva” (Stillman, from Love et al., 1998:308).

Tahitian *himene tarava* is possibly the best-known choral form from Polynesia. Influenced by the European harmonic language, *himene tarava* is based around triad harmonies of the supertonic (ii), which moves to the tonic and then alternates between the tonic (I) and the dominant (V) harmonic functions. As in most cases in Polynesia, big mixed groups sing *himene tarava* with interesting dividing functions. “The primary functions of the vocal parts are textual declamation, rhythmic punctuation, and melodic decoration. The primary declamatory part, performed by most of the women in a choir, centres at or near the tonic; the men’s counterpart usually centres on the dominant below. Other texted parts are performed by pairs of soloists, usually men, and centre on the third degree of a major scale. The rhythmic punctuation performed by the remainder of the men consists of a vocalized grunting pitched on the lower tonic” (Stillman, from Love et al., 1998:308). We should also note that as it is usually the case in Polynesia, music and dance are closely associated with each other in Tahitian culture (Moulin, 1979).

Smaller islands. Interesting and unusual examples of polyphonic tradition when parts sing different texts were also documented in Polynesia. *Suahongi* from **Bellona** (a small, 11- kilometer-long coral island between the Solomon Islands and Vanuatu), as well as *me’etu’upaki* from Tonga represent this kind of polytextual polyphony (Stillman, from Love et al., 1998:308-309).

Polyphony (with long drones in the older layers) has been recorded in such far-flung regions of Polynesia as the easternmost Polynesian island **Rapa Nui** [known also as Easter Island] and the westernmost small islands laying deep within the Melanesian territory (**Luangiua, Bellona, Tikopia, Anuta**. See Besnier et al., 1998:843, 850, 852, 856). Community participation in choral singing is so intense that, for example, on a small Anuta atoll with only 200 residents, when a member of society dies, the population divides itself into “small” choirs of about twenty members (thus, each choir has 10% of the total population of the island!) and they all sing at the deceased’s house one after another” (Feinberg, see in Besnier, et al., 1998:857).

Melanesia

According to the above-mentioned compilation works of Schneider and Lomax, drone polyphony has been the leading form of traditional polyphony not only in Polynesia, but in Melanesia as well. Interestingly, the dissonant

nature of the indigenous polyphonic tradition of Oceania has been better preserved in Melanesia, where the stylistic parallels between some European polyphonic traditions and some Melanesian regions reach astonishing precision. Parallels between the singing in dissonant seconds of faraway Balkan mountaineers and Admiralty islanders are among the best known and most puzzling in ethnomusicology, involving polyphonic traditions of faraway regions of the world. Discussed at different times by Erich Moritz von Hornbostel, Jaap Kunst, and Florian Messner, this issue will be discussed, together with other comparative issues, in the next part of the book.

Guadalcanal Island. Polyphonic singing from Guadalcanal Island gives a good representation of Melanesian polyphony. “The vocal music of Guadalcanal also uses a drone, above which two solo parts interweave melodic lines. In the Nginia language, a person may say that the first voice opens (*hihinda*) the singing, the second follows (*tumuri*), and the drone growls (*ngungulu*). In women’s singing throughout the island, the growl is a continuous drone, like that of the panpipe ensemble ... In three-part instrumental or vocal polyphony of Guadalcanal, the melodic parts at the end of stanzas and pieces join the tone of the drone, so all parts cadence in unison or at the octave. Besides this type of polyphony, the songs of Guadalcanal feature two solo vocal parts having wide ranges and frequent and rapid change of register, a kind of yodeling” (Zemp, in Kaeppler et al 1998a:665). A similar tradition of drone three-part singing exists on the neighbouring small volcanic **Island Savo** with 1500 residents, who have the same kind of drone polyphonic singing tradition (ibid, 1998:666). Good examples of Polynesian and Melanesian polyphony are presented in volume 9 of The Garland Encyclopedia of World Music, “Australia and Pacific Islands”.

New Guinea. New Guinea is the biggest land area of Melanesia. It is also an important region for polyphonic traditions. For example, the Indonesian province of **West Papua** (formerly **Irian Jaya**) is home to several mountain peoples from the Central Irian Jaya regions, who widely use vocal polyphony: the Moni, Dani, and Yali.

The songs of the **Moni** “are famous for a thick harmonic texture, with melodies sung in parallel motion on chords using ninths and elevenths, transcribable as C-E-G-B-D-F, over a bass drone” (Chenoweth et al, 1998:584). **Yali** polyphony is more adventurous – their songs are based on two- four-part contrapuntal polyphony.

An extremely interesting drone polyphonic tradition with secondal dissonances had been recorded north-East in New Guinea, on Manus Island. The same type of dissonant polyphony has been also recorded in East Flores, and the similarity of this tradition to Balkan drone-secondal polyphony puzzled Jaap Kunst (1954) and was later re-examined by Gerald Florian Messner (1989).

Vocal music of the aboriginal peoples of Borneo (most notably, Kenyah and Kajang) also features drone polyphony. Singing mostly consists of a soloist, singing a melody, and a group of singers accompanying the singer with a drone. The drone can be moveable or performed on one pitch only (Matusky, 1998:826-827).

Micronesia

Micronesian group singing traditions are sometimes considered to be close to the Southeastern Asian polyphonic traditions of mountain Vietnam, Southern China, and other group singing traditions from this region (including Northeastern Indian polyphonic traditions). Generally, polyphonic traditions in Micronesia are not as strong as in Melanesia and particularly Polynesia, and are mostly based on unison and heterophonic forms of singing. We should not forget that group antiphon and responsorial singing (in unison and octaves) is widely spread between peoples with both monophonic and polyphonic singing traditions.

Australia

Despite the fact, that Australian traditional music is heavily based on group singing (mostly unison singing with some elements of heterophony), singing in parts is not characteristic for the indigenous populations of this continent. If we do not take into account the singing traditions of late migrants from different parts of the world, we may say that Australia is the most monophonic continent of our planet. The only tradition that contains polyphony is the vocal-instrumental forms, particularly in the northern tip of Australia, where the didgeridoo (drone) and singing voice creates drone two-part polyphony. According to available information, polyphony is not performed in a purely vocal form.

Conclusions of the first part

So we come to the end of a review of vocal polyphonic traditions all over the different continents. The distribution of vocal polyphony shows an uneven and puzzling pattern. It is quite safe to say that some continents and major regions of the continents are predominantly monophonic, while other continents and major regions are predominantly polyphonic.

Predominantly polyphonic continents are Africa (more precisely sub-Saharan Africa and Sahara) and Europe (particularly the mountainous and island parts of East Europe and the Mediterranean region). Another very important polyphonic region (not a continent), is Oceania (particularly Polynesia and Melanesia),

On the other hand, the major parts of North, Central and East Asia, Australia and most of North and South America are monophonic, although there are some very interesting exceptions, like the polyphonic singing of the Ainu in North Japan, or the secondal polyphony of Nuristanians in mountainous Afghanistan, or the drone polyphony of the Northwest American Indians and some South American indigenous peoples, or the unique overtone singing style of some Central Asian peoples.

I want to repeat here again that despite all my efforts to represent all the major polyphonic traditions of the world, I am sure that the list of polyphonic regions and cultures in this review is not complete. It is definitely beyond the possibility of one researcher to comprehensively review all the known in contemporary ethnomusicology polyphonic traditions of the world. So, despite my lifelong interest in traditional polyphonic cultures, and the most

generous help of my colleagues, experts of traditional polyphony from different regions of the world, this review by no means can be considered complete. I am sure experts of different regions of the world will find the information about many polyphonic traditions incomplete. And of course, the possibility of finding new interesting traditions of vocal polyphony is still with us, particularly in the regions, traditionally known as “monophonic”.

Another important issue that must be taken into consideration, when we are trying to create the cartography of polyphonic tradition, is the possibility of the presence of vocal polyphonic traditions in several regions of the world where we currently do not have live traditions of vocal polyphony, but historical sources give us some grounds to discuss this issue. I will attempt to discuss some of these regions in the next part of this book, completely dedicated to the historical and comparative study of traditional polyphonic cultures from different regions of the world.

PART 2

COMPARATIVE PERSPECTIVES

Introduction: Dialogue between regional and comparative studies

After the world centre of ethnomusicology shifted from Germany to the USA in the 1950s, there was a paradigm shift in ethnomusicology. To put it very simply, **comparative studies** were replaced by deep **regional** studies. Regional study (favored by the post-WW2 USA school of ethnomusicology) is a study going into the depths of a culture. We could call this method “vertical study” as well. Ethnomusicologists, who follow this paradigm, try to look at every aspect of a culture. Multiple fieldworks in the same region for many years, learning the local language, living among the members of the society for a lengthy period are some of the methods of getting deep “vertical” knowledge of the whole system of social interaction and music. Such a high standard of requirements to get into the complex system of social and cultural life of any country, region or even village under study, of course, severely limits the quantity of cultures a scholar can study during his lifetime. As a result, most of the scholars, following this paradigm, are experts in very few (often only one) culture or region.

On the other hand, comparative study (widely used by pre-war German and European scholars) was more geographically spread and did not go deep “vertically” into every culture under comparison. We could call this method “horizontal study”. Scholars would study and compare several cultures, sometimes from totally different regions of the world and without much knowledge of these cultures. In their studies comparativist scholars would also often rely on already existing material from cultures they may never have visited (let alone doing long fieldworks or committing themselves to such a task as learning the native languages).

After the paradigm shift in the 1950s, the comparative method was discredited and mostly rejected together with the major part of comparative studies of pre-war Germany. As Tim Rice told me about this on July 9th, 2001 in Rio de Janeiro, during the ICTM Conference: “the baby was thrown out together with the bath water”. The ICTM (International Council for

Traditional Music) is the world's biggest and arguably the most important professional body of experts in traditional music. Symptomatically, one of the important indications of the possible "Comparative comeback" in 21st century ethnomusicology was the Rio de Janeiro ICTM Conference itself, where the first theme was actually dedicated to the state and perspectives of Comparative research in contemporary ethnomusicology. As ethnomusicology learned a few lessons from the previous experience (hopefully), the factual basis widened, methodology advanced, and the means of communication became much more sophisticated, and the time for the "new comparative wave" feels right.

Of course, to say that the pre-WW2 German school of comparative ethnomusicology was always based on a "horizontal study" and that the post-WW2 American school of ethnomusicology was alternatively always based on "vertical study" would be a gross oversimplification, although if we use the word "mostly", instead of "always", the generalization will be closer to the reality. We should not forget, however, that there were some very important regional studies (particularly by native ethnomusicologists from East European countries studying their own musical traditions), published before WW2, and there were at least a few wide comparative studies after WW2 as well (for example, Alan Lomax's widely publicized "Folk Song Style and Culture" was possibly the widest ever comparative endeavor in ethnomusicology).

There is not much sense in discussing which of the abovementioned methods is "better". I hope that most of my colleagues would agree that the **method** of any particular study should be naturally connected to the **research goals** of the study. If we want to get a systemic understanding of the social and musical life of a Bolivian mountain village, or a gamelan-centered community musical life on Bali, or an urban society in Northeast Brazil, we need to spend months and years in getting into the details of their social, economic and cultural life, understand their language and feel the flow of their everyday life. We simply cannot fulfill such a task only by going to the library and reading published accounts about this culture, region or country, or even visiting this region on short fieldtrips. On the other hand, if we want to understand the history of the development and distribution of, say, woodwind instruments, or any particular scale, or drone polyphony, or personal songs, or lullabies, or many other shared elements of human musical cultures (and it is not easy to name the element that is not shared by at least a few cultures), we cannot accomplish this goal by having long fieldworks in one village or one country, learning the language and studying one tradition

in amazing depths of details. We will need to conduct a wide comparative study, using all the available resources that sophisticated contemporary libraries provide, and besides try to get as much as possible additional information from a variety of different sources.

Of course, if we still try to compare the regional (“vertical”) and comparative (“horizontal”) methods, we need to acknowledge that deep regional study is the “backbone” of ethnomusicology, because regional studies can certainly exist without comparative studies, whereas comparative studies totally depend on the number and quality of regional studies. In the case of active comparative studies of the first decades of the development of our discipline (before WW2), there was an insufficient number of regional studies of the world regions for comparative studies. So the global theories about the general rules of development of human musical cultures, or about the cultural “borrowings” from one culture by another were often based on a mixture of inferior facts and second- and third-hand incomplete information.

Wider regional studies, or studies of a single phenomenon of traditional music make two most promising directions for new comparative research. As usual, these types of pure “wider regional” or “single phenomenon” studies rarely exist in real life. In practice most existing comparative studies combine the elements of both regional and single phenomenon studies. For example, the study of gender relationships in the musical cultures of Mediterranean peoples is aimed at the particular regional entity (Mediterranean region), although it concentrates only on one aspect of musical culture (gender) (see, for example, Magrini, 2003). In the same way, say, a study of traditional polyphony among the Caucasian peoples is regionally specific, and at the same time it concentrates on one aspect of musical language only. Although both of these methods of comparative studies (wide regional studies and cross-cultural studies of a particular phenomenon of traditional music) require major cross-cultural comparative research, they are methodologically quite different.

For example, if we study Georgian traditional music as a part of a **wide regional** study of **Transcaucasian** musical cultures, we will be dealing with three independent cultures (Georgia, Armenia, Azerbaijan) with major differences between the whole set of important parameters: the languages they speak (Armenians speak Indo-European, Azerbaijanis Turkic, and Georgians the Caucasian family of languages), religions (Azerbaijanis are Moslems, Armenians and Georgians are Christians, although they belong to different denominations of the Christian Church), and musical culture (Georgian singing traditions are overwhelmingly polyphonic, while

Armenian and Azerbaijani singing traditions, having a whole set of differences between them, are both monophonic). At the same time, all three cultures, having lived together as neighbors during the millennia (in the case of Armenians and Georgians) or at least a few centuries (Armenians and Georgians with Azerbaijanis), they currently have a whole set of shared cultural elements. For example, there are quite a few shared song melodies, certain types of musical instruments, and similar layers of urban music. Now, if we look at the prospects of regional ethnomusicological study of the **entire Caucasian region**, then the North Caucasian peoples, languages and religions come into the picture as well. So we will be dealing with the peoples speaking the Indo-European family of languages (Armenians and Ossetians), the Turkic family of languages (Azerbaijanis, Balkarians and Karachaevis), and the Caucasian family of languages (Georgians, Abkhazians, Adyghe, Chechens, Ingushes, and Dagestanians). Regarding religion, we will have here a Christian group of peoples, comprising Armenians, Georgians and Ossetians, and the Moslem group of peoples, comprising Azerbaijanis, most of the Abkhazians, Adyghe, Balkarians, Karachaevis, Chechens, Ingushes, and Dagestanians. The situation is more complicated as some of the Georgians and Ossetians are Moslems, and some of the Abkhazians are Christian. In terms of musical culture this region can be divided into the group of peoples with a tradition of polyphonic singing (Georgians and all North Caucasian peoples), and peoples with monophonic singing traditions (Armenians and Azerbaijanis). [This kind of regional division was followed, for example, by the editors of the Garland Encyclopedia of World Music.] At the same time the North Caucasian peoples (irrespective of differences in religions and languages) share the tradition of specific Nart epic songs – very important for most of the peoples of North Caucasia and virtually absent in Transcaucasia.

On the other hand, a research project dedicated to some **specific phenomenon** of Georgian traditional musical culture would lead us to totally different regions and cultures of the world. For example, a search for the parallels and the possible roots of Georgian traditional string instruments could lead us to Middle and Central Asian musical cultures; a search for the parallels of the western Georgian yodel would lead us to some isolated regions of the world, including the Alps, Balkans, some north European countries, Central and South Africa and Papua New Guinea. This is hardly surprising, as on one hand the peoples of the world are tied to each other throughout their ethnic history, migration processes, cultural and economical contacts, and on the other hand, faraway cultures without contacts and common origins may share the principles of convergent evolution. As a

matter of fact, the main appeal of the comparative study, particularly for the non-professional reader, is that it is aimed either (1) to uncover the concealed historical and pre-historical processes, like ancient migrations, conquests, assimilations and cultural borrowings, or (2) to bring to light the common mechanisms of the development of human cultures and societies.

It is obvious that the comparative cross-cultural, or “horizontal” study of certain phenomena of traditional music does not (and can not) require from the scholar the deep “vertical” knowledge of all compared cultures, but it does require a wide international knowledge of the musical element under study. In a way, wide cross-cultural study requires a deep “vertical” knowledge of this particular musical phenomenon.

Some elements of traditional musical culture are distributed more widely throughout different continents than others. That’s why different elements of musical culture pose different challenges for researchers. For example, a worldwide study of overtone singing tradition, or the scales with augmented seconds (which are confined to relatively few regions of the world) does not require involving as many cultures of the world, as, say, studies of the drone polyphony or the pentatonic scale.

A brief review of comparative studies and ideas

Being among the biggest themes of musicology and ethnomusicology for more than a century, the origins, distribution and typology of traditional vocal polyphony has been discussed by numerous authors in numerous publications. Before we start discussing the comparative prospects of the study of vocal polyphonic traditions in the second part of this book, I would like to bring to the reader’s attention a few ideas on the comparative aspect of the study of traditional polyphony. These ideas come from different scholars from different countries, schools and generations, including the founders of ethnomusicology and the younger generation of ethnomusicologists from different regions of the world.

- Czech Ludvik Kuba was possibly the first scholar who suggested (in 1909) that the unusual dissonant singing style heard in mountainous villages in the Balkans was the remnant of an ancient tradition (Kuba, 1909).

- Erich Moritz von Hornbostel, Austrian, arguably the most influential scholar in shaping the development of the German school of comparative musicology, published one of the first articles on non-European polyphony (Hornbostel, 1909). He also expressed the idea about parallels between

African and Medieval polyphony and came up with the suggestion of harmonic (European professional) and melodic (African traditional) types of polyphony (Hornbostel, 1928).

- Vasil Stoin was one of the first to study Bulgarian traditional polyphony and he came up with the idea of the Bulgarian origin of European polyphony (Stoin, 1925).

- Marius Schneider, a student of Hornbostel and the author of the “History of Polyphony” (1934-35), was the only author who specifically researched the problem of the origins of polyphony in the worldwide detailed study of traditional (and in fact, professional as well) polyphony. During his lifelong work on the origins of the phenomenon of polyphony he argued that polyphony reached Europe late, from Southeast Asia via the southern parts of Asia and the Caucasus (Schneider, 1940, 1951, 1961, 1969)

- Joseph Yasser noted the correlation of the scale systems and the type of parallelism in polyphony. He wrote about the connections of parallel fourths and fifths with the anhemitonic scales, and parallel thirds with the diatonic scales (Yasser, 1932). This type of correlation of a scale system and type of polyphony was later widely accepted as the explanation of sub-Saharan polyphony (see Gerhard Kubik, 1968).

- Siegfried Nadel studied Georgian traditional polyphony and came up with the idea (before Schneider) that Georgian traditional polyphony possibly contributed to the origins of medieval professional polyphony (Nadel, 1933).

- Curt Sachs deciphered the earliest written example of music, recorded on a Sumerian tablet, and came to the conclusion that the recorded music represents an example of polyphonic music (Sachs, 1937).

- Charles Seeger observed interesting parallels between the shape-note books, African-American spirituals and the early European examples of medieval polyphony (Seeger, 1940).

- Hans Hickman came to the conclusion that the ancient Egyptians had a tradition of vocal drone polyphony (Hickman, 1952, 1970).

- Jaap Kunst is the author of one of the best known and one of the most controversial hypotheses in ethnomusicology about the possible links between Balkan and Indonesian secondal singing, as a result of ethnic and cultural contacts between these two regions (Kunst, 1954);

- Yvette Grimaud together with Gilbert Rouget noted the closeness of the polyphonic traditions of the Central African Pygmies and the South African Bushmen (Grimaud & Rouget, 1957).

- Erich Stockmann was the author of one of the first comparative research articles involving Albanian and Georgian polyphonic songs (Stockmann, 1957).

- Cvjetko Rihtman is often credited as being one of the first to note that the polyphonic traditions of the Balkan peoples must be a survival of a very ancient common singing culture (Rihtman, 1958, 1966).

- Nikolai Kaufman independently arrived at a similar conclusion that polyphonic traditions are a survival of the very ancient common singing culture of the Balkan peoples (possibly Illyrian tribes. Kaufman, 1966).

- Paul Collaer studied European polyphonic traditions and came to the conclusion that European professional polyphony came to life as a result of the impulses from the ancient vocal polyphony of European peoples (Collaer, 1960).

- Bruno Nettl discussed the available information of polyphony among North American Indians and suggested that the scattered elements of drone polyphony could indicate that (1) these isolated pockets of polyphony were remnants of the earlier wider distribution of polyphonic singing, or (2) that North American Indians were on the verge of developing their own polyphony from an initial monophonic tradition (Nettl, 1961).

- Oscar Elschek conducted a comparative study of European polyphonic traditions. He distinguished six main areas (east Slav, Carpathian, Alps, Mediterranean (the Balkans, Sardinia, Portugal), the Caucasus and Iceland), and came to the conclusion that polyphony is not a European phenomenon (Elschek, 1963)

- Ernst Emsheimer, with his characteristic careful approach to the problems, wrote about European polyphonic traditions, stressing mostly the difference between the isolated traditions from different European regions and suggested that generally there are no connections between vocal and instrumental forms of polyphony (Emsheimer, 1964).

- Alan Lomax, director and the main force behind the “Cantometric” project, wrote about the particular importance of social cohesiveness and the absence of male domination for the societies that practice polyphonic singing (Lomax, 1968). He considered the West European polyphonic traditions to be an ancient survival that survived in the mountains, islands, and generally, “on the fringes of Western Europe” (Lomax, 1971:236).

- Anne Draffkorn Kilmer suggested that the examples of ancient music from Ancient Mesopotamia, recorded on fired clay, represented polyphonic (instrumental) music (Kilmer, 1971, 1974)

- Alica Elschekova conducted a comparative study of vocal polyphonic tradition in the Balkans and the Carpathians (Elschekova, 1981).

- Gerald Florian Messner studied some polyphonic traditions of the Balkans, Indonesia and the Pacific region and published a book dedicated to Bulgarian diaphony, with a wider look at the phenomenon of secondal dissonant singing (Messner, 1980; see also 1989 and 2013).

- William H. Tallmadge, an expert of Baptist Hymnody in the USA, attempted to explain the origins of folk polyphony (“folk organum”) from monophony, using mostly examples of contemporary congregation singing (Tallmadge, 1984).

- Kwabena Nketia studied many local traditions of sub-Saharan Africa and wrote about the importance of the “secondary” material not gathered by a researcher in a field: “...it is impossible for any single individual to undertake fieldwork that covers the whole of a country or region (let alone the whole of Africa), one cannot but use data from secondary sources, including unpublished material at radio stations, ministries, and departments of information. The last often maintain an archive of photographs that cover musical events, performers, and musical instruments” (Nketia, 1998:28).

- Rudolf Brandl expressed doubts about the ancient origins of secondal polyphony and suggested that vocal drone could have arisen under the influence of the instrumental drone during the last century (Brandl, 1989, 2005)

- Edith Gerson-Kiwi (Israel) discussed the possible historical links between the polyphony of the Samaritans and Syrian church organum: “The question is still open whether a connection can be established with the great Caucasian centre of folk polyphonies *via* Syria, where we also have some folkloristic sources for the present practice of Organum singing in the Christian-Syrian churches.” (Gerson-Kiwi, 1980:78).

- Gerhard Kubik from Austria has been one of the most active researchers of sub-Saharan African polyphony, and his theory about the link between scale structures and vocal polyphony (Kubik, 1968, 1986, 1988) in sub-Saharan Africa is generally accepted.

- Simha Arom worked extensively with the Pygmies and he is best known for his innovative recording methodology for polyphonic music (Arom, 1991). Arom established the first international research body of traditional vocal polyphony (in Paris).

- Karl Brambats, discussing the polyphonic traditions of the Baltic peoples, put them into a wide Mediterranean and East European context and

agreed with a large group of European scholars about the ancient (possibly pre-Indo-European) roots of the phenomenon of drone polyphony in Europe (Brambats, 1983).

- Martin Boiko studied Baltic polyphonic traditions and suggested direct connections between the polyphonic traditions of the Baltic region and the carriers of specific archaeological cultures (Boiko, 1992).

- Nino Tsitsishvili studied parallels between polyphonic traditions and some elements of the ethnography of Georgians and South Slavs (Tsitsishvili, 1991). In another study she suggested the presence of Indo-European elements in the drone polyphonic singing of East Georgian table songs (Tsitsishvili, 1998; see also 2010).

- Emanuelle Oliver and Susanne Furniss critically reviewed the well-known question of the possible links between Pygmy and Bushmen polyphony and unlike most of other researchers, came to the conclusion that the similarity between their polyphonic traditions is superficial (Oliver & Furniss, 1999).

- Bozena Muszkalska studied secondal singing in the Mediterranean region and came to the conclusion that unlike European professional polyphony, where a “maximum purity of intonation” requires a “considerable involvement of the intellect”, secondal singing is mostly based on the “intuition and shaped, to a considerable degree, under the impact of emotion” (Muszkalska, 2005:203).

- Victor Grauer studied the polyphony of Central African Pygmies in the wide context of vocal and instrumental forms of polyphony from around the world and suggested that Pygmy polyphony could be the survival of the earliest type of human choral singing with the roots going back to 100 000 years in human prehistory (Grauer, 2006, 2007). In 2007 Grauer initiated a comparative study of singing styles and genetic markers in Africa with potentially groundbreaking preliminary results (see Callaway, 2007)

As is evident from this brief review of published ideas and theories on comparative studies of traditional polyphony, as well as from the review of polyphonic traditions of the world regions from the first part of this book, vocal polyphony is truly an international phenomenon. Different forms of vocal polyphony are present on all the continents and major regions of the world. Besides, with the introduction of the notion of “social polyphony”

(which generally means group singing, not necessarily singing in different parts) it is becoming clear that no human culture is completely devoid of group singing (social polyphony) (Jordania, 2005). We will concentrate on the general human predisposition towards group singing and will discuss the origins of the phenomenon of social polyphony mostly in the third part of this book, together with the problem of the origins of traditional polyphony and other related issues.

The previous part of this book was a regional review of the polyphonic traditions of the world, so I tried to avoid (as much as I could) any comparative endeavors during the review. On the contrary, this chapter is heavily based on the comparative method. So, in this chapter the reader will find discussions on the following topics:

- General methodology of the comparative study of traditions of vocal polyphony;
- Discussion on stable and mobile elements of traditional music and polyphony;
- Traditional polyphony from the perspective of the historical dynamics – the processes of the appearance (or disappearance) of vocal polyphonic traditions;
- Some of the major population migrations in the course of human history and their influence on the distribution of polyphonic traditions;
- Possibility of distinguishing “primary” and “secondary” forms of traditional polyphony,
- Separate cases of the historical studies of some polyphonic traditions, including European drone polyphony, European medieval professional polyphony, East European heterophony, Lithuanian sutartines, Central Asian overtone singing, polyphony of Ainu and Southeast Asian peoples, Nuristan polyphony, Tuareg polyphony, polyphony among American Indians, Polynesian polyphony, discussion of the possibility of vocal polyphony in some extinct civilizations (ancient Middle East and Central America), and elements of archaic vocal polyphony in contemporary pop and rock music.
- The combined cartography of the regions of traditional polyphony and an attempt to distinguish certain “families” of traditional polyphony will be discussed.

Section 1: Methodological Issues

“They sound so similar”, Or how could we compare polyphonic traditions

There was quite an “ethnic-musical shock” in Tbilisi, the capital of Georgia, in the second half of the 1980s, when the USSR Central TV program “Raduga” (“The Rainbow”) broadcast a film about the singing traditions of Corsica. Georgians were telephoning each other while the program was still on, urging their friends and relatives to watch the program and to listen to the polyphonic singing that “was not Georgian but sounded exactly like it”.

A few thousand kilometers away, in the northern part of the USSR, in St. Petersburg, at the very same time as the same TV program was still on, ethnomusicologist Igor Macievsky called his colleague, Izaly Zemtsovsky: “Izaly Iosifovich, listen and tell me who are singing now” asked Igor with a pleasant anticipation of a wrong reply from his former teacher and world renowned ethnomusicologist, holding the receiver closer to the TV set. “Sure, these are Georgians, but I am not sure which region of Georgia they are from” came the reply Igor was expecting. In a way, Zemtsovsky’s reply was a very good guess, because if you have never heard Corsican polyphonic singing, and if you know Georgian singing very well, then Corsican polyphonic singing does sound extremely “Georgian”. Unfortunately, I myself never saw this particular program about Corsican polyphony. Later I tried to obtain a copy of this program, so after a long search for the phone number of the Central TV officials (which was always problematic in the USSR), I called the program “Raduga” of the now Central TV Channel and asked them if I could get a copy of that particular program for the Tbilisi State Conservatory archive. I got a sharp reply: “I have already told your colleagues several times that we can not give anyone any copies of any of our programs.”

That particular TV program did play at least some positive role in changing the attitudes of some of my colleagues (particularly Georgian colleagues) and friends towards my work. At the time of that historical broadcast, in the second half of the 1980s, I was actively working on a search of vocal polyphonic traditions that were (in my opinion) historically related to Georgian traditional polyphony. In the eyes of some of my friends and colleagues my research had the wrong aim, because Georgian polyphony was

considered to be too unique to have close relatives anywhere in the world. “Now that I have listened to that amazing Corsican singing,” one of my older musicologist friends told me, “I have started believing you are right – there are some traditions that might be closely related to Georgian polyphonic singing”.

Two decades later, in 2008, after meeting a wonderful Corsican singer Philippe Rocchi (a member of the much revered ensemble “Voce di Corsica”) I found out that Corsican traditional musicians also had a similar musical “shock” when they first heard recording of Georgian traditional polyphony in the beginning of the 1970s (personal communication from October 20th, 2008).

A few years later after that famous “Raduga” broadcast, when “Perestroika” got stronger, the notorious “iron curtain” disappeared, and contacts with western countries became possible for Soviet citizens, I received a copy of the recording of that amazing Corsican polyphonic singing tradition. It was very interesting to find out that in fact, Corsican polyphonic singing was on one hand very close to Georgian polyphony, but on the other hand, it was also clear that the Corsican type of polyphonic singing does not exist anywhere in Georgia. Let me explain this. As the reader may remember from the discussions about Georgian singing traditions, there are generally two – eastern and western Georgian singing styles. The eastern Georgian style is based on richly embellished melodic lines and free rhythm and metre, and the western Georgian style is based on non-embellished melodic lines and precise rhythm and metre. These are both **village** singing traditions. Besides village traditions, there are two **urban** singing styles in Georgia as well – so called “eastern” and “western” styles. The eastern urban style is closely connected to Middle Eastern music with augmented seconds and embellishments, and the western urban style is connected to the European major-minor harmonic system and European-type chords. The Corsican polyphonic style sounded like an interesting combination of eastern Georgian village melodic (embellished) style, mixed with the western Georgian urban (European) harmonic system. Despite the fact that this kind of singing style (“mixture” of the east Georgian village style with the “western” urban style) does not actually exist anywhere in Georgia, the Corsican singing manner, the timbre of their ensemble (male voices only), the open and slightly nasalized sound projection, in combination with the richly embellished melodic lines, was very close to the sound of the East Georgian polyphonic singing tradition.

So, strictly speaking, the closeness of Georgian and Corsican polyphonic traditions was based first and foremost on a ***strong audio impression***. At the same time, researching other polyphonic traditions, I came to the conclusion that some other polyphonic traditions (for example, Albanian polyphony from the Balkan region) were ***stylistically*** closer to Georgian polyphony than Corsican polyphony, although they did not sound as similar to the Georgian sound as did Corsican polyphony.

So, here is the question: what should be the basis for comparative research: (1) our audio impressions, or (2) the results of stylistic analyses? Of course, the musical substance is sound, and as the brilliant Russian musicologist B. Asafiev declared famously “the criteria by which music is measured is hearing” (Asafiev, 1971:207). Hearing is our first and foremost tool, there is no doubt about that, but we need to remember that our first audio impression can be very strong and very misleading at the same time. As Izaly Zemtsovsky once said to me, the fugue of J.S. Bach, performed on the Kazakh traditional instrument, instantly sounded like a piece of Kazakh traditional music. We must remember that if we want to analyze parallels between different polyphonic traditions, we should rest our research on the appropriate fundament of stylistic analyses of the compared cultures.

I am sure, for most of my colleagues this is something they already know. So, why do I need to repeat here the importance of the stylistic analyses as against the audio impressions? Of course, very few (if any) ethnomusicologists would actually suggest that a comparative study should be based on audio impressions only, but still we should remember that our audio impressions profoundly affect our thinking. That’s why we still hear assertions that a certain singing style is “extremely archaic”, mostly because it “sounds very archaic”. We will discuss some such styles later in this part of the book. Of course, there is nothing wrong in having a strong audio impression about certain singing styles. As a matter of fact, it is very important to have strong audio impressions, but if we want to include our impressions in a scholarly hypothesis, we need to put them through vigorous analyses, using all the available background information and cross-disciplinary data about the particular carriers of this particular singing style.

The employment of the right method is crucially important for any research. The same is true for the comparative study of polyphonic cultures. The method I am going to employ is very simple. It is based on the specific ***set of stylistic parameters*** of the polyphonic tradition. But before we discuss the all-important set of stylistic parameters for the classification and comparative study of part-singing traditions, we need first of all to discuss

whether we can trust music for any kind of diachronic conclusions. So, the next crucial question that we are going to discuss is how deep musical data can go in human history, or simply – how stable is music.

What is more stable: Language or music?

To some readers this might sound a silly and “non-scholarly” question. In fact, it is a very serious question, and I remember quite a few discussions of this topic at several ethnomusicological conferences. So, what is more stable: language or music? I guess, for most readers music is one of the unstable elements of human society and culture. According to this opinion, although it might not be exactly clear “how mobile” or “how unstable” is music, we can’t go wrong saying that at least language is much more stable than music. “Look at the languages,” they would say, “languages come throughout human history and cultures for hundreds and thousands of years. They do not change quickly, they do not follow a fashion, and there are certain rules of very slow changes that languages undergo during the centuries and millennia. And now look at the musical culture and musical styles – they change almost every decade, and different songs travel across cultures and state borders with an amazing easiness. Of course, language is much more stable than music, no question about this.” I guess a big proportion of linguists will be in this camp (see, for example, Dempster, 1998).

But this opinion is not the only one on this topic. Now let us listen to another opinion. According to this point of view, music is extremely stable. Again, although it might be difficult to specify exactly how stable music can be, the proponents of this opinion would argue that music is at least much more stable than language. They can name countless examples when people (or part of the people) for different historical (political, economical, migration) reasons lose their language, but still keep alive their musical traditions. “Besides,” they would say, “even the most sophisticated linguistic analyses can not go further than four or five thousand years back in human history. Look now at the traditional musical cultures of the world – you can see the musical traditions that come from many more thousands or even tens of thousands of years. Of course, music is much more stable than language, no question about that”. At least some ethnomusicologists would agree with this opinion, including myself. For those who would not believe there is something serious behind this bold assertion, I would like to present a couple of brief historical examples of the stability of musical traditions from the cultures I know:

(1) Ossetians live on both sides of the central part of the Caucasian mountain range. They speak the Indo-Iranian language and were considered to be the descendants of the Medieval Indo-Iranian tribe Alans. A study of the physical features of contemporary Ossetians, Medieval Alans, and the earlier Caucasian population of this region suggested that the Indo-European (Indo-Iranian) Alans in fact did not have much impact on the genetic make-up of the Ossetians (Alexeev, 1974a:197-200). On the other hand there is a clear morphologic continuum between the earlier Caucasian population and contemporary Ossetians. Therefore, the change of language must have occurred without a change of the major part of the indigenous population. Scholars are well aware of such cases when language is lost without the population replacement. The music of the Ossetians, unlike their language, shows a clear relationship with other, indigenous Caucasian populations. This brings us to the conclusion that although the old Ossetian population of the Central Caucasian Mountains lost their language, their musical traditions survived the painful process of their cultural assimilation.

(2) The neighbouring Balkarians and Karachaevis represent the same kind of historical story. Both of them speak the Turkic language, are Moslems, and were believed to be the descendants of late medieval Turkic tribes who brought the Turkic language and Moslem religion to the North Caucasus in the 16th-17th centuries. Anthropological surveys of the Balkarian and Karachaevis populations proved that, as in the case of the Ossetians, there has been no serious trace of a genetic relationship between the Balkarians and Karachaevis on one side, and the population of the late medieval Turkic newcomers on the other side. Instead, there is an obvious genetic continuum between the earlier Caucasian population and the Balkarian and Karachaevis populations (Alexeev, 1974a:200-203). This means that the old Caucasian population adopted the new language and religion without being physically replaced by the carriers of this new language and culture. Their music, unlike their language, has not been assimilated in this process. Therefore, the contemporary musical traditions of all North Caucasian peoples, together with their physical morphology, demonstrate the survival of the genetic and cultural unity of the indigenous populations of Caucasia.

(3) Another example of the solid stability of musical traditions could be the Balkan mountainous region. This region is a tapestry of different Indo-European languages, at least two major religions and countless cultural traditions. At the same time, physical anthropologists propose that the populations of the mountainous regions of the Balkans show the obvious

signs of (1) morphological unity within the Balkan mountain ranges, and (2) a genetic continuum from the ancient pre-Indo-European population (the so-called “Dinarian” anthropologic type). This ancient “Dinarian” type is the best represented among the populations of southwestern Bulgaria, of northern mountainous Greece, mountain Albania, Macedonia, Serbia, Montenegro, Croatia, Bosnia and Herzegovina. These populations currently have different languages and different religions, which means that new languages and religions spread here without the replacement of the major part of the indigenous population. On the other hand, music also shows clear signs of the ancient unity of all these regions. A drone type of polyphony with specific frictional (secondal) harmonies is spread throughout virtually the same mountainous regions as the Dinaric physical anthropologic type: southwestern Bulgaria, the population of North Greece, mountain (mostly southern) Albania, Macedonia, Serbia, Monte Negro, Croatia, Bosnia and Herzegovina. So, we again witness the change of the languages of the populations in the course of history without major demographic changes. Despite the language change (unquestionably the crucial and the most salient feature of any culture), the ancient unity of the singing traditions on the Dinaric Mountains was preserved throughout the millennia.

Many more examples of the stability of musical language (particularly – the traditions of polyphony) will be discussed in the second and third parts of this book, when we will be analyzing the reasons for the mysterious distribution of the traditions of vocal polyphony on different continents. But I hope that these few examples of the stability of singing traditions are enough at least to put some doubt in the minds of the staunch believers in the non-stable character of music. Yes, despite all these fashion-like kaleidoscope changes of musical styles and popular melodies, there is something extremely stable in musical traditions. This is exactly what we are going to discuss next: what are the stable and mobile elements of traditional musical culture? That’s exactly the title of the next section.

What are the stable and mobile elements of musical culture?

We have just read about a few cases when musical traditions proved to be extremely stable. At the same time we need to always remember that musical tradition, as a complex phenomenon with the whole set of elements, is not a single monolithic unit. Some elements of musical tradition might be more stable than others. As a matter of fact, we should know that although some elements of musical language are unbelievably stable, there are other

elements that are extremely unstable. They can easily be lost or obtained, or go traveling across cultures and territories. For example, song melodies or certain musical instruments can become cross-culturally popular and quickly spread over large territories within a very short period of time. So, melodies can travel, and certainly, musical fashions can change, and still, there are some elements of musical language that are extremely stable. Distinguishing stable and mobile elements is methodologically particularly important, as ***stable elements are the ones we want to rely on for the comparative studies and historical reconstructions***. That's what we are going to do next – try to distinguish stable and mobile elements of musical culture.

To discuss this issue, I would like to present a few not-so-ancient cases of cross-cultural musical contacts, where all the participants and details of these contacts are relatively well known. Let us have a closer look at these cases and see how the cultures “behave” in the process of cross-cultural contacts. These cases might help us to distinguish the mobile and stable elements of traditional musical culture.

(1) “I have lost a little girl” is a typical example of an east Georgian urban song (and by the way, a very popular song in Georgia, so if you happen to be there, particularly in Tbilisi, at the traditional banquet-like feast, there is a good chance that you'll hear it). The origins of this song are obviously in neighbouring Middle Eastern cultures (more specifically – neighbouring Armenia and Azerbaijan). This is clearly demonstrated by the specific scale used in this melody, containing an augmented second (totally uncharacteristic for village polyphonic songs in Georgia), and specific melodic embellishments, characteristic of the Middle Eastern singing tradition. Here is this melody:

Fig. 9. Melody of “Patara Gogo”, urban song from Tbilisi.



Now let us have a look at what has happened to this melody in Georgia. Although the main elements of the melody have remained the same, in Georgia this melody is performed in three-part harmony. Following the principles of Georgian polyphonic tradition, the original monophonic melody is “wrapped” from both sides by two harmonizing parts: (1) another melodic part is singing on top of the main melody (performed by a soloist, mostly following the main melody in parallel thirds, and finishing on a fifth), and (2)

the bass part, a slightly moveable drone, performed usually by a group of singers. Now have a look at the same melody in a three-part “Georgian version”:

Fig. 10. “Patara Gogo” in three part harmony, as performed in Tbilisi.



Let us now analyze what has happened in this case. Nothing particular – this has been happening thousands of times between hundreds of different cultures: the melody from one culture came into another culture and became popular. Every culture has a number of such borrowings. Most importantly for us, during this transition the song has *undergone certain changes according to the intrinsic rules of the receiving culture*. These “changes” can be quite robust (as in this case, when the melody traveled from a monophonic to a polyphonic culture and “obtained” additional singing parts), or quite subtle (if the cultures are closer to each other – see the next case). So, in this particular case the monophonic melody became polyphonic. It is clear that it’s the *intrinsic rules of Georgian polyphony* that remained stable. These intrinsic rules, the “grammar” of the musical language, are much more stable than the “lexicon” of the language (melodies). In other words we can say that the changeable component for a culture is *what* is performed (melodies that can be borrowed from the other cultures), and the stable component is *how* it is performed (following the intrinsic rules of the culture). If we ask questions in this case of the Georgian urban song with the Middle Eastern melody “what are they singing?” and “how are they singing?” the answers will tell us completely different stories about different things. The answer to the first question (*what* are they singing - a Middle Eastern style melody) is informing us about the migration route of the melody, and possibly about the cultural and economic contacts between Georgia and the Middle East. The answer to the second question (*how* are they singing - in three parts, with the drone) is informing us about the “main musical grammatical rules” of Georgian music. Every musical culture is able to receive songs and melodies from other cultures, and as soon as the

intrinsic rules of the receiving culture are at work, the newly received melodies will be naturally “absorbed” by the receiving culture. ***It is the tradition of singing in three parts (with the main melody in the middle part and the drone) that is stable in Georgian traditional music.*** This is the way Georgians sing Middle Eastern, Russian, Ukrainian, French, Gypsy, Italian, English and other melodies.

(2) In the next case Georgia is not the “receiver” of the song. Now the song from Georgia traveled a long way to Central Africa. This case is particularly interesting as it involves the interaction of two polyphonic cultures.

In a twist of history a Georgian doctor (physician) was sent by the Soviet government to work in Central Africa in the beginning of the 1980s. Apparently being a good amateur singer of Georgian urban songs (which is not unusual for Georgians of totally different professions) and a socially easygoing person, he taught his new African friends a few Georgian urban songs. This was not a case of performing an act of “musical therapy”, or at least, an intended case. After the Georgian doctor came back to Georgia, Georgian TV made a documentary program about him and later broadcast this program on Georgian TV. A couple of minutes of the program were a live recording of the singing of three African women, performing the well-known Georgian urban song “Zhuzhuna tsvima movida” [lit: “Sparkly Spring Rain Came”]. Here are the choruses of both the original Georgian version and the Central African versions of the same song [the Central African version is transcribed from memory]:

Fig. 11. “Zhuzhuna Tsvima”, Georgian urban song, chorus only (original Georgian version)



**Fig. 12. “Zhuzhuna Tsvima”, Georgian urban song, chorus only
(Central African version)**



Unlike the first case, when we had a monophonic melody absorbed by a polyphonic culture, in this case we have a song from a polyphonic culture (Georgia) absorbed into another polyphonic culture (albeit into a totally different polyphonic culture of sub-Saharan Africa). So the difference between the original and the new African versions (if any) is expected to be subtler. Indeed, the result of the natural “acculturation” of the song is very interesting. Those who can read music please look at the transcriptions of both versions. Two top parts of the original Georgian version of this song are moving in parallel thirds, and as sub-Saharan African traditional polyphony is heavily based on the parallel flow of parts (as you may remember from the first part of this book), the original parallel thirds have been accepted without any change. The bass part was different. In the Georgian version the bass is a functional moveable drone, and it moves quite actively, following the European TSD (Tonic-Subdominant-Dominant) harmonic system (let us remember this is an urban song). Drone polyphony is not a natural part of the “musical grammar” of sub-Saharan polyphony, so in the African version of this song the original Georgian drone is substituted by a different part, which moves in a **parallel motion together with the two top parts**.

So, again, if we look at *what* the Central African women are singing and *how* are they singing, the answers to these two questions will tell us completely different things. The answer to the question “*what* are they singing?” (Georgian urban song) is telling us that there must have been some contacts between the African community and faraway Georgia (in this particular case the contact was very sporadic). The question “*how* are they singing this song?” is informing us about the main principle of African traditional polyphony – singing in parallel motion of all parts, often in parallel thirds or triads. In this case again, after the song from another culture entered the new environment, it has been “*absorbed*” by the receiving culture according to the intrinsic rules of the receiving culture. Although I am not aware of many such cases from sub-Saharan Africa, I am pretty sure

that most of the songs from different cultures that were absorbed in sub-Saharan African cultures would have undergone somewhat similar changes.

(3) Of course, this kind of borrowing does not necessarily contain Georgian music (as a receiver or as a donor). The next case comprises an interesting interaction of Arab and Polynesian musical cultures. In his letter from the 19th August 1986, one of the leading experts of Polynesian culture and history, Thor Heyerdahl wrote to me about a very interesting case (in fact, group of cases) when the monophonic songs from Arabian cultures were absorbed by the polyphonic Polynesian culture. Unfortunately, the letter did not contain the musical transcriptions, but fortunately, the description of Heyerdahl is quite eloquent:

“On my visit to Easter Island at the beginning of this year we managed to record on tape a number of choirs performing in three-part harmony, and some of the songs could easily have been mistakes for melodies from the Arabian world, while they were completely different from anything performed elsewhere in Polynesia”.

In this case as well, the question *what* are Polynesians singing (Arabian style melodies) informs us about the cultural/trade contacts of Polynesians with the faraway Arabian culture, and the question *how* are they singing informs us about the intrinsic rules of Polynesian traditional music (singing in three-part harmony). So again, the new melodies and new songs come easily, but they are absorbed and performed according to the *intrinsic rules* of the receiving culture.

We have good reason to believe that **contemporary cases of borrowing the new tunes and songs from one to another culture (“absorbing” them through the intrinsic rules of the receiving culture) effectively use the same general strategy that was employed by traditional musical cultures throughout their history.** That’s how Ossetians, Balkarians, Karachaevis, and Balkan mountaineers retained their tradition of ancient polyphonic singing through the dynamic periods of Indo-European and Turkic migration waves, often accompanied by the painful processes of language and religion changes.

It is obvious now that the answer to the question “*what are traditional musicians singing?*” can be quite mobile and can relatively easily change via cultural contacts. Sometimes very sporadic contacts are enough for bringing new songs and new melodies into a culture. On the contrary, the answer to the question “*how are the traditional musicians singing?*” provides much

more stable information about the intrinsic principles of their musical culture. Recalling the comparison between the stability of language and music, we may say that “*what*” (specific melodies) is much more unstable than language, but “*how*” (“grammatical rules” of the musical language) is far more stable than language.

A set of stylistic parameters of polyphonic traditions

Now that we have discussed a few examples of the stability of musical culture, we have come to the conclusion that different elements of musical culture behave very differently over time. Some elements can change very easily and quickly through even sporadic contacts with other cultures, but other elements are extraordinarily stable. Of course, both mobile and stable elements convey plenty of information about the culture, but it is the stable elements of the musical language that make the best “comparative tool”. Operating with the stable elements will allow us to follow the most chronologically distanced events of ethnic (and possibly even human) history.

Unfortunately, we cannot distinguish one magic element of music that would give us the clue to the most distanced events of music history (a bit like a mitochondrial DNA that molecular biologists use for the reconstructions of the genetic contacts between early humans). In music these are rather the *set of elements*, or, I would prefer to say, *set of stylistic parameters* of musical language, that we can use for comparative analyses and diachronic reconstructions. As this study is fully dedicated to the study of traditional vocal polyphony, the set of stylistic parameters will be appropriately dealing with the elements of vocal polyphony.

I propose the following five stylistic parameters for the classification and comparative-diachronic study of traditions of vocal polyphony:

- 1. Type of polyphony**
- 2. Vertical coordination between the parts**
- 3. Social organization of the singing group**
- 4. Scales**
- 5. Rhythm and metre**

All five stylistic parameters are easy to distinguish and easy to use in a comparative analysis. This practicality is very important, as a researcher needs to classify a large number of musical examples and transcriptions from different polyphonic cultures. We need also to remember that, unfortunately,

the information about different polyphonic styles is not always complete, as not all existing transcriptions provide the fullest possible information. Here is a brief discussion of the strong and weak points of each of the five stylistic parameters:

1. Type of polyphony. This parameter is at the top of the list of the set of stylistic parameters not only because it is the main feature element of any polyphonic tradition, but because it also shows a remarkable stability in the course of human history. During the complex ethnic and cultural mixtures and during the migration processes the type of polyphony is more likely to survive (unless there is a considerable change of the indigenous population). The type of polyphony can be a (1) **ostinato** (present in most of the polyphonic traditions, and in some cultures totally dominating, as among Pygmies), (2) **drone** (e.g. as in the Balkans and many other European and some Pacific polyphonic traditions), (3) **parallel polyphony** (particularly widespread in most sub-Saharan African polyphonic traditions), (4) **variant heterophony** (very widely distributed all around the world and particularly important among Eastern Slavs).

2. Vertical coordination between the parts. I propose this as the second most important parameter of polyphonic traditions. Polyphonic cultures differ from each other according to the intervals (or chords) they **prefer to hear in their singing**. In other (more scholarly) words, cultures differ from each other according to the principles of vertical coordination between the parts. We may generally distinguish two main principles of vertical coordination – coordination on **dissonant intervals** (particularly on seconds, as in the Balkan and Caucasian traditions), and coordination on **consonant intervals** (particularly on thirds, fifths, octaves and triads, as in most of the sub-Saharan African traditions). There are also cases when the vertical coordination between the parts (intervals and chords) is mostly a result of the free development of melodic variants (dissonant clashes in variant heterophony).

3. Social organization of the singing group. Without going into the very interesting and important subtleties of the interrelationships between the parts and singers within a traditional singing group in different cultures (which could be a good topic for a separate large-

scale research), in this book this parameter concentrates simply on the ***number of the singers of each part in a polyphonic texture***. Which part/parts are performed by the **individual singer** and which part/parts are performed by a **group of singers**? There are cases when the groups of singers perform all the parts. In other cases the individual performers perform most of the parts, and the big group performs only one part (this occurs in the majority of cases in polyphonic cultures). And finally, there could be cases where individual performers perform all the parts. Although gender differences are another very important part of the social organization of many polyphonic traditions (also a good topic for separate research), the gender aspect will only get a limited attention in our classification.

4. Scales. Traditional polyphonic singing uses different types of scales: diatonic, pentatonic, tetratonic, hexatonic, tetrachordal, pentachordal etc. As if this is not enough, each of these scales might contain a few subtypes as well (e.g. pentatonic can be minor, major, or neutral; it can also be without a half tone, or with a half tone, etc.). We will have a special look at the diatonic scale systems based on the use of perfect octaves, perfect fourths, and perfect fifths (creating accordingly the scale systems of the octave diatonic, fourths diatonic, and the fifths diatonic). This parameter (scales) is the most technical, and I'll do my best to give simple explanations in the text to the non-professional readers.

5. Rhythm and metre. The rhythmic and metric nature of the music is easier for a non-professional reader to understand than the system of scales. Polyphonic traditions use all the varieties of existing metres: simple duple and triple metres, array of complex metres, and the free metre. The polyphonic nature of music, which requires rhythmically well-coordinated and coherent singing, naturally favors more simple repetitive rhythms (for example, simple duple rhythm dominates sub-Saharan African and western Georgian polyphonic singing traditions). Interesting cases of polyphonic traditions with a free metre will be analyzed later in the chapter.

All parameters of this five-unit set are **fundamentally important** for the musical language of each polyphonic tradition, although their importance for **comparative research is not equal** (at least, in this study). The reason for this

is the difference in **stability** and the **availability** of the information on different parameters. Some of the parameters seem to be extremely stable (e.g. the type of polyphony, or the vertical coordination between the parts), and the information about them is more readily available from the existing transcriptions. Some of the other parameters seem to be more flexible and mobile even within the obviously related polyphonic traditions (e.g. different pentatonic, tetratonic, hexatonic and even diatonic scale systems can all be present in related polyphonic cultures). At other times the information on some parameters is not available from the existing transcriptions (e.g. it is not always indicated in transcriptions and the accompanying notes how many of the singers are singing different parts). Therefore, some parameters are naturally better suited for comparative research than others. As a result, among these five parameters I rely heavily on the first two parameters (the type of polyphony and the vertical coordination between the parts), as the most stable and readily available parameters for the comparative research of polyphonic traditions.

The third parameter (social organization of the singing group, or to refer to this parameter with a shorter name for further reference – “social organization”) is the next in line for its importance for comparative studies (at least in this research). Social organization of the singing group seems to be a very stable parameter. For example, for the major part of European polyphonic cultures on one side, and sub-Saharan polyphonic traditions on the other side, the stable models of the social organization of the singing group are used. At the same time, the social organization of the singing group can use different social models within the same culture. For example, in Georgian culture some songs are performed by the large group (the group always sings a bass part in unison, never the melodic parts), while some western Georgian songs are performed by individual performers for each part. Unfortunately, transcribed music does not always contain the information about this important factor, so it is not always clear which part of the polyphonic texture is performed solo, and which part is performed by the group of singers.

Unlike the first three parameters (the type of polyphony, vertical coordination, and social organization), which are **specifically connected to polyphonic cultures**, the last two parameters (scale and rhythm) are not specifically connected to polyphonic music. Scales are very important as the universal “building pitch blocks” of every musical culture, both polyphonic and monophonic. As a matter of fact, one of the strongest impulses for the development of ethnomusicology was the introduction of the universal

interval-measuring system in cents for measuring different scales from different cultures (1 cent equals 1/100 of a semitone) in 1884 by A. Ellis. Despite their obvious importance for the musical language, there are at least two inconveniences for using specific scales in comparative research:

- (1) Some scales are so widely distributed that it does not make much sense to use them as culture markers. For example, the anhemitonic pentatonic scale is spread through huge territories of all continents (both in monophonic and polyphonic cultures), so, for example, noting that the Chinese and Scottish use the same scale in their traditional music, does not mean that there have been any specific historical connections between them. The same scale is used in many traditions of sub-Saharan Africa and South America. Another group of more specific scales, known as scales of octave, fourth and fifth diatonic, are more culture-specific and more suitable for comparative studies.
- (2) Another inconvenience is that closely related cultures (or even within the same culture) sometimes use different scales. For example, among the sub-Saharan African cultures, obviously connected to each other, some traditional cultures are based on tetratonic, some pentatonic, some hexatonic and some diatonic scale systems, and some use more than one scale.

The rhythm and metre are also universally important for both monophonic and polyphonic cultures, as the “building blocks of timing”. Like scales, some rhythms are also spread too widely through different continents to be helpful in comparative research of polyphonic studies. For example, simple duple and triple rhythms are actively used in a huge number of musical cultures all over the world. Another, more specific example is the use of rhythmic formulas, and indeed, some of the comparative research even has been done relying on certain rhythmic formulas only (for example, see Zemtsovsky, 1990). As a general tendency, we may say that polyphonic cultures mostly tend to use simple and precise rhythms, although this can by no means be considered a rule (for example, the Balkans are the obvious, and not the only exception).

Therefore, as we can see, **most of the comparative research presented in this book is based on specific parameters, connected to the polyphonic texture.**

So, we have discussed the general methodology of the comparative study of polyphonic traditions, then became witnesses to the amazing stability of musical traditions (and particularly – the stability of polyphonic traditions), then we had a look at a few cases of the borrowing of particular songs and discussed the mobile and stable elements of musical cultures. We have also discussed the importance of different parameters of the polyphonic texture for comparative analyses, and finally, we have established the set of all-important parameters that are going to guide us through the comparative generalizations of polyphonic cultures. So, we are ready to move on.

Section 2: Practical Issues

Introduction:

Regions, Styles, Peoples, Migrations:

Historical Dynamics and Comparative Perspectives

- I consider this section the most important for the general idea of this study. Of course, the issues, discussed in the third part of this book (origins of choral singing, intertwined with the origins of human intelligence, language and speech) are much wider and should be naturally considered more important, but this part is the main historical “engine” for the suggested model of the origins of vocal polyphony.

- For the sake of a clearer picture of our goals and conclusions in every stage, I organized the different issues connected to traditional polyphony into separate “case studies”. Some case studies are dedicated to the specific and unique polyphonic tradition (as in the case study on Ainu polyphony, or overtone singing, or Lithuanian “sutartines”), but some are wider and include discussions of more general methodological issues (as in the cases on the importance of Indo-European migrations in establishing the stratification of European polyphonic cultures, or the case study of the historical dynamics of the appearance and/or disappearance of polyphonic traditions, or the case study of the emergence of European professional polyphony).

- The general aim of these “case studies” is to demonstrate that polyphony is an extremely ancient phenomenon of human history, although there are major differences between different polyphonic styles. Some polyphonic styles can be relatively recent (about one century old or even younger), others can be a few centuries old, and some can go very deep in human prehistory. We are not discussing the actual reasons and the mechanisms of the origins of vocal polyphony in this part of the book, as we will tackle this issue in the next part of the book, dedicated to the problems of choral singing in human evolution.

- Most importantly, contrary to the general belief that polyphony is a late cultural development, a kind of a cultural invention that came out from the initial monophonic singing and has been since spreading to new cultures, in this section of the book I will try to demonstrate that vocal polyphony has in fact been gradually disappearing off our planet throughout recorded human history.

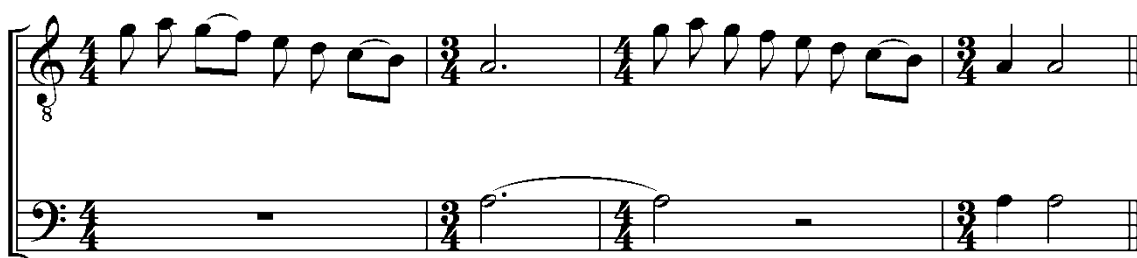
Case Study #1

What has Happened to the Vocal Polyphony in Khevsureti?

Khevsureti is a tiny region in mountainous eastern Georgia. If the reader goes back and has a look at the ethnographic map of Georgia (pg. 81), it is easy to see how small it is. I am not even sure the readers would remember that I have mentioned Khevsureti in the discussion of Georgian polyphony. The whole of Khevsureti is just about a dozen small villages between the spectacular Caucasian mountains. However, the discussion about Khevsureti had a profound role in the discussions of Georgian ethnomusicologists about the origins of Georgian polyphony. Let me explain why:

Starting from the publications of Araqishvili, and later Chkhikvadze and Aslanishvili, Khevsureti was always considered a case of the most archaic layers of Georgian traditional music and polyphony (Araqishvili, 1905; Chkhikvadze, 1948; Aslanishvili, 1954). The singing style in Khevsureti represents more of a loud (actually, extremely loud!) declamation of poetry, and regarding the music this has always the same falling phrase, starting from the highest point of a melody and going down to the very bottom (usually within a seventh). Polyphony is nominally present in Khevsureti. More precisely, only the meager remnants of the two-part round dance (“Perkhisa”) were recorded in the 1930s. I was not able to record “Perkhisa” during my two visits to almost all the villages of Khevsureti in 1982 and 1986. Only the information about this dying tradition was recorded. Discussions about the song “Thursday has come” (Khutshabats Gatendebao”) became particularly prominent in Georgian ethnomusicology. In this song the main melody (as I mentioned, always the same falling melody) is joined at the very end by a few singers as a drone, and the drone is maintained as the next phrase is starting.

Ex. 97. “Khutshabats Gatendebao” (Chkhikvadze, 1960:12)



According to the common belief of Georgian ethnomusicologists, this song is particularly important in the context of the emergence of polyphony

in Georgian music. A solo melody, joined casually by the co-singers at the very end of the musical phrase, looks like the most natural way of joining a group with the soloist. Most importantly, when the new phrase starts in this song, the single note drone is still sounding, thus creating the most archaic, or even “primordial” kind of drone polyphony. Most importantly, the singing style itself in Khevsureti sounds incredibly archaic – a very loud, actually a shouting declamation of poetry without any serious commitment to any particular scale (although in some versions of this common falling Khevsurian melody the features of the minor pentatonic scale are evident).

In discussions of Georgian ethnomusicologists Khevsureti was the only alternative to Svaneti, another high mountainous region in western Georgia, as the contestant for the position of the “most archaic dialectal area” of Georgia. Svaneti was always known among ethnographers for its incredibly archaic elements of material and non-material culture (I mentioned them in the first part of this book, in a section about Georgia). The only suspicion for the archaic nature of Svanetian traditional music was caused by the Svanetian polyphony itself – unlike the Khevsurian singing, where there are only meager elements of two-part polyphony, in Svaneti the tradition of three-part singing with sharp dissonant chords, exhilarating round dances and the scales of fifths diatonic thrives. So, if Svanetian polyphony has a well-established three-part structure, Khevsurian polyphony seemed to be at the very “origins” of the polyphonic singing tradition of Georgian tribes.

In the second part of the 1980s a particularly interesting new phase of the discussion about Khevsureti started. Not going into detail of this discussion, I want to mention that the discussion was centered round the possibility of so-called “secondary archaism” in Khevsureti ethnography, religion, and culture. Zurab Kiknadze, head of the Tbilisi University department of Georgian traditional poetry, was the main proponent of the idea of “secondary archaism” in Khevsureti. He argued that some of the most archaic elements of Khevsureti culture were in fact not an ancient pre-Christian survival, but the result of a degradation of the higher forms of Christian culture. This idea caused a major controversy and long published and unpublished debates among Georgian scholars. My research of Khevsureti musical traditions brought me to a multifactorial analyses of this question. I approached the Khevsureti musical traditions from different sides and tried to check it by the set of archaic elements of musical culture accepted among Georgian ethnomusicologists. A few of these archaic elements are as follows:

- Syncretic unity of singing and dancing;
- Importance of round-dances;

- Importance of antiphon performances;
- Survival of nonsense syllables, today devoid of meaning;
- Use of the more ancient forms of poetry;

If we check Khevsureti traditional music against these criteria, we will find that:

- There is virtually nothing left in Khevsureti from the ancient syncretic unity of singing and the dance;
- The last remnants of round-dances were witnessed in Khevsureti in the 1930s;
- Although it is present, antiphon does not play an important role in Khevsureti;
- Nonsense syllables of ancient origins (actually, any nonsense-syllables) are virtually completely absent in Khevsureti songs;
- Poetry in Khevsureti is extremely developed, with no signs of the ancient non-rhythmic forms of poetry. Khevsurs are in fact considered to be the best poets among Georgians.

In contrast, Svanetian traditional music shows the archaic character by all these factors:

- There is a strong syncretic integrity of singing and dancing;
- Round dances are extremely widely distributed;
- Antiphon forms of singing are almost the only form of singing;
- Ancient nonsense-syllables are very widely used (sometimes showing promising parallels with the dead ancient languages of Mesopotamia) and
- There is no modern rhythmic poetry in Svaneti.

We should also add here that, unlike Svanetians, who still speak their language, Khevsurs speak the Georgian language, although the character of geographic names from Khevsureti suggests that populations of this region spoke North Caucasian languages. Also unlike Svanetians, who still live in their family towers built in the 8th-12th centuries, according to Georgian historical sources, the Khevsurs must have come to the mountainous area of their contemporary residence during 17th-18th centuries. Therefore, if we look

at the musical traditions of the Khevsurs from the point of view of the “secondary archaic” it becomes possible to view the simple character of Khevsureti two-part singing not as the actual “beginnings of Georgian polyphony”, but as the result of the **loss of more complex forms of polyphony**.

Khevsureti is not the only region in Georgia where we have the case of the gradual disappearance of more advanced forms of traditional polyphony. Meskheta in southern Georgia is another case. Here the last examples of traditional polyphony were recorded in the 1960s by Valerian Magradze from the only two surviving old singers, living in different villages (Magradze, 1986). By 1983, when I conducted fieldwork in Meskheta, only monophonic versions of polyphonic songs were found. Saingilo is still another region with a Georgian population (in the territory of Azerbaijan) where the tradition of polyphonic singing is absent, although during my fieldwork in this region in 1987 I managed to record the detailed description of the polyphonic singing tradition that was still around in the 1950s (Jordania, 1988b).

Are these cases of losing the traditions of vocal polyphony unique to Georgia? This is the crucial question we are going to discuss in the next case, dedicated not to any particular tradition of vocal polyphony, but to the general historical dynamics of the appearance/disappearance of vocal polyphony.

Case Study #2

Historical Dynamics: Appearance or... Disappearance?

Just a week after his 26th birthday, while resting in a forest, Charles Darwin experienced a major earthquake that struck Chile on 20th February of 1835. Walking a few days after the earthquake on the beach, Charles noticed that some mollusks that always live on the rocks under the water, were now on the rocks well above the water level. Darwin made a correct conclusion that the recent earthquake was to blame for this, and, on a bigger historic scale, he concluded that the series of such earthquakes during many millennia were responsible for the actual rise of the surface and the creation of the Andean mountains. So, Darwin correctly understood the historical dynamics of the landscape changes and the rest was the question of multiplying the results of small time span changes (that humans can observe) into a large evolutionary scale that humans cannot observe.

The question of **historical dynamics** is absolutely crucial for the correct understanding of any processes that goes for centuries and millennia, including the process of the origins of vocal polyphony.

As ethnomusicologists tacitly agreed more than a century ago, polyphony is a higher form of music, the new stage of musical development that came after humanity exhausted other means of further development within the initial monophonic tradition. According to this paradigm, it is only natural to expect that the geographic area of the distribution of vocal polyphony would be gradually growing.

My own research experience in the field of traditional polyphony suggests that this paradigm of the origin of polyphony needs to be fundamentally revised. In this discussion the question of historical dynamics is absolutely crucial. As we can not go back in time to watch firsthand the process of appearance (or disappearance) of the traditions of vocal polyphony, we can only have a look at the recorded history of humankind and try to find out **which of the processes stand out from our recorded history more prominently: appearance or disappearance of the vocal polyphonic traditions.**

So, let us now have a look at the map of the world vocal polyphonic traditions in search of the facts of the **historical dynamics.**

Here is the list of the cases when the **disappearance** of vocal polyphony is historically well documented (for more detailed information and references the reader can have a look at the corresponding sections of the first part of this book where all these cases were described):

• **North Europe.** According to an unambiguous written document from the educated Welshman Giraldus Cambrensis, the big group of North European countries (from Scandinavia to the British Islands) had traditional vocal polyphony by the end of the 12th century (Hibberd, 1955). According to the available data, from most of these countries today we have only either late pan-European style polyphony with parallel thirds, or no data on vocal polyphony at all. Only Iceland has retained the earlier form of polyphony (arguably connected to the earlier forms of European professional polyphony).

• **Italy.** In Lombardy, singing in seconds has been documented in the 15th century, but later disappeared (see Ferand, 1939).

• **Lithuania.** The unique vocal polyphonic style *sutartines*, based on the almost constant use of secondal dissonances, has disappeared during the last two centuries (Rachiunaite-Viciniene, 2002).

• **Latvia.** A tradition of three-part drone singing, with the drone in the middle of the polyphonic texture and the third part, singing a major second below the drone, recorded by A. Yurian at the end of the 19th century, disappeared without much trace (Yurian, 1907).

• **Estonia.** A tradition of drone polyphony was recorded by Tampere in the beginning of the 20th century (Tampere, 1938). No traces of this tradition survived.

• **Russia.** A unique tradition of duet and trio singing with independent melodies was recorded by E. Gippius in the 1920s, and was never heard again (Zemtsovsky, 2000:758).

• **Sicily.** According to the archive recordings, the western part of Sicily was as polyphonic as the rest of this Mediterranean island, but after the 1968 earthquake the tradition seems to be lost (Macchiarella, 2008:142).

• **Macedonia.** According to Macedonian ethnomusicologists, as a result of government politics, the tradition of Macedonian singing in dissonant seconds has been disappearing from the 1950s to the 1980s (Bicevski, 1986).

• **California.** According to the historical sources and archival recordings, interesting forms of vocal counterpoint that were present among South Californian Indians, also disappeared (Keeling 2001:418).

• **Venezuela.** According to Isabel Aretz (1967:53), there was a general tendency in the states of Lara, Falcon, and Portuguesa towards the disappearance of three-part singing.

- **Taiwan.** According to the archive recordings, the small mountain tribe Saisat had a tradition of singing in parallel fourths that disappeared within the first few decades of the 20th century (Tsang-houei, 2002:525).

- **Indonesia.** According to Dana Rappoport (2004), part of the traditions of vocal polyphony in Central Sulawessi has disappeared during the last decades.

- **Polynesia.** According to A. Kaeppler (1990), a tradition of six-part polyphony on Tonga, a tradition that the knowledgeable older singers still remember, was eventually lost, and partly replaced by late European three-part singing.

- **Africa.** According to Simha Arom (personal communication, letter from 7th August, 2007), the tradition of vocal and instrumental polyphony has been declining among pygmies from the 1970s, and some songs that were known in four parts survive today only in three- of two-part versions.

- **Georgia.** Documented cases of losing (and a major decline in) the traditions of vocal polyphony in Meskhети, Saingilo and Khevsureti should be mentioned in this list as well (Magradze, 1986; Jordania, 2000:827).

These documented cases of losing the tradition of vocal polyphony by no means represent a complete list of all disappeared traditions. I can judge about this even from my own experience of knowing Georgian musical culture. Writing about the disappearance of the traditions of vocal polyphony is not a very prominent tendency in ethnomusicology. Despite my lifelong interest in all aspects of traditional polyphony, I myself failed to mention the facts of the disappearance of vocal polyphony in Saingilo and the decline of polyphony in Khevsureti in my Garland Encyclopedia article about Georgia (although I did mention the disappearance of polyphony in Meskhети, Jordania, 2000: 827). Therefore I expect that ethnomusicologists with an interest in polyphonic traditions could name many other cases of the disappearance of vocal polyphonic traditions in different parts of the world. And of course, besides the complete disappearance, there are also numerous cases of the decline of the tradition of vocal polyphony.

In some cases the reasons for this disappearance (or decline) are known. For example, in the case of western Sicily it was the natural disaster that disturbed the social life of the traditional society, or in case of Macedonia it was mostly the government policy of a socialist country, waging war against the “out-of-date” cultural practices. There are lucky “escapes” as well. According to Felix Quilici and Wolfgang Laade, the great tradition of polyphonic singing in Corsica was on its way towards dying out in the 1950-

1970s, but a later change of state cultural politics and international success made the Corsican tradition of polyphonic singing a much protected and popularized symbol of Corsican culture and identity. Lithuanian sutartines was not so “lucky”, and although during the 20th century *sutartines* also became a symbol of Lithuanian national identity, and although you can still hear sutartines sung by University students and amateur ensembles, the village tradition seems to be irreversibly lost.

Of course, speaking of government politics and ideologies, we should not forget the vigorous and millennia-long fight that official churches conducted against the “out-of-date” practices of singing and dancing to the old pagan gods. Historical records from medieval Georgia (as well as many other countries of Europe) about the strict bans against the old traditional singing and dancing practices certify the ferocity of this struggle. We may never know the full extent of the direct and indirect persecutions that the bearers of the “pagan” and “horribly sounded” loud and dissonant polyphony have endured in Europe only.

All right, the reader might say, we briefly discussed the documented cases when the tradition of vocal polyphony was lost. Now, what about the opposite cases, or about the documented cases when the tradition of vocal polyphony was **born** out of the monophonic singing traditions? That’s what we are going to talk about in the next “case study”.

Case Study #3

Who Can Drink Milk? Or the Origins of European Professional Polyphony

I remember very well my long visits to my friend, now a decorated and internationally renowned Russian tiger trainer Nikolai Pavlenko at Tbilisi hospital, where he spent the few last months of 1974. I remember very well how surprised I was to witness how much milk he was drinking every day. I was always a bit uncomfortable with drinking milk, despite encouragement from my parents. I was told it was good for my health, but I always felt a bit heavy in the stomach after drinking even a half-cup of milk. Nikolai, on the contrary, seemed to be happy to drink a few liters of milk every day. I guess this feature is still with me, and when I eat my favorite cereal for breakfast, to the surprise of my Australian friends, I eat it with mineral water instead of milk.

Some readers of this book might not be aware that different human populations differ quite drastically from each other according to their ability to absorb milk. As scholars found out during the second part of the 20th century, there are certain human populations where people cannot drink the usual cow's milk without heavy digestion problems, pain in the stomach and some other uncomfortable complications. For example, it was found that African Americans have a much higher percentage of people who cannot absorb milk than European Americans (particularly North and Central European Americans. Boyless, Rosenzweig, 1966). Later studies suggested, that the number of the populations that have problems with milk (or, more correctly, with lactose, the central ingredient of milk), is quite big, and includes populations of sub-Saharan Africa, Arabs, most of the Jews, most Asian populations, Australian Aborigines and Melanesians (Flantz & Rotthauwe, 1977). And finally the scholars came to the quite amazing conclusion that with some minor exceptions, the only major population on our planet, that can drink milk without complications, is the population of North and Central Europe (and their descendants on different continents).

Symptomatically, scholars, who were conducting these studies, initially considered the ability to absorb milk without problems as a norm of the human condition. If we take into account that most of these scholars were Europeans themselves, and for them drinking milk was a very natural part of their life, it is not difficult to understand this kind of unconscious "European arrogance" towards other populations of the world. From the end of the 1970s it has been acknowledged that although very young children of **every**

human population naturally drink milk, it is a norm for most human populations that as children grow, they lose the ability to absorb lactose (to drink milk). So, it is the North and Central European adult population's ability to absorb milk, if we may say so, is "out of the human norm".

How can this case of the human population's ability or inability to drink milk help us to understand the historical dynamics of the distribution of vocal polyphony? No, I am not going to link the distribution of milk absorption by different populations to the distribution of vocal polyphony, but I think this case can teach us a very important historical-psychological lesson – **not to extrapolate European experience to other populations of the world.**

In the previous section we were talking about the multiple documented cases of **losing** the traditions of vocal polyphony. This section is dedicated to the documented cases of the **emergence** of vocal polyphony. According to the dominant point of view in musicology, regarding polyphony as the higher evolutionary (and later) stage of the development of musical culture, there must be many more documented cases of the emergence of traditional vocal polyphony from monophonic singing.

And here is a disappointment for readers if they expect me to give the long list of cultures where "primordial" monophony gave way to the evolutionarily "more advanced" polyphonic singing traditions: despite my lifelong keen interest in the issues of polyphony of different peoples and regions, I cannot name **even one documented case of the emergence of vocal polyphony in traditional music from a formerly "monophonic" culture.** Of course, I know that such categorical claims are virtually never correct, and I expect there will be at least some suggestions that my claim has no grounds. Of course, I agree that when European missionaries came to some remote regions of the world, they did teach Christian polyphonic hymns to many aboriginal peoples, although we must remember that the success of European missionaries in teaching European hymns to non-Europeans was often based on solid local traditions of polyphonic singing (as in sub-Saharan Africa or in Polynesia). Besides, let us remember that in cases of European missionaries teaching Christian hymns we are dealing with the **introduction and purposeful teaching** of a new culture, and not the **evolutionary change** of a traditional singing style from monophonic to polyphonic. Therefore, I am **not** claiming that you cannot teach choral singing to representatives of monophonic musical traditions (although it does seem to be easier to teach a new polyphonic style to the populations that have the experience of singing another type of polyphony). What I am claiming is that I do not know a

single documented case when the **traditional monophonic singing style “evolved” into a traditional polyphonic singing style.**

Even in cases of century- and millennia-long residence next to the bearers of the polyphonic traditions, accompanied with the millennia-long developments of musical culture, peoples with the monophonic singing stay loyal to their own traditions (as in the case of Armenians, the millennia-long neighbors of Georgians in Caucasia). The cultural policy of the former Soviet Union also provided us with a huge 70-year long mass experiment with over 200 million people in this direction. Aiming at creating a modern socialist musical culture for everyone, Soviet authorities were trying hard to bring choral singing, harmony and polyphony to all people of the former Soviet Union. Great amounts of finances were spent, Moscow trained composers and choir leaders were sent to the monophonic Central Asian republics to help them to harmonize their traditional and newly composed monophonic melodies and to organize big choirs. And still none of the traditionally monophonic peoples started singing their traditional songs polyphonically, and as soon as “perestroika” ensured increased local authority, one of the first things that happened in monophonic Soviet Central Asian republics was that the choirs were disbanded.

The belief that monophony turns into polyphony, and that all the polyphonic cultures were “once upon a time” monophonic is so strong among musicologists that no one actually even tried to raise arguments to support this view. Where does this belief come from? Why should we expect that monophonic traditions would turn into polyphonic ones? Well, there are at least two reasons to believe this must be the case:

(1) To sing in parts for a group of people is generally more difficult than to sing in unison. Therefore, if we look at this commonly accepted fact from the evolutionary point of view, we may conclude that humanity must have come to the idea (and ability) of polyphonic singing later, after a long period of initial monophonic singing. So, according to this model, polyphony is a kind of evolutionarily natural way of development of human musicality, and therefore, all polyphonic cultures were at some time monophonic, and similarly, at some point all monophonic musical traditions might turn into polyphonic ones.

(2) Most importantly, after all that was said above, we do have a wonderfully detailed documented case of monophonic singing turning into polyphonic singing! This case is so well documented that scholars sometimes claimed to know not only the time but also the name of a person who “invented” polyphony. This “case study” mostly discusses this “newly born” polyphonic tradition.

We can add here that this new emerged polyphonic style that we are talking about is unquestionably the best-known, best documented, best studied and the most influential musical style our planet has ever seen. The only downside of this well documented historical case for our discussion is that this is not a case of emergence of polyphony in **traditional** music. We are talking about the emergence of polyphony in **European professional (“art”) music**.

Well, I agree that as this book is dedicated to issues of **traditional** polyphony, we should not be discussing here the origins of European **professional** polyphony (unlike Marius Schneider, who deliberately studied the origins of both – traditional and professional polyphony in his “History of Polyphony”), but we have a few very important reasons to discuss the origins of European polyphony:

(1) European professional polyphonic music was (and arguably still is) the biggest subject of musicological studies.

(2) All our mainstream musical education is based on European professional polyphonic music.

(3) Most of our terminology that we use in studying different styles of music, scales, harmony, still come from the vocabulary of European professional polyphonic music.

(4) Studies of European professional music and European professional polyphony affected the way musicologists (and the general public) view the origins of polyphony as a phenomenon in the most profound way.

(5) And finally, as a result of this profound influence, at least some ethnomusicologists still view the origins of

polyphony (repeating – despite the absence of any documented case of traditional monophonic culture evolving into a polyphonic one!) as a natural evolutionary development of monophonic singing.

Therefore, although European professional polyphony does **not** belong to the realms of traditional music, the importance of the origins of European professional polyphony in the study of the origins of polyphony in traditional music was absolutely crucial. The example of European professional music was so influential that it was widely believed that the way European professional music gained its polyphony (which was developed after a few centuries of development within the monophonic singing style) was the only way for any other people to gain their polyphony. This idea was so keenly believed that no one even tried to seriously prove the correctness of this assumption. Discussing the evolutionist viewpoint on the history of music, Bruno Nettl suggests that although this [evolutionary] “viewpoint cannot be generally accepted, but ... has been tacitly agreed upon for the special problem of polyphony. There is, indeed, no culture that has no monophonic music at all, and since each polyphonic composition must consist of (independent) monophonic structures, it can perhaps be assumed that monophony preceded polyphony in each culture“(Nettl, 1961:360-361).

Well, maybe this simple reasoning sounds quite convincing (“singing in one part is simpler, and, therefore, historically must be earlier than singing in many parts”), but the reality of the historical dynamics of the appearance/disappearance of polyphonic traditions, documented in different continents, **does not support this viewpoint**. The examples of the documented disappearances of traditional polyphonic practices are numerous in different parts of the world, but there is hardly even a single case of the documented appearance of polyphony in traditional music from the inner development of monophonic singing.

With the convincing and well-documented example of the late development of European professional polyphony from monophonic singing, for the educated Europeans the late emergence of polyphony from monophony for all human cultures was as natural as the idea of drinking and absorption of milk for all humanity. Of course, in the case of milk absorption scholars found out that Europeans were in fact the only major population on the planet who can drink milk without any complications, so the humanitarian aid programs correspondingly had to adjust their policy of

providing thousands of tons of milk powder to the starving populations to the third world countries who could not actually absorb lactose (Vogel, Motulsky, 1990:41). In this section of the book I tried to convince the reader that the history of European professional polyphony is in fact a **unique** historical case, and it **should not be used as the model for the origins of the phenomenon of polyphony**. So, in the same way as we accepted the fact that not everyone can drink milk without health complications, we need to accept the fact that the transformation of European professional monophony into polyphony is a unique occurrence in the history of music.

And of course, in the course of our current knowledge it is clear that even the origins of European professional polyphony cannot be considered as a pure case of “monophonic music evolving into a polyphonic one”. The time when music historians believed that polyphony was invented by the medieval monks and actually were trying to explain the presence of vocal polyphony in traditional music of people from different parts of the world as a result of the influence of European missionaries has long since gone. Siegfried Nadel and particularly Marius Schneider were among the first musicologists who reversed our understanding of the origins of European polyphony and wrote that the historical process of the influence between professional and traditional polyphonies must be reversed: it is not the medieval European professional polyphony that influenced the emergence of polyphony in traditional cultures via missionaries, but, on the contrary, it was traditional polyphony that had a crucial influence on the emergence of medieval European professional polyphony.

For Nadel and Schneider this influence came mainly from outside the Central regions of the European continent. Caucasian (mainly Georgian) polyphony was given a crucial role in this model by both Nadel (who only expressed this idea as a possibility. Nadel, 1933) and by Schneider (who first criticized Nadel’s idea as “going too far”, but soon changed his mind and published a series of special publications on the origins of polyphony from the 1940s until the 1960s. Schneider, 1940, 1951, 1961, 1969). On the contrary, for Paul Collaer the main influence for the emergence of European polyphony came from the local European (particularly Mediterranean) polyphonic traditions (Collaer, 1960). Collaer’s idea, that the emergence of European professional polyphony was in fact a penetration of the ancient European traditional polyphony into their professional music, is widely (although not universally) accepted today. I believe the existing evidence also supports Paul Collaer’s idea.

Therefore, today even the origins of European professional polyphony do not look to most of my colleagues as “natural evolution” or the “invention” of a new polyphonic style by some talented medieval monks, who dared to go beyond the established tradition of monophonic singing.

If we want to understand the mechanisms of the emergency of professional polyphony in medieval Europe, we need to remember the origins of Christian religion and Christian music in the first place. Christianity came into Europe from the Middle East, together with the accompanying sacred music, performed in the Middle Eastern monophonic singing style. For several centuries this new sacred ecclesiastic monophony must have represented a stark contrast to the ancient European traditional polyphony. Supported by the official state and church authority, this new sacred monophonic style tried to suppress the “pagan” tradition of loud and dissonant polyphony. Despite all these bans and ideological suppression from the early Christian church authorities, polyphony gradually penetrated liturgical music. This was a long and sometimes painful process: (1) The first attempts at the creation of liturgical polyphony were made in the 9th-12th centuries, (2) this process was later supported by the major changes in ideology and social life during the Renaissance (15th – 16th centuries), (3) and the Protestant Revolution (16th century). As a result, the ancient pre-Christian tradition of polyphonic singing came back into the European musical scene as the only officially accepted European style of professional music.

Therefore, we may say that European professional polyphony represents an historical mixture of two main and very different musical styles: the Middle Eastern monophonic singing style and the ancient European polyphonic singing style. The unusual history of the interval of a fourth in European music theory reflects this historical marriage of monophonic Middle Eastern and polyphonic European styles. As unquestionably the purest consonance in Middle Eastern monophonic musical traditions (which is mostly based on the tetrachordal scales with perfect fourths), the fourth was initially considered by European music theorists as consonance as well. However, later period musicians became suspicious about the consonance nature of the fourth and moved it to the category of mild dissonances. This kind of change, when the interval is considered consonance and later it is perceived as a dissonance is unique in the history of European music. Usually the intervals that were considered to be dissonances are perceived later as consonances (for example, thirds and sixths).

As often happens, the result of this mixture of two different (Middle Eastern monophonic and European polyphonic) styles was a totally new style

of music. The most important feature that European professional music owes to Middle Eastern monophonic music seems to be the particular **importance of the melodic element** in European professional music. Unlike the ancient European drone polyphonic style with small range melodies, where hearing sharp dissonances was possibly the leading aesthetic element, European professional polyphony from the very beginning was established as a tradition where the “melody was the soul of the music”. On the other hand, the gradual increase of the influence of the ancient European polyphonic tradition from the 9th to the 15th century brought polyphony and harmony into early Christian monodic singing. Of course, the European professional harmonic style was initially very different from the old European traditional harmony. For example, the sharp dissonances (like seconds), long accepted in traditional polyphony, has been granted “freedom of expression” in European professional music only in the 20th century.

The history of European professional music can be in fact viewed as the complex and reciprocal interaction of these two contrasting styles: (1) Middle Eastern monody (characterized by the dominance of the leading melody, which was supported by the rest of the musical texture, as this was the case among Viennese Classical School composers, or more homophonic style music), and (2) old European polyphony (characterized by the primacy of independent and simultaneously sounding parts, as in compositions of J.S. Bach, or polyphonic style music).

Conclusions for the previous two case studies

A study of local polyphonic traditions suggests that the prevailing tendency of the historical dynamics is the disappearance of the vocal polyphonic traditions. Actually, this is not a prevailing, but the only tendency. Historically documented cases of the disappearance of polyphonic traditions come from Europe, Asia, America, Africa and Oceania. On the contrary, the documented cases of the appearance of vocal polyphonic traditions (as the natural evolution of polyphonic singing from monophony) are conspicuously absent. This means that the **universally accepted idea of the natural evolutionary transformation of monophonic singing into polyphonic singing is a fiction, totally unsupported by the evidence.**

I believe that the few cases of the disappearance of vocal polyphonic traditions from different parts of the world that I mentioned in this “case study”, are in fact only the “tip of the iceberg” of the multiple cases of the disappearance of polyphonic traditions in different regions of our planet. My

colleagues, experts in traditional music from different regions of the world might be aware of a few more such cases of the disappearance (or decline) of the polyphonic tradition that I am not aware of. Hardly any of my colleagues would remember someone writing about the exciting news of the “beginnings of a new vocal polyphonic tradition” (I mean the evolutionary change from monophony to polyphony), whereas scholarly literature is full of suggestions (founded or unfounded) of the “ancient survival” of the existing vocal polyphonic traditions and their gradual disappearance.

I am sure that in ten years we will know about many more such cases of the disappearance of vocal polyphonic traditions in different parts of the world than I have written in this book. (For example, cases of the decline of polyphony among central African Pygmies, and the disappearance of vocal polyphony in Central Sulawessi were brought to my attention by Simha Arom and Dana Rappoport after the publication of the original version of this book in 2006). And still, I believe that we will never learn about most of the cases of the decline and disappearance of vocal polyphonic traditions during the centuries and millennia of human history and prehistory.

The idea of the disappearance of polyphonic traditions is not new in ethnomusicology. For example, here are the words of Albert Lloyd from the 1961 issue of the *Journal of the International Folk Music Council*. Discussing the polyphonic traditions in Albania, Lloyd comments: “Certainly, comparing these [Albanian polyphonic] forms with those of Yugoslavia, Bulgaria and northern Greece, one has the impression that Albania has developed part-singing to a far higher degree. Or should one say: has **preserved** it better? For it is possible, even probable, that at one time various polyphonic forms abounded all over the southern Balkans and perhaps far beyond it, that have since dwindled or disappeared. Albanian country communities are more isolated and culturally more conservative than those of Bulgaria, say. In Bulgaria, in Sofia, Pirin and in the western Rhodope regions, diaphony abounds, but more complex forms are hard to seek. Moreover, even the two-voice singing is nowadays confined mainly to women and girls, who are notoriously slower than men to change their cultural habits. The notion that the more elaborate forms are ison-based polyphony are now dwindling in the Balkans gains support from Nikolai Kaufman’s study of the songs of the Macedonian district of Kostur (Kastoria). Besides one- and two-voice songs, the Kostur tradition also has three-voice songs: but this three-part polyphony is in the process of disappearing, the informants are all old, mostly women, and youngsters show little taste for this music though they still perform two-part songs with

enthusiasm” (Lloyd, 1961:145). The author of these visionary words did not try to generalize his idea towards the general tendency of the disappearance of vocal polyphony all over the world, but the appearance of such an idea (even in connection with only one region – the Balkans) was symptomatic. Unfortunately, ideas like this sounded like the singing of an exotic bird in the environment of the solid belief of musicologists in the steady evolutionary movement from monophony to polyphony.

As we have seen, the only documented case of the appearance of polyphony is European **professional** polyphony, discussed in the previous section. It was mostly the legacy of the study of the late emergence of European professional polyphony that fundamentally influenced the historical thinking of musicologists and ethnomusicologists about the origins of vocal polyphony. And although the idea of the independent and earlier origins of polyphony in traditional music is generally accepted, polyphony is still mostly viewed as the logical result of the development of the initial, or “primordial” monophony. The results of this study strongly suggest that polyphony is not the result of the evolutionary development of initial monophonic singing. On the contrary, the historical dynamics and the available recorded information from different continents suggest that the **tradition of polyphonic singing is gradually disappearing on our planet.**

So where and when should we look for the origins of polyphonic singing? I would suggest readers not jump to conclusions about the origins and age of vocal polyphony. We will reach this subject in the final, third part of this book. In the third part of the book, after discussing the origins of vocal polyphony, we will discuss the reasons and the mechanisms of the gradual disappearance of vocal polyphony. But before this we still have a few more important “case studies” to discuss.

Case Study # 4

Drone and Horses: Ancient European Family of Polyphony and the Indo-Europeans

For the understanding of the puzzling distribution of vocal polyphonic traditions in the European continent the question of Indo-European migrations is crucial. No other migration process had such a profound impact for the history and populations of Europe, as the appearance and spreading of waves of Indo-Europeans. What I am going to do in this “case” is to generally discuss the appearance and spreading of Indo-European languages throughout Europe from the musical point of view (Jordania, 1992b). I am not going to discuss the problem of Indo-European languages in any detail. I trust that the reader of this book would have some general knowledge of Indo-Europeans and the fact that most of the languages of Europe (particularly of Western Europe) belong to one huge Indo-European family of languages, spreading from North India and Tajikistan to Iceland and Scandinavia.

Of course, we must always remember that the meaning behind the term “Indo-Europeans” is much more complex than the term “Indo-European languages”. Language can spread in a new population without any major change of the old population, so for example, if today Norwegians speak one of the Indo-European languages, this does not mean that they are all descendants of the waves of Indo-Europeans that first appeared in Europe four or five millennia ago. Norwegians may well be the physical descendants of the ancient, pre-Indo-European local population, who only changed their language. The success of Indo-Europeans in spreading their languages is believed to be connected to the strategy of the “*elite-dominance*” model, in which a relatively small group of highly organized people, who are militarily and politically efficient, invades a country and successfully imposes its own language” (Cavalli-Sforza et al., 1994:164). According to this scenario, a big part of the European population is connected to the ancient European population which lived there before the appearance of the Indo-Europeans.

Migrations are almost always connected to the mixing of the old and new populations, and as Indo-Europeans progressed through Europe, their ethnic element got more and more mixed up with the local pre-Indo-European ethnic elements. Besides, it is widely known that in some cases the spread of the new languages can happen without any substantial ethnic change of the old population. Therefore some of the contemporary European populations that speak one of the Indo-European languages, might be physical

descendants of the local pre-Indo-European population.

Before we discuss the issues connected to the most important migration processes in the history of the European continent, let us briefly review the **characteristic features of the European “polyphonic family”**.

Here I must say that most of the main characteristic features of the polyphonic traditions of Europe are well known among ethnomusicologists (see, for example, Schneider, 1969; or the materials of the conference “Drone in the European folk music”. See Deutsch, 1981). For example, the fact that *drone* is one of the key elements of European polyphonic traditions has been noticed by all scholars who have ever discussed European polyphonic traditions. Another crucially important feature is also quite evident – the *dissonant vertical coordination between the parts*. The term *Schwebungsdiaphonie* [means in German “roughness diaphony”, or “roughness two-part singing”] has been used for this kind of polyphony for a few decades (for a good discussion of this topic see in Messner, 1980; See also Muszkalska, 2005). As the drone and dissonant intervals represent the two most important elements of this style of singing, I suggest to mention it as a **drone-dissonant polyphony (D/D)**.

Another important feature of European polyphonic traditions is not so widely known – in most cases the melody (melodies) are performed by the individual performers, and the drone is performed by a group of singers. Therefore the *social organization of the singing group* is also similar. Scale systems used in European polyphonic traditions range from the anhemitonic pentatonic to diatonic and sometimes even almost chromatic scales with “crawling” seconds in some of the Balkan polyphonic traditions. The possible presence of specific “fifth diatonic” scales has not been investigated in European polyphonic traditions, but this specific scale is present at least in two such faraway cultures from geographically opposed corners of Europe as Georgia and Iceland. In regards to the rhythmic characteristics we may say that polyphonic songs are mostly based on simple metres, although some traditions (particularly in the Balkans) use extremely complex metres and rhythms.

If the reader remembers the review of European polyphonic traditions, they may object to this simple unification of all European polyphonic traditions. These parameters do not always fit every polyphonic tradition of Europe. Neither drone nor the dissonances are universal for all European polyphonic traditions today. For example, most of the polyphony of the East Slavs is not based on drone (it is rather based on different forms of heterophonic singing). Besides, in some traditions of European polyphony

(particularly later styles) the main harmonic interval is not the sharp dissonant second, but rather the soft consonant third. And still, the main characteristic of the **older styles** of European traditional polyphony seems to fit well with the above-mentioned features (drone polyphony; dissonant intervals between the voices; singing of the melodic lines by individuals and the drone – by the group of singers). This “case study” (which in fact unites two “case studies” – (1) of the ancient European drone polyphony and (2) the Indo-European element in European polyphonic traditions) is fully dedicated to the discussion of the stratification of European polyphonic traditions in an historical perspective.

Let us first of all have a good look at the distribution of vocal polyphonic traditions throughout Europe (see the color map of distribution of different styles of vocal polyphony in Europe). As we may remember from the first part of this book, polyphonic traditions in Europe are scattered through very different regions, ranging from Iceland in the northwest to Mordva in the east and the Mediterranean islands in the south. The crucial question is whether there is a historical-genetic connection between these singing traditions, or whether these different peoples in different regions all started singing polyphonically independently, each on their own, following the common rules of the development of human musical culture. The prevailing opinion between ethnomusicologists on this question is that there is a deep historical connection between these scattered drone-secondal polyphonic traditions of Europe (see, for example, Collaer, 1960, or Lomax, 1968). I fully agree with this opinion, and want to discuss the puzzling distribution of polyphonic traditions in Europe in the context of the appearance of Indo-Europeans and Indo-European languages.

For a discussion of these topics let us first of all recall the cartography of the polyphonic regions in Europe.

I remember very well that every time ethnomusicologists start discussing the distribution of polyphonic traditions throughout Europe and try to discuss the possible reasons for the emergence of choral singing, one of the most popular ideas among ethnomusicologists is the crucial importance of the “mountain factor”. “Look”, someone would say, “most of the European mountain ranges are populated by the carriers of the polyphonic tradition. There is something in this. Somehow mountains help to create polyphony”. If you have a look at the cartography again, it is hard to deny that almost all European mountain ranges are in fact populated by the peoples with polyphonic singing traditions: Pyrenees, Alps, Balkans, Caucasus (to

mention only the few major European mountain regions). But there is another very important peculiarity of the distribution of polyphonic traditions in Europe as well: besides the mountain regions, there are also very important non-mountain regions with traditions of vocal polyphony. For example, Polesie, the border region between Russia, Ukraine and Belarus is one such region. Polesie is very rich in forests (you may remember, “Polesie” in east Slavic languages means “the region of forests”), but it is thousands of kilometers away from a nearest mountain range. The same applies to the Baltic region – no mountains around. The same occurs with some of the islands of the Mediterranean Sea and North Europe – no major mountains. If you allow me to use the well-known German saying about one of the most important musical dynasties in the history of European music “Not all musicians are Bachs, but all Bachs are musicians”, we could coin a new saying “Not all European polyphonic traditions are in the mountains, but all mountains in Europe are polyphonic”.

Most importantly, there is one very important common feature that unites most of the European polyphonic traditions. Mountains, large forests, islands- these are all geographically isolated regions. What does this fact tell us?

This fact suggests that mountains do not help to create polyphony (the same way as islands and forests do not help to “create” polyphony), but as geographically isolated regions, they help polyphony and other elements of the culture to **survive**. It is widely known that the most archaic features of culture (language, rituals, customs, singing styles, dances) usually best survive in mountainous regions. Islands and huge forests, like mountains, are also geographically isolated, so they also help the ancient features of culture to survive. That’s why, for example, all East Slavic scholars agree that the above-mentioned forest-covered Polesie is a unique museum of the most archaic features of the East Slavic language, ethnography and culture.

As I have already mentioned, I am not going to go into a full detailed discussion of the migration processes that shaped the ethnic and linguistic map of Europe. We know that today the majority of peoples in Europe speak Indo-European languages. This is particularly evident in Western Europe, where all the languages but one (Basque) belong to the Indo-European family of languages. This wide distribution of new Indo-European languages means that in the history of Europe at least one very large-scale migration (more correctly – several migration waves during about two millennia) took place. Although it is not very clear from where and exactly when they appeared in Europe (debates continue), carriers of the Indo-European languages entered

Europe between the 3rd and the 1st millennia B.C. Of course, this picture was later complemented by the arrival of Finno-Ugric peoples, and during the late medieval time the Turkic language also made its way to southeastern Europe.

The process of the arrival of new populations has always been a complex process. Even today, when the migration process is very much controlled by the state authorities, legal and particularly illegal migration often creates different kinds of problems for the state. A few millennia ago this process was easier for the migrating peoples and more painful (and sometimes catastrophic) for the autochthonous peoples. Without discussing the details of this very complex process, let us try to reconstruct the general dynamics of population movement and stratification in Europe. Several stages of this process could be identified:

- Before the migration waves of Indo-Europeans appear, the European continent was populated by the speakers of non-Indo-European languages (sometimes these languages are mentioned as pre-Indo-European languages). Some scholars suggested the remnants of these initial European languages are today represented in Caucasian and Basque languages (e.g., see Cavalli-Sforza et al., 1994:300). Carriers of these pre-Indo-European languages had more or less related cultures; let us not forget that this seemingly monotonous primordial unity of Ancient Europe is generally a fiction, although some common features must have been present.

- The first waves of the new population arrive and occupy the best and the most accessible territories. More waves of the new arrivals – more pressure on the indigenous populations. Some of the later migrants push and assimilate the older migrants as well.

- There are only two options for the autochthonous populations in the wake of major migrations: (1) part of them stay in their old territories, and (2) part of them is pushed to the geographically isolated regions (mountains, forests, swamps, islands, and the colder northern margins of Europe). Of course, mountain ranges in Europe have never been “empty”, so it would be a mistake to think that mountains (and other geographically isolated regions) were populated only because of the arrival of the new migrant populations. But there is no doubt that because of the new arrivals the population of the mountains became denser. This was (and still is) the strategy of survival of the indigenous populations against intruders if the relatively inaccessible mountains are a part of their ethnic territory. “If the enemy is

prevailing in the plain, I'll go and find shelter in the mountains" these are the words of a simple Georgian song.

➤ Part of the older population, who did not move from their native places, is assimilated by the waves of newcomers. The cultural integrity of the other part of the old population that moved to the isolated regions survived better. Of course, we are not talking about the complete survival of all elements of culture. For example, most of the native, pre-Indo-European languages were lost among most of the mountain populations of Europe, with the only exception of the Basque and Caucasian languages which survived until the 21st century (and of course, both in mountains!).

➤ Let's go back again. Of course, such generalizations are always imprecise, but we may say that two different layers of populations occupy different geographical environments: the newcomers occupy the easy to access and more fertile plain regions of the central and southern part of Europe, and the older populations live in the geographically isolated regions (mountains, islands, forests, and in the northern marginal and colder zone of the continent). For a few centuries (or even millennia) this stratification is kept. Losing contact with other isolated (and related) regions, each surviving isolated island of the older population and culture maintains and develop contacts within the natural borders of their own mountain region, forming closer cultural ties;

➤ Later, when the time for the creation of the states is right, the "fathers of the state" notice that the most natural places to draw the borders between the states are geographically isolated regions, like mountain ranges, big rivers or the forests. Exactly where the old surviving populations live.

➤ Caught up in this process of state-making and the creation of state borders, the old surviving populations, living for centuries and millennia in the isolated mountain ranges and forests, and keeping contact within their "own" mountain range, suddenly find themselves belonging to different states, divided by the newly created state borders;

➤ If we look at the geographically isolated regions in Europe (particularly mountain ranges) we can see that most of the major mountain ranges are used as the borders between the states, and the native mountain populations are often divided between different states. Basques in the Pyrenees are divided between

France and Spain. The Alpine population is divided between France, Switzerland, Germany, Austria, Italy and Slovenia. The late unification of Switzerland was a lucky historical exception for the mountaineers. Balkan populations of the Dinaric Alps are divided between Bulgaria, Greece, Serbia, Croatia, Slovenia, Albania, and Macedonia (Macedonia is itself divided between several state territories). Caucasian mountaineers are today divided between Georgia and Russia. Even the population of the greatest forest region of Europe – Polesie – is also divided mostly between the Ukraine and Belarus (and partly Russia and Poland as well).

➤ As a result of the unnatural (from the point of view of the mountaineers) division of their mountainous homeland between different states, very often the peoples, living on the slopes of the same mountain ranges (but from different sides) and thus in different states, are much closer to each other than to some other regions of the country they officially belong to. Northern Italians are closer to southern Germans and western Austrians than to the southern Italians. Northern mountaineer Greeks are closer to mountain Albanians, southwestern Bulgarians and other Balkan mountain populations, than to southern or central Greece. In the same way the population of the Ukrainian part of Polesie is closer to the Belarus part of Polesie than to the southern part of the Ukraine.

➤ Unlike the infamous “Berlin Wall”, dividing one nation (and even one city) into two antagonistic parts, state borders in the mountains were (and still are) much more difficult to guard than in non-mountainous regions. This fact is well known to the mountaineers, living on different slopes of the officially divided mountain ranges. There is hardly a mountain range in the world that does not have some hard-to access mountain pathways that are not guarded by even the most oppressive authoritarian governments. These pathways constantly allow at least limited contact between the officially divided states.

➤ Another interesting outcome of this process of marginalization of the older autochthonous populations in geographically isolated areas is that the populations of these isolated regions are often considered to be the carriers of the most ancient elements of the ethnography, language and different elements of the national culture. Despite a certain historical irony in

this fact, it is certainly true that scholars often discover the whole set of ancient features of material and intangible culture in the mountains and other isolated regions of the ethnic territory.

This hypothetically reconstructed picture of the arrival of waves of Indo-Europeans and the survival of ancient populations on the peripheries and in geographically isolated regions of Europe fits very well the general rule of the geographic distribution of ancient and later elements of culture and population. According to this rule, more ancient phenomena are always distributed in several smaller isolated territories (particularly, in geographically isolated regions, like mountains). Later phenomena, on the contrary, are usually distributed continuously. So if the distribution of two phenomena (A and B) on a map looks something like this:

Fig. 13. Geographic stratification of two different cultures. The Distribution of Phenomenon A is indicated with parallel lines (/////), and Phenomenon B with crosses (+ + +)

[illegible]

Phenomenon “A” that is marked with the parallel lines (/////) and is distributed in a few isolated pockets, must belong to the older layers, and phenomenon “B” that is marked on this map with the small crosses (+ + + +) and is distributed continuously over the whole region, must belong to the later layers in this region (on this methodologically important issue see Nettl, 2005:320-338; Sachs, 1940:62).

To summarize all the above-mentioned facts and considerations, we need to conclude, that **the vocal polyphonic traditions of Europe, distributed in geographically isolated regions (mountains, islands, forests, northern peripheries) must be the survival of the singing traditions of the ancient pre-Indo-European populations of the European continent.**

The idea of the survival of the ancient European tradition of polyphony in geographically isolated regions is by no means new in ethnomusicology (see, for example, Collaer, 1960, Kaufman, 1968, Emsheimer, 1964:44; Lomax, 1971:236, Messner, 1980, 2013). Besides, the discussion of the ancient pre-Indo-European unity of Old Europe is a perennial theme in many historical disciplines (for a good discussion on this very popular scholarly topic see

Gordeziani, 1985, Gamkrelidze & Ivanov, 1984).

To complete the picture, I must also mention a source-critical view on the origins of southern European polyphonic traditions (Brandl, 2008). Rudolf Brandl suggested that drone-dissonant polyphony (or *Schwebungsdiaphonie* – roughness-diaphony) might originate from the sounds of church bells and instrumental forms of polyphony, and its vocal form could be only a century, or even only a few decades old (Brandl, 2008:290). This very interesting suggestion fails to explain why the polyphonic traditions in Europe have such a geographic pattern of distribution, concentrating in isolated and relict areas, pattern that is widely known to be connected to the archaic phenomena. Most importantly, the absence of data on “roughness-diaphony” from the 18th-19th century travelers in Balkans and Georgia (which are used by Brandl as the proof of the absence of roughness-diaphony in this period, Brandl, 2008:282), does not mean the absence of polyphony. I can point to a few recent publications, written by professional ethnomusicologists, where authors fail to mention the presence of polyphony from the regions where the presence of vocal polyphony is a fact. Such articles can be found in the Garland encyclopedia of World Music: an article on the musical traditions of Vietnamese minorities does not mention very interesting forms of vocal polyphony among them (Nguyen, 2002), an article on Basque traditional music does not mention the presence of polyphonic traditions among Basques (Laborde, 2000), an article on Ukrainian traditional music does not mention the very interesting drone polyphonic traditions in the Ukraine (Noll, 2000), and there is no mention of the presence of vocal polyphony in several articles about South Indian tribal cultures (as a matter of fact, the words “polyphony” and “multi-part music” are absent in a very detailed index of the whole volume). If we take these writings at face value (particularly as they are all written by the internationally recognized experts of these musical traditions), we should conclude that by the beginning of the 21st century there were no vocal polyphonic traditions among Vietnamese minorities, Basques, peoples of Southern India, and drone polyphony in the Ukraine as well. I believe it would be unrealistic to expect mentioning of the specific traditions of drone vocal polyphony with dissonant intervals from non-professional travelers who spent a few weeks in a new country, whereas even professional ethnomusicologists with an expert knowledge of a culture (and often natives of these cultures) fail to mention the presence of vocal polyphony in specially written musicological articles.

One of the most important pieces of support for this ancient unity of the populations of the mountainous regions of southern Europe with the

populations of northern Europe comes from physical anthropology. Close morphological links between the populations of Central and East European mountain populations has been noted by many physical anthropologists (for a good review see Alexeev, 1974,1974a; Cavalli-Sforza et al., 1994: 266-268). In the same way the morphological links between Central and Eastern European mountain populations on one side, and the populations of North Europe are also well known (see the review in Alexeev, 1974, 1974a). Discussing the ancient languages of Europe, Cavalli-Sforza wrote: “In the late Paleolithic, languages spoken in Europe may have been of the type still represented in Basque and Caucasian regions, and it is tempting to speculate that languages of this family were spoken by the first modern humans who arrived in Europe. Most linguists are convinced that languages evolve too fast to allow recognition of relationships of this time depth. Recent preliminary results, however (reviewed in Ruhlen, 1990) suggest that this skepticism is unjustified. There is a clear need for a deep investigation of ancient language relationships so that they can inspire general confidence.”

“It is also difficult to exclude the possibility that expansion of proto-Caucasian (proto-Basque) speakers was later than the first expansion of anatomically modern humans to Europe, but there is no reason to postulate other radiations until there is evidence for them. If a proto-Caucasian type of language was used by modern humans spreading to Europe in the period between 40 and 30 kya, its origin need not have been in the Caucasus. It is more likely that the Caucasus is one of the few areas that lends itself, for geographic and ecological reasons, to the survival of relic languages. But, we are clearly asking questions that are very difficult to answer and we do not know whether answers will ever be found. In any case, thorough investigation of the Caucasus populations must be a high priority” (Cavalli-Sforza et al, 1994:300).

Legacy of singing Indo-Europeans

In our discussion of the interaction of the pre-Indo-European and Indo-European populations and cultures so far we have deliberately omitted one very important aspect that we are going to discuss in this section. This aspect is the complex process of *mixture*.

There is no migration or conquest without a mixture of populations, traditions, and different elements of culture. There is no doubt that the arrival of the new waves of new populations was accompanied by the complex process of the mixing of dozens of important elements of musical culture as well. And maybe the most exciting outcome of such mixtures is that the

result of such processes can be a totally new phenomenon. Unlike biology, where the horse and the donkey produce a mule (which can not actually breed and produce itself any more!), the result of such a mixture in culture can be a new wonderful and thriving cultural phenomenon. The result of one such musical-stylistic mixture of supposedly pre-Indo-European and later Indo-European musical traditions is the topic of our next section.

East Georgia: Listen what the “Long” table songs can tell us

The “Long” table songs of Kartli and Kakheti (central regions of East Georgia) are one of the wonders of traditional polyphony. The magnificent “Chakrulo”, the best known among the “long” table songs, was officially pronounced by UNESCO as the “Masterpiece of intangible heritage of Humanity” in 2001. In this sub-section we are going to discuss the origins of the “long” table songs from East Georgia.

If the reader remembers the quite detailed description of the polyphonic traditions of Georgia, they might remember the generally accepted division of the whole of Georgia into two parts – (1) eastern Georgia and (2) western Georgia. Despite the obvious unity of the vocal polyphonic traditions of both Georgian halves, the differences between them are quite clear as well. Let me briefly remind you of the most important elements of the difference between East and West Georgia:

- East Georgia is considered to be the “kingdom” of the pedal drone (particularly the magnificent “long” table songs, like “Chakrulo” and “Long Kakhetian Mravalzhamier”); West Georgia is mostly known as the “kingdom” of contrapuntal polyphony;
- The drone is always at the bottom of the musical texture in East Georgia, while in West Georgia the drone can be used in the middle of the polyphonic texture as well, or above the main melody (as happens in the magnificent four-part working songs);
- In East Georgia the bass is always sung by a group of singers; in the most intricate songs of West Georgia the bass is performed by an individual singer, and is often the most melodically active part;
- The metre is always precise in West Georgian songs, while in at least some East Georgian songs (particularly – the same “long” table songs from Kartli and Kakheti) the polyphony develops without a precise metre, in so-called “rubato” (free metre);
- A major part of the metered polyphonic songs in Georgia is based on the simple duple (2/4, 4/4) and triple metres ($\frac{3}{4}$, $\frac{6}{8}$). East Georgia uses all

these metres, whereas West Georgia uses predominantly (and in some regions almost exclusively) only duple metres;

- East Georgian polyphonic songs are famous for their richly ornamented melismatic melodies. There are no ornamented melismatic melodies in West Georgian polyphonic songs at all (apart from the region of Racha, which has an obvious influence from the East Georgian singing style);

- Both East and West Georgia are the “kingdoms” of the dissonances, although sharp dissonant chords play a much more prominent role in West Georgian traditional and ecclesiastic music;

- East Georgia makes use of the scales of fourth and fifths diatonic, and in “Long” table songs there is an interesting mixture of these two scale systems, used simultaneously above and under the drone; Western Georgian polyphonic songs are based almost exclusively on scales of the fifths diatonic;

- The specific and very important melodic formula, the so-called “Melody of Iav-Nana” (Aslanishvili, 1954), is present only in East Georgia;

- The yodel is present only in West Georgia;

The differences between East and West Georgia are not exhausted by this list of musical elements. There are other important differences as well in musical instruments, traditional architecture, ethnography, everyday and ritual food, dress, etc. There is no need to continue this list. Many countries of the world comprise regions with a whole set of notable differences, so there is nothing particular in the existence of two regions in Georgia with a set of differences between them. The reader should remember that I am listing here only the differences between East and West Georgia. The list of the features common to East and West Georgian vocal polyphony is much more impressive.

Let us now briefly discuss the possible reasons for the existing differences between the eastern and western Georgian polyphonic traditions. Of course, the possibility of the inner, independent development of all above-mentioned differences within the singing traditions of eastern and western Georgia can not be ruled out, although the possibility of a certain external influence on the singing traditions of one of these regions seems more plausible.

N. Tsitsishvili specially studied the stylistic features of the East Georgian “long” table songs and using the specially designed seven style factor analyses came to the conclusion that there are certain commonalities “...between the singing style of the Kartli-Kakhetian ‘long’ songs and the

singing style of rural Armenia, Azerbaijan, West and Central Asia. Solo performance and monodic musical structure (factors 1 and 2) inherent in the rural music-cultures of Armenia, Azerbaijan, West and Central Asia are also characteristic of the Kartli-Kakhetian “long” songs. The tetrachordal system in the scales of “long” songs (factor 3) is the system on which songs from the music cultures of Armenia, Azerbaijan, and the peoples of West and Central Asia are based (Kushnarev, 1958:11-12). Ornamentation and recitation in the melodies (factor 4), freely improvised rhythm (factor 5), non-metric time organization (factor 6) and non-repetitive improvised form (factor 7) are characteristic traits of the rural music-cultures of the peoples of Armenia, Azerbaijan, Central and West Asia as well as of the Kartli-Kakhetian ‘long’ songs.” (Tsitsishvili, 1998:137; see also Tsitsishvili, 2010).

The most plausible historical explanation of these contacts comes from the archaeological records. According to them, there had been two major waves of migration on the territory of Georgia in the 3rd and 2nd millennia B.C. These migrations brought to Georgia a totally new type of material culture, social organization, burial rites, and a new population with a different physical type. Archaeologists believe these migrations were connected to the appearance of Indo-Europeans on the territory of Georgia (Japaridze, 1976, 2006:332-341). As time went by the mixture of the old and new populations and cultures became evident.

The new Indo-European population must have brought to Georgia the new type of musical culture as well, most possibly close to the musical styles of some other early Indo-European peoples of the neighbouring regions – for example, Armenia and Iran. These are musical cultures based on a **monophonic singing style with an emphasis on solo performance, richly ornamented melodic lines, tetrachordal scales, often with the augmented seconds, free rhythm and non-metric time organization.**

Before we start discussing the possible legacy of the Indo-Europeans in Georgian (and later in Europe) we need to discuss an important issue. According to the abovementioned stylistic elements of musical culture, many of the Indo-European peoples (Armenians, Iranians, Indians, Tajiks, or the Dorians from the Ancient Greece) show close links with the musical cultures of other Middle Eastern peoples who speak non-Indo-European languages belonging to the Turkic and Afro-Asiatic (Hamito-Semitic) families of the languages. Despite the marked differences between their languages, musically they all belong to a huge macro-family uniting cultures from the North Africa and the Middle East to the Central Asia. Curt Sachs was arguably the first musicologist who acknowledged the similarity of the

musical traditions of the Ancient Greeks to West Asian musical cultures (Sachs, 1937a). This unity of musical traditions of the peoples speaking on different languages would have made it very difficult to make a decision whether the external factor that influenced singing traditions of the eastern Georgia came from Indo-European, Semitic, or Turkic speaking peoples. Fortunately, combining with archaeological, physical anthropological and linguistic data allow us to link this influence on ancient Georgian musical culture with the peoples speaking on the Indo-European languages.

Most importantly for our topic, these migrations and major cultural and population changes during the 3rd-2nd millennia involved only the territory of East Georgia, while the territory of western Georgia, situated on the other side of the Likhi mountains (the dividing mountain range between eastern and western Georgia) remained virtually unaffected (Japaridze, 1976, 2006:360-366; Abdushelishvili, 1964, 1966; Alexeev, 1974a).

Richly ornamented and freely flowing “long” table songs from East Georgia are not the only witness of the ancient external influence of the monophonic musical cultures of West Asia and Central Asia on East Georgian musical culture. The singing traditions of Kartli and Kakheti (two central regions of the East Georgia) also contain a special genre of solo monophonic working songs, known under the generic names “Orovela” [meaning is unknown] and “Urmuli” [lit. bull-carter’s song]. These are important groups of songs of purely monophonic music, with richly melismatic melody, free rhythm, non-metric time organization and “oriental” tetrachordal scales with augmented seconds. In Georgia “Orovela” and “Urmuli” songs are found exclusively in the plain regions of East Georgia (Kartli and Kakheti). There are no signs of Orovela and Urmuli type songs in western Georgia or the mountain regions of eastern Georgia. At the same time, outside Georgia the same type of agricultural working songs (based on tetrachordal scales with the augmented seconds, melismatic melodic line and free metric organization) are found in neighbouring Armenia, Azerbaijan, West and Central Asia. Even the generic Georgian term “Orovela” finds parallels with the solo working songs from Armenia (“Horovel”), Azerbaijan (“Holovar”) and even with the texts of Central Asian solo working songs (Tsitsishvili, 1998, 2010).

Therefore, if the “long” table songs show signs of a complex stylistic mixture of polyphonic and monophonic singing traditions, “Orovela” and “Urmuli” songs are more direct and unaffected representatives of the West and Central Asian monophonic singing traditions in East Georgian traditional singing culture.

As you would expect from the polyphonic-crazed Georgians, there is a tendency to turn the solo monophonic “Orovela” (but not “Urmuli”) into polyphonic songs. So, although “Orovela” is a genuine monophonic song, traditionally performed in East Georgia solo during different types of agricultural work, when performed in a different social environment (when the performer is not alone), or later, on a stage, the song instantly “acquires” the pedal drone, thus becoming a typical example of East Georgian two-part drone polyphony.

To summarize, we may say that the singing style of the East Georgian “long” table songs is an incredible mixture of two totally different musical styles: (1) the autochthonous Caucasian polyphonic three-part singing style with the drone and dissonant intervals, and (2) the West and Central Asian monophonic singing style with richly ornamented melodic lines, specific scales, free rhythm and non-metric time (see Tsitsishvili, 1998, 2010). As Tsitsishvili puts it “...the [East Georgian] “long” songs represent a total transculturation of style which differs from both parent cultures, though belongs in the polyphonic music-culture of Georgia” (Tsitsishvili, 1998:145-146; see also Tsitsishvili, 2010).

European mix:

Indo-European contribution to Ancient European polyphony

The case of the mixing of the autochthonous polyphonic tradition with the monophonic singing style of the Indo-Europeans in East Georgia is by no means a unique occurrence in Europe. Moving through Europe, Indo-Europeans were in constant contact with the autochthonous carriers of the ancient European polyphony, so the possibility of a mixture of these two different types of music (polyphonic and monophonic) must have been extremely high in many regions of Europe.

Let us have another look at the existing polyphonic traditions of European peoples **in search of the possible traces of this ancient mixture of polyphonic and monophonic singing styles**. So, we are looking at the vocal polyphonic traditions with the following specifications:

- (1) Drone polyphony (most likely the pedal drone),
- (2) Melodic lines are richly ornamented with melismas,
- (3) The rhythm is free (rubato), or relatively free, and
- (4) The time organization is mostly non-metric.

Those who read the first part of this book very carefully may remember that polyphonic traditions with such characteristics are not rare in Europe. Here are some of them:

- South Albanian polyphony of the Tosks and Chamëri (but not the Labs);
- Part of the polyphony of the Macedonians (although the other part does not show these features);
- Polyphony of Farsheroti Aromanians in Romania;
- In Bulgaria – vocal polyphony in Pirin;
- Northern Greece (Epirus) polyphony;
- Southeastern Serbian polyphonic style;
- Northern regions of Belarus Palesie (and again – the southern part does not show these features);
- Corsican polyphonic singing;
- North Sardinian polyphonic singing (but not the Central Sardinian);
- East Spain polyphonic singing in Albacete;
- Eastern and Southern Portugal polyphony (but not the northern polyphonic style).

More about mixed styles: Age matters

Any migration can and usually does lead to the mixture of different ethnic elements and cultures, and there is hardly a culture (or nation) on our planet that does not represent a mixture of different ethnic and cultural elements. The only difference is that earlier influences from a different type of culture are much more difficult to trace than later influences, because the longer period of time of the interaction between different musical styles assists the process of natural “absorption” of two initially different cultures into one common mixed style. Later influences are often more obvious, less “absorbed” and much easier to detect. For example, in Georgia the later influences (from the 7th century onwards) of Arabic and Turkic musical cultures are very obvious, because often the complete melodies, musical instruments, performance genres and terminology univocally point to the external influences. At the same time an earlier influence of Indo-European culture in Georgia (3rd-2nd millennia B.C.) is much more difficult to detect, as this earlier influence has been long since absorbed, and today it is represented by a much more subtle mixture of elements from polyphonic and monophonic singing traditions (like the ornamented melodic lines and

rhythmically freely flowing singing of polyphonic “long” table songs of East Georgia). Late external influences are usually readily identified and acknowledged by national scholars (and sometimes rejected from the sanctuary of the national culture), but this is often not the case with the historically earlier external influences.

In some European regions the influence of more than one source is the most likely case. For example, the “oriental” elements in some regions of the Balkans could be connected not only to the later and more obvious influence of Turkish culture, but to the possible earlier influence of Indo-European culture as well. The early arrival of Indo-Europeans with the “oriental” type of monophonic singing in the Balkans has been documented in the case of Ancient Greece. In the same way, prominent “oriental” features of the music in some regions of Spain and Portugal could be the result of not only the later and more obvious influence of Arabian culture, but to the earlier influence of Indo-European cultures as well.

Using Georgian music as a model of such “earlier” and “later” influences, I agree that the obvious external influence in the musical traditions of the Balkans and the Pyrenees (“oriental” musical forms and genres, melodies, musical instruments and instrumental ensembles) came from the influence of Arabic (in case of the Pyrenees) and Turkic (in case of the Balkans) musical cultures, but I would suggest that the more subtle and already mixed singing styles (for example, in Albacete in Spain, or Chamëri in Albania), where richly ornamented and freely flowing melodies are organically mixed with the drone polyphony, are possibly the result of a much earlier influence, supposedly coming from early Indo-European migrations. These mixed styles of polyphonic and monophonic elements (which are often unacknowledged as mixed styles in the first place) I attribute to the legacy of Indo-Europeans.

Another factor that we should take into account is that Indo-Europeans came to the different parts of the Europe after a certain ethnic and cultural mixture during their long migration, so when they reached their “destination”, they could have been the carriers of quite different and already mixed singing styles. Besides, some of the Indo-Europeans might be carriers of different polyphonic singing traditions as well. In this case the identification of the new cultural element would be much more difficult. Therefore, not all the waves of Indo-Europeans might be the carriers of the monophonic vocal traditions with richly ornamented melodies and free rhythm and metre. In this context it is important to note, for example, that there are hardly any traces of the “oriental” mixture with drone polyphony (I

suggest to name this style “melismatic-rubato polyphony”) in many northern regions of Europe. (Although we need to acknowledge that very few traditions of polyphonic singing from North Europe have survived until the 20th century).

After a brief discussion of the importance of distinguishing earlier and later influences in European music, let us now go back to the list of mixed cultures of ancient Europe. This list can be longer, but I think my argument is already clear: moving through Europe, the Indo-Europeans were in constant contact with the autochthonous population of Old Europe, with the supposedly polyphonic traditions of drone polyphony. During the centuries and millennia after the arrival of Indo-Europeans these two cultures and their representatives interacted, mixed, and gave birth to the new combined traditions of polyphonic singing. The typological closeness of these “mixed” polyphonic traditions is quite clear. The main reason for this closeness must be the fact that in all these cases there was a **similar mixture of two different types of cultures**:

- (1) Drone-dissonant type of polyphony of the old European populations, and
- (2) Richly ornamented, free rhythm and non-metric time based monophony of the populations brought by at least some migration waves of Indo-Europeans.

As I have already mentioned, I suggest to name this new mixed polyphonic style as “**melismatic-rubato polyphony**”, according to the most important specific elements of this singing style.

I propose that this initial closeness of two main ingredients of the “Great European Stylistic Mixture” created the similarity of the drone polyphonic traditions of East Georgians, Chameri Albanians, Corsicans or the Albacete residents from eastern Spain (to name a few), and not the westward migrations of Georgians to southern Albania or eastern Spain, or the eastward migrations of Spaniards or Albanians to Caucasia.

More mixture:

The influence of European professional polyphony

Stratification of European polyphonic traditions is further complicated by the apparently late influence of European professional polyphony. European professional polyphony (itself a result of the mixture of Middle Eastern monody and ancient European polyphony) first appeared at the end of the

first millennia, then gained confidence and went from strength to strength from the 15th century on. By the 19th-20th centuries European professional polyphony became the most influential musical style of our planet, influencing indigenous musical traditions throughout Africa, Asia, Oceania, Australia, and America.

Before we discuss the influence of European professional polyphony on European traditional polyphonic cultures, let us name a few well-known and most important features that entered European traditions of polyphonic singing from European professional polyphony:

- (1) Prevalence of parallel thirds and sixths between the parts,
- (2) Prevalence of triadic chords, and
- (3) Tonic-dominant-subdominant functional system with typical bass movements by fourth and fifths.

I suggest to name this polyphonic style “chordal-triadic polyphony”, although two-part singing in parallel thirds arguably has the widest geographic distribution.

Here is the list of a few traditional polyphonic styles of Europe that show signs of the late influence of European professional polyphony:

- Singing “na bas”, very widely distributed in virtually all the **Balkan** polyphonic cultures, is mostly based on two-part singing, prevalence of parallel thirds between these two parts, the peculiar cadence formula in the bass (a jump of the bass a fourth down, often considered as a jump from Tonic to Dominant), and finishing musical sentences on the “empty fifths”;

- Another very important region of the distribution of the mixture of ancient European and late European professional polyphony is the biggest mountain range of Central Europe – the **Alps**. Choral singing of the Alps mountaineers in Austria, Switzerland, Northern Italy, and Southern Germany is the backbone of their traditional music. Harmonies here are usually fuller (three and four-part) than in the Balkan mostly two-part singing tradition of “na bas”. The influence of European professional polyphony in this region is so strong, that apart from the yodeling, it is not easy to detect any feature that does not come from the influence of omnipotent European professional polyphony.

- In **Georgia** this tradition is well represented by the so-called “western branch” of Georgian urban music, particularly in a cappella three- (and four-) part table songs with parallel thirds and sixths, changeable drone (changes according to the TSD system), and triadic chords. This style is known and

popular in most of the cities of Georgia, particularly in the biggest city of western Georgia – Kutaisi and the capital Tbilisi.

- The reader might remember that the polyphonic style, heavily affected by European professional polyphony, is widely present in the **Ukraine**.

- The influence of the European professional style is also evident in the polyphonic traditions of the Mediterranean islands: **Corsica**, **Sardinia** and **Sicily**. This influence is mostly evident in the triadic structure of the chords, and the TSD harmonic system.

Many more European polyphonic traditions are affected by late professional polyphony than the ones listed above. We could expect that in most European cities there will be some late style group singing connected to European professional polyphony. In general, the influence of European professional polyphony is much wider than the influence of the West Asian monophonic style.

Conclusions

Not going into the details of many other influences that shaped the musical profile of the European continent, we may say that contemporary European polyphonic traditions represent a mixture of at least these three big and very different musical styles:

- 1. Ancient European drone polyphony with secondal dissonances. This style is autochthonous to Europe;**

- 2. West Asian monophonic singing with richly ornamented melodies and free meter and rhythm. This style arguably came first to Europe together with some carriers of the Indo-European languages, as well as later with other carriers of the West Asian singing traditions (carriers of Arabic and Turkic languages);**

- 3. European professional polyphony with parallel thirds and triadic chords and TSD harmonies. This singing style was developed in medieval professional polyphony (and historically is a mixture of ancient European polyphonic and Middle Eastern monophonic cultures);**

We could call these three styles “three main stylistic elements” that mostly shaped the profile of the polyphonic traditions of different European regions. As a conclusion of our discussion of the historical processes involving the polyphonic traditions of Europe, we can now briefly summarize this multifaceted “case study” and present a generic picture of the complex interactions of these three main stylistic elements in different European polyphonic cultures. I suggest that in some of the cases we have a result of the interaction of **two styles**, and in other cases we even have a mixture of **all three above-mentioned styles**. And still in other cases we have the relatively **complete survival** of the ancient drone polyphony without any major external influences. Let me mention a few polyphonic traditions of Europe to illustrate my ideas (see also the maps of distribution of vocal polyphony in Europe);

- **No external influences. Ancient European drone polyphony without major external influences** could be represented by the polyphonic traditions of western Georgia (particularly in Svaneti), Laberi in Albania, Shops in Bulgaria, the central Polesie region in the Ukraine and Belarus, or drone polyphony in Latvia (both two- and the currently disappeared three-part traditions). Here the ancient European drone polyphony with the secondal dissonances does not show any major traces of the influence of West Asian melismatic monophony or European professional polyphony. I call this style as “Drone-Dissonant Polyphony”.

- **Mixture of two styles (A). Ancient European drone polyphony with the influence of West Asian melismatic monophony** could be represented by the polyphonic singing traditions of East Georgians (particularly “long” table songs), Chameri from Albania, Albacete drone polyphony from East Spain, Farsheroti Macedonians polyphony from Romania, or southeastern Serbian polyphony. Here the ancient drone polyphony is mixed with ornamented melodies and free rubato flow. I suggest mentioning this style as “Melismatic -Rubato Polyphony”.

- **Mixture of two styles (B). Ancient European drone polyphony with the influence of European professional polyphony** could be represented by the singing traditions of west Georgian urban style a cappella songs (particularly from Imereti), a new Balkan popular singing style “na bas” (group of songs and traditions without melismatic elements in the melody), most of the polyphonic traditions of the Alps, or drone polyphony from eastern Lithuania (“collective *sutartines*”) with triadic chords. I suggest mentioning this style as “Chordal-Triadic Polyphony”.

• **Mixture of three styles. Ancient drone polyphony with the double external influence from West Asian melismatic melody and from late European classical polyphony.** These are historically the most interesting polyphonic styles, where the mixture of all three major styles is evident. I think few European traditions could represent this category: Corsican polyphony with drone, freely flowing melismatic melody, triadic chords and TSD harmonies is a clear example of the mixture of all three major European styles; Sicilian polyphony and North Sardinian polyphony also show obvious elements of the mixture of these three styles (but not the central regions of Sardinia which shows very little external influence). Some of the Balkan “na bas” singing style with ornamented melodies and parallel thirds, as well as melismatic eastern and southeastern Portugal polyphony could also be included in this category. I suggest mentioning this style as “Melismatic-Triadic Polyphony”.

Another singing style that is represented on the map of European polyphony is heterophony (or variant heterophony). The status of variant heterophony is ambiguous, and we are going to discuss this singing style in a special “case study” which comes next.

Case Study #5

Heterophony

Heterophony is strategically positioned between polyphony and monophony. To have heterophonic singing all you need is to have a group of singers, singing in unison where some members of the group do not strictly follow the unison. Even rare deviations are enough to see the elements of heterophony. Ethnomusicologists often use heterophonic polyphony as a flexible model to illustrate the process of the **emergence** of polyphony from monophony. If you believe in the evolutionary development of polyphony from monophony, you can have a look at the musical tradition of any national musical culture with developed heterophonic traditions and classify heterophonic examples according to the gradual increase of the heterophonic elements. So you will soon have a clear evolutionary picture of the evolution of polyphony from monophony: at the bottom of the scale you can put the unison examples (as the most archaic, “monophonic layer”); then comes the unison singing with only occasionally emerging heterophonic elements; next would be examples where heterophonic “deviations” from the unisons are quite numerous, and finally you may have examples where heterophony is the leading element of the texture, and where the unison only is used at the crucial moments of melodic development (this would be the latest, already the “polyphonic layer”).

The only problem with this very simple and ostensibly logical evolutionary transformation from monophonic to polyphonic singing is that existing facts do not support this scenario. So, there is nothing wrong with this kind of classification of unison-heterophonic traditions per se, but if we want to consider this gradation as the *historic model of the evolution of polyphony from monophony*, we immediately run into major contradictions with the existing facts. Even if we forget about the general tendency of the disappearance (and not the appearance) of polyphonic traditions around the world, discussed earlier in this part, the evolution of monophony into polyphony through heterophony still faces contradictions.

Let us first of all note the difference between the heterophonic elements in polyphonic cultures and heterophonic polyphony per se.

Heterophonic elements can be potentially present in every polyphonic culture and style, where at least one of the parts is performed by more than one person. For example, in Georgian polyphonic songs different bass singers may occasionally sing different notes. These notes are never haphazard, and they are as a rule a third or a fifth apart (according to the

principle of “third and fifth substitution”, mentioned during the discussion of Georgian polyphonic tradition in the first part).

Heterophonic polyphony is a type of texture where all (or almost all) the singers perform the main melody of the song heterophonically. In this “case study” we will be concentrating on heterophonic polyphony, not the heterophonic elements in other types of polyphony.

Let us now have a look at the patterns of stratification of heterophony in one of the most important regions of the distribution of heterophonic polyphony in the world, and definitely the largest region of the distribution of heterophonic polyphony in Europe – Eastern Europe (see the maps). This is the ethnic territory of the eastern Slavs, who are particularly well known for their rich traditions of heterophonic polyphony.

Heterophony among Eastern Slavs has a few different versions, but the uniting feature between them is the above-mentioned tradition of singing the main melody as a “thick” heterophonic melody. The singers call this heterophonic melody a “bass” part (see the section about Russian polyphonic traditions on this subject). In eastern Slavic tradition heterophonic singing of the main melody is often accompanied by a functionally different part (usually a high part), mostly performed by a single performer.

If we want to understand the history of the phenomenon, first of all we need to have a careful look at the geographic distribution of this phenomenon in a wider context. Let us ask two important questions: (1) is this phenomenon distributed throughout a single uninterrupted territory or throughout several isolated smaller territories? And (2) is this phenomenon distributed throughout geographically isolated regions (like mountains, major forests, islands, continental fringes) or throughout easy to access territories? The answers to these questions are usually very easy to discover, and are very informative at the same time. Here are the simple answers to these two questions:

(1) Heterophony is distributed virtually throughout the whole ethnic territory of the Russian populations, as well as the Ukrainian and Belarus populations. Only in a couple of smaller regions do we see the existence of a different type of polyphony – drone polyphony. This simple and well known fact among Russian ethnomusicologists points to the earlier chronological period of distribution of drone polyphony and the later distribution of the heterophonic singing style.

(2) The area of the distribution of heterophony is the hundreds of thousand kilometers of open area of Eastern Europe, north from the Black and Caspian Seas. No major geographically isolating ecological systems exist on this territory. Except one. The only geographically isolating region on this huge territory is Polesie, the biggest forest region of Europe, the border region between all three Slavic peoples (particularly – between the Ukraine and Belarus). And again – Polesie is almost the only region where another (drone) type of polyphony is distributed.

Therefore, the distribution pattern of heterophony on the territory of Eastern Europe point to its late distribution. This is particularly evident in comparison of the distribution pattern of heterophony with another polyphonic type of Eastern Europe – drone polyphony. Drone polyphony of Polesie and some other (also isolated!) smaller regions (like the Bryansk and Belgorod districts in Russia) must be chronologically much older than the tradition of heterophonic singing.

The idea of the possible later origin of heterophony, as the result of losing the ancient “more polyphonic” tradition, has been expressed (as one of the historical possibilities) by Russian and Ukrainian scholars. For example, Sokolova declared “Heterophony is not the primordial type of polyphony, but a specific version of the texture of the ‘podgolosochnaia polifonia’ type” (Sokolova, 1989:44). Efremov concluded his recent paper, delivered at the Tbilisi 2004 International Symposium on traditional polyphony, with the idea that the dissonant small range drone polyphony and dissonant small range heterophony is the archaic form of Ukrainian polyphony, and the heterophony with parallel thirds and large range (up to a sixth) melodies is a historically later form of group singing (Efremov, 2005).

If we have another look at the geographic map of Eurasia, we can see the possible reasons for the disappearance of the older forms of polyphony in most of the territory of Eastern Europe: this territory is totally unprotected by any serious geographic barriers, so the new migrating waves (coming from the east, by the way) were able to go through without any major natural obstacles. This was the region where the migration waves from Central and East Asia (the most monophonic regions of Eurasia) were coming into Europe.

So, if the relatively equal mixture of the carriers of ancient drone polyphony and the carriers of vocal monophony created in Mediterranean Europe the qualitatively new melismatic and free-flowing drone polyphonic

style, the much bigger proportion of the new (monophonic) migration waves in Eastern Europe created heterophonic polyphony, the phenomenon that is positioned between the polyphonic and monophonic types of singing. Another very important distinction: unlike Central and Western Europe, East Europe had a major influx of new populations and cultures from Central and East Asia, carriers also of monophonic (although very different from some “oriental” early Indo-European, or West Asian style) singing traditions. So, without going into a detailed discussion, we may say that unlike Central and Western Europe, Eastern Europe had one more very important stylistic element that shaped the musical profile of this region – the Central and East Asian musical style, based on anhemitonic pentatonic scales and monophonic singing.

One of the biggest questions of Euro-Asiatic musical stratification is the problem of the Turkic peoples. The Turkic-speaking world unites peoples of such vastly different origins as Turks, Balkarians and Karachaevis, Kazakhs and Yakuts. The historical process of the creation of Turkic linguistic unity might be one of the key elements for our understanding of the musical diversity of Eurasia (see Zemtsovsky, 2003).

Stratification of the polyphonic forms of Eastern Europe shows some other signs of losing the ancient tradition of drone polyphony that must have been distributed in Eastern Europe much wider than it is today:

- (1) Drone polyphony (although not the small range dissonant type, but with the elements of heterophony in the top parts) is still present in Mordva;

- (2) Remnants of drone polyphony are also present in some heterophonic singing traditions, where the main melodic line is performed heterophonically by a group, and the functionally different part is sung in a higher range, as a slightly movable drone. In some traditions this high drone is performed by a single singer, although high drone can be also performed by a group of singers as well (see the discussion of Slavic polyphonic traditions in the first part of this book);

- (3) In some Eastern European traditions drone and heterophonic singing are more intertwined. Here both parts (drone and the melody) are performed by groups of singers and there is no strict division between the functions of these parts. In this singing tradition

singers can easily cross over from the main melody to the drone and vice versa even during the same stanza (see again the discussion of Slavic polyphonic traditions in the first part of this book);

In my opinion, this diversity of the unorthodox and sometimes fragmentary use of the drone together with the heterophonic types of singing points to the actively negotiating processes of the interaction of ancient drone polyphony with monophonic singing traditions. Unlike the Mediterranean region of Europe, where we can clearly see the influence of the “oriental” type of the singing style with richly ornamented and rhythmically free melodies, in Eastern Europe the main source of the monophonic influence seems to be the Central and East Asian pentatonic monophonic style.

Conclusions. According to the stratification of the heterophony and the drone polyphony in the territory of Eastern Europe, heterophony must be a later phenomenon, apparently the result of the loss of the more ancient tradition drone polyphony, as a consequence of active migrations and ethnic mixtures in Eastern Europe. This conclusion about the secondary nature of heterophony is supported by the general historical tendency of the loss of the tradition of polyphonic singing, discussed above.

Case Study # 6

Lithuanian Sutartines

As discussed in the first part of this book, Lithuanian *sutartines* represents a unique singing style. Most of the ethnomusicologists that have discussed the origins of *Sutartines* consider it a very archaic singing style. In this “Case Study” we are going to look at this unique singing style from the historical and comparative perspectives.

D. Rachiunaite-Viciniene gives a comprehension survey of the available publications on *Sutartines* (Rachiunaite-Viciniene, 2002:16-38). It is clear that the unique tradition of secondal *sutartines* has been at the very heart of Lithuanian musicology and ethnomusicology for the most part of the development of Lithuanian ethnomusicology.

The first information about a specific style of music (that has been identified by musicologists as *sutartines*) comes from the 1578 publication of Alexander Guagnini. This publication describes the tradition of “strange and dissonant” music played on “long wooden horns” (trumpets) in 16th century Samogitia (the southern part of Lithuania). The publication of the “Chronicle” of Polish Maciej Strykowski in 1582 contains extremely interesting information about Lithuanians singing with the specific syllables associated with the *sutartines* singing style, and gives fragments of the texts of two historical *sutartines*. The first actual mention of the term *sutartines* comes much later, from the early 19th century. In a 1828 publication Simonas Stanevichius comments about one of the songs: “This song is one of the *sutartines*, which has recently gone out of fashion, and has lost its purpose among Samogitians. Remnants of the song are more commonly heard in Lithuania [upland Lithuania]” (cited from Rachiunaite-Viciniene, 2002:20-21). The first actual transcription of *sutartines* comes from 1833. The example and the accompanying notes mention the multipart performance style (actually a canon – round), but the example does not represent the famous secondal *sutartines* with dissonant intervals and polytonal clashes between the parts.

Publications of Adolfas Sabaliauskas and Aukusti Roberto Niemi in 1911 and 1916 contained 150 melodies of *sutartines*, both vocal and instrumental. According to Sabaliauskas, “hymns” (*sutartines*) are “never sung in unison, but always contain two melodies, one alongside the other, coming together in counterpoint”. Interestingly, Lithuanian musicologists and intellectuals did not understand at the time the advanced musical language of *sutartines*, considered it “incomprehensible, and probably completely impossible”, even

describing it as “a crocodile, singing in parallel seconds” (Rachiunaite-Viciniene, 2002:31).

Jadviga Chiurlionyte’s anthology of Lithuanian folk songs (Chiurlionyte, 1938) contained 22 *sutartines* (out of 350 songs from all Lithuania). Chiurlionyte pointed at the unique character of *sutartines* among other Lithuanian songs (I guess she was pointing primarily at the unique character of secondal *sutartines*) and wrote that the chronological relationship between the *sutartines*, and the other Lithuanian singing styles was unclear. Her 1967 German article about *sutartines* (Chiurlionyte, 1967) brought international interest to the *sutartines* phenomenon.

In his book on Lithuanian folk music, German scholar Edwin Geist expressed the idea that *sutartines* was the ancient type of atonal music, practiced much earlier than the European professional atonal music of the 20th century (Geist, 1940:74. Cited from Rachiunaite-Viciniene, 2002:34). The comparison to the 20th century advanced music language is appropriate, although the point of comparison is not completely justified – *sutartines* is the early style of **not atonal**, but **polytonal** music, as the two tonal centres and shifts between them are clearly identifiable in the examples of secondal *sutartines*.

The biggest contribution to the study of *sutartines* comes from Zenonas Slaviunas. In his comprehensive 3-volume book (Slaviunas, 1958-1959) all the available information and examples of *sutartines* are gathered, and are accompanied by a deep analysis of many aspects (historical and theoretical) of the study of the phenomenon of *sutartines*.

A number of European scholars also expressed their opinions about the unique singing style of *sutartines*:

- Walter Wiora included two examples of *sutartines* in his “European Folk Music” and considered *sutartines* an ancient polyphonic style. Wiora grouped *sutartines* with the polyphonic traditions of North and South Europe – the Icelandic tradition of parallel fifths, and Portuguese polyphony of three-part parallel singing (Wiora, 1952:7).

- One of the greatest scholars of the 20th century, Curt Sachs, seems to miss the point, suggesting that in *sutartines* singers do not pay any attention to the clashing secondal dissonances, concentrating instead on the regular repetition of the theme (Sachs, 1965:181; see Rachiunaite-Viciniene, 2002:36). On the contrary, all the currently available information on the *sutartines* point to the fact that singers enjoy the clashing dissonances and try to achieve them. This phenomenon of enjoying the dissonant seconds is now well documented from a great number of traditional polyphonic cultures.

- Carl Stumpf wrote in 1926 “in the music of primitive peoples, there is often the desire to achieve a sharper sound through the help of a ‘clinging’ of adjacent tones from which, for example, parallel seconds are formed” (Stumpf, 1926:42. Cited from Rachiunaite-Viciniene, 2002:54)

- Ernst Emsheimer wrote about the originality of the *sutartines* style (Emsheimer, 1964) restraining himself from any further comments about the age of *sutartines*. Werner Danckert pointed out, “not all polyphony is based on consonance” (Danckert, 1966:66).

- Nikolai Kaufman points out that, despite the obvious differences, *sutartines* show the closeness with the Bulgarian (“Shop” region near Sofia) singing style, where the enjoyment with the sharp secondal dissonances plays the leading role (Kaufman, 1966).

- Florian Messner (1980) pointed to the similarities between different singing styles throughout the world that use the secondal dissonances, and *sutartines*.

- Alica Elschekova suggested that the *sutartines* style has no parallels, at least in the Carpathian and Balkan regions (Elschekova, 1981:240).

- Karl Brambats expressed the same idea of the unique character of the *sutartines* style. According to him, *sutartines* is “difficult to fit into some genetic and historical context” (Brambats, 1983:26).

- Martin Boiko did a fundamental study of the *sutartines* phenomenon and after a study of the other Baltic singing styles he (1) found structural similarities of *sutartines* with the refrain songs from Latvia and Estonia, as well as (2) found the elements of *sutartines* in Latvian traditional music (Boiko, 1992, 1992a)

Discussing the age and the archaic origins of *sutartines*, Rachiunaite-Viciniene uses the information based on the set of three different elements: (1) archaic elements in the texts of *sutartines*, (2) very old choreography, and (3) musical features. Based on an analysis of these elements in detail, Rachiunaite-Viciniene agrees with most of the researchers of *sutartines* and concludes that the roots of *sutartines* “lie as deep as the prehistoric era” (Rachiunaite-Viciniene, 2002:58).

I agree that an analysis of the song texts, choreography and musical features can give us lots of information, but I would still suggest that if we want to find out the age of *sutartines* (or of any other phenomenon of culture) we need to consider first and foremost the context of its **geographical distribution**, then the **ethnic history of the region**, and finally the **existing parallels with other polyphonic traditions**.

1. Geographic distribution. Typical elements of the archaic geographic distribution are:

- The phenomenon exists in several geographically isolated islands, surrounded by the later styles.
- The extremely ancient phenomenon of traditional culture is most likely to survive in extremely isolated and hard to reach geographical regions, as in high mountains, or on islands, or in deep forests, where active migrations and new economic and cultural developments can not reach easily;

2. Ethnic history of the region. You would certainly expect that the region where the extremely archaic elements of culture can survive, will:

- Display the great continuity of the population and languages; and will
- Display the whole set of other archaic features as well.

3. The set of defining musical features. Musical language of the extremely archaic phenomenon would:

- Display a great integrity of the archaic musical features;
- Display deep parallels with other existing archaic traditions from different isolated parts of the world.

If we study the geography, ethnic history of the region, and musical features of *sutartines* polyphony against these criteria, we will have the following picture:

- *Sutartines* does not exist in several isolated regions. It is basically one region only, unique for the rest of Europe and in fact the whole world;
- The region where *sutartines* is distributed does not have any kind of isolating geographical environmental factors (high mountains, forests, island), although the name of the region of the distribution of *sutartines* in Lithuania (“Aukštaitia”) literally means “Highlands”;
- The ethnic history of this region does not show any particular continuity of the population or the language. The ethnic, linguistic and cultural continuity of this region was interrupted at least once, when the Baltic peoples came here at the end of the 3rd millennia B.C. as a part of the migration waves of Indo-Europeans;
- The region where the unique secondal polytonal *sutartines* was located is not prominent with any other archaic survivals of other elements of culture and ethnography. Even within Lithuania the region of distribution of secondal *sutartines* is not considered to be the most archaic. East Lithuania, where examples of drone polyphony come from, is considered generally to be the region of the most archaic survivals within Lithuania.

- The main elements of *sutartines*, the famous secondal clashes and the polytonal relationship between parts show very different pictures. Secondal dissonances in *sutartines* show obvious parallels with the big group of other archaic polyphonic traditions from the most archaic high mountain regions, but no other polyphonic style from the rest of the world shows parallels with another crucial and unique element of *sutartines* – the polytonal relationship between the parts. According to the words of Rachiunaite-Viciniene “most scholars stress that *sutartines* are unique, having no direct parallel in the folklore of any other country” (Rachiunaite-Viciniene, 2002:38).

Therefore, despite the whole set of archaic elements, found through an analysis of the texts of *sutartines*, choreography and the musical features, (1) very uncharacteristic for the archaic survivals geographic location, devoid of any isolating factors, (2) ethnic history of the region and population, undistinguished from other Indo-European migrants, and (3) the unique musical sophistication of one of the *sutartines* most important elements (polytonal relationship between parts, absolutely uncharacteristic for archaic singing traditions) suggest that ***sutartines* can be a relatively late phenomenon.**

But let us not forget, that *sutartines* is not only secondal and is not always polytonal. Rachiunaite-Viciniene discusses 36 different types and sub-types of *sutartines*. My conclusion about the relatively late origins of the *sutartines* does not concern all types of *sutartines*, but rather the **secondal polytonal *sutartines*.**

I would like to suggest that another, currently extinct type of *sutartines* was the archaic prototype of the unique secondal polytonal *sutartines*. In search of this archaic prototype let us have a good look at two different polyphonic styles from Lithuania: (1) **secondal polytonal *sutartines*** and (2) **drone polyphony** of eastern Lithuania. They are both known as *sutartines*, although stylistically they are quite different. (1) Secondal polytonal *sutartines* does not use drone, is based on the canonic repetition of two polytonal sections of the melody and is full of sharp secondal dissonances. (2) Drone polyphony (known as “collective *sutartines*”), on the contrary, is based on the drone bass but in vertical coordination it is heavily based on the triadic harmonies, revealing the strong late influence of European professional polyphony.

I suggest that there was a common predecessor of both of these styles, a predecessor that “gave birth” to both secondal polytonal *sutartines* and the later style of drone polyphony in Lithuania. This common predecessor was

the **ancient European polyphony based on the wide use of drone and secondal dissonances**. I propose that this common predecessor of both secondal polytonal *sutartines* and the drone (“collective”) *sutartines* with triadic chords underwent local developments and changes in different region of Aukstaitia.

In Eastern Lithuania, the region with the most archaic set of elements in the whole of Lithuania, the main element of the archaic drone polyphony – the drone – survived, but another important feature of the archaic polyphony – the dissonant vertical coordination of the parts - was heavily influenced by European professional triadic harmony. This process is very well documented in many regions of Europe, where the tradition of the drone survived, but dissonant vertical coordination was substituted by European style triadic harmonies. I have discussed such mixed styles in “Case Study #4”, dedicated to historical aspects of European traditional polyphony, under the name “Mixture of two styles (B): Ancient European drone polyphony with the influence of European professional polyphony”.

In another region of Lithuania the ancient drone polyphony with secondal dissonances underwent a different modification: the drone was lost, but the art of creating constant secondal clashes reached unprecedented heights with the introduction of a new vocal style – polytonal canonic singing. We may also say that the drone was “sacrificed” for the sake of creating more secondal dissonances. This was the birth of secondal polytonal *sutartines*.

Therefore, if the survival of the ancient drone and the loss of the dissonant vertical coordination between the parts in eastern Lithuania created an obviously late style of European-influenced polyphony, in another region of Aukstaitia the survival of dissonant clashes and loss of the drone created a new style of secondal polytonal *sutartines*, absolutely unique among traditional polyphonic cultures of our planet, and preceding the revolutionary “discovery” of polytonality in European professional music by Ives, Bartok and Stravinsky in the 20th century.

Therefore, I support the idea of the close relationships of *sutartines* with the Balkan polyphonic traditions, and other European traditions based on the drone and secondal dissonances (Messner, 1980, 2013). At the same time, in most of the Balkan traditions the drone is a central element of polyphony, which is not the case in secondal polytonal *sutartines*. I fully support the idea of Rachiunaite-Viciniene, that “according to polyphonic elements, the *sutartines* [secondal polytonal type of *sutartines*] would be closer to the polyphony of Bosnia and Herzegovina by virtue of the crisscrossing of voices, syllabism, and the dominant second accords” (Rachiunaite-Viciniene,

2002:72). Elschekova wrote about these specific parallels as well (Elschekova, 1981:240). Both in Lithuanian secondal polytonal *sutartines* and Bosnia-Herzegovina polyphony we have the total domination of secondal dissonances and the absence of the drone, although in Bosnia-Herzegovina the domination of secondal dissonances is achieved mostly by parallel “crawling” singing in seconds, whereas in Lithuanian secondal polytonal *sutartines* this is achieved by simultaneous singing of triadic melodies in two different keys. According to Slaviunas, the closest links *sutartines* displays with the Polesie region (known for long drones and secondal dissonances. Slaviunas, 1972:10). Another very interesting parallel to *sutartines* (that was mostly excluded from the discussions about *sutartines* style) is the three-part drone polyphony with secondal dissonances, recorded as a dying tradition in neighbouring Latvia at the end of the 19th century by A. Yurian. We will discuss these parallels later in another context, in a case dedicated to Nuristan polyphony.

It is very interesting that the main principle of *sutartines* polyphony (melodic development by the consonant thirds and fifths, and harmonic coordination between the parts by dissonant seconds) coincides with the principles of improvisation in western Georgian traditional polyphony, where each melodic part develops by consonant thirds and fifths, and the vertical coordination between the parts is based on dissonant intervals (seconds, fourths). There are two important differences between Lithuanian *sutartines* and west Georgian polyphony though (apart from the fact that these principles are realized in *sutartines* is two-part canonic polyphony, and in western Georgia this principle is realized in three- and four-part contrapuntal polyphony): (1) in *sutartines* improvisations are very much restricted, whereas in western Georgian contrapuntal polyphony these principles are used first and foremost for improvisation, and (2) in *sutartines* we have a case of true polytonal polyphony of two parts, whereas in Georgian music all three or four parts are united within one tonality.

To conclude this “case study” I would like to briefly discuss the possible reason for the appearance of the unique secondal polytonal *sutartines*. I think the idea of the influence of the instrumental (particularly aerophones) tradition of playing in several layers of the secondal dissonances can be very fruitful. To support this idea we could recall that the very first information about the *sutartines*-like music mentioned instrumental music, and besides, the melodies of secondal *sutartines* are so close to the instrumental *sutartines* that there are certain deep connections between them. The idea of the influence of instrumental *sutartines* on the vocal *sutartines* was expressed at

different times by Slaviunas (1959:20), Rachiunaite-Viciniene (2004:222) and the expert of Lithuanian traditional instruments S. Paliulis (Paliulis, 1984:88).

Conclusions. The unique polyphonic tradition of Lithuanian secondal *sutartines* is based on the combination of two crucial elements: (1) the abundance of secondal dissonances, and (2) the conscious use of polytonality in two different vocal parts. Out of these two elements the first (secondal dissonances) is documented in many geographically isolated (mostly in high mountainous) regions of Europe and other parts of the world, which point to the antiquity of this element. On the contrary, the conscious use of polytonality does not show characteristics of archaic polyphony, is not represented in different isolated regions of Europe or the world, and must be considered a late development (possibly under the influence of well documented and rich instrumental polyphony in Lithuania with many layers of secondal dissonances). I propose that the prototype of secondal polytonal *sutartines* was the ancient European drone polyphony with secondal dissonances. According to my suggestion, this ancient tradition of European drone polyphony underwent developments in Lithuania in two different directions: in eastern Lithuania, under the influence of European professional music the dissonances were substituted by triadic harmonies, although the use of drone survived. In the other case, on the contrary, the drone was lost but the art of singing in dissonant seconds was brought to the highest possible point by developing a unique polytonal singing style, where two parts sing simultaneously precisely coordinated two triadic melodies in two different keys.

And as I have already mentioned, we will be back again to the *sutartines* singing style when we discuss other isolated polyphonic traditions.

Case Study #7

Overtone Singing of Central Asia

The Central Asian tradition of overtone singing is a unique singing style that poses another puzzle for ethnomusicologists. Overtone singing is distributed among several Central Asian peoples - primarily in Tuva, Mongolia, Altai and Khakassia. This phenomenon is mostly known by the Mongolian term *khoomi* or *hoomii* (throat, or pharynx). During the 1930s and 1940s *hoomii* was elevated in Mongolia to a “national” art form (Pegg, 2002: 1009). Here are a few questions that I will attempt to answer in this “case study”:

(1) In the first place, it is not clear whether this is monophony or polyphony. As I have mentioned earlier, from the musical point of view it is polyphony, as we have two obviously functionally different parts (drone and melody), but from the social point of view, this is not polyphony, as the main element of polyphonic singing – group musical socializing, is absent.

(2) We need also to ask why the “usual” forms of vocal polyphony are absent in Central Asian cultures, where the two-part overtone singing tradition is so developed and widespread?

(3) Another important question would be whether different forms of overtone singing from different regions of the world are connected to each other, or whether they represent the result of convergent evolution.

(4) And finally – the question about the beginnings: where and when do we propose to find the origins of overtone singing? Without going into details of the technique of producing the audible overtones (there are a few good publications on this subject, (see reviews in Tongeren, 2002; Levin, 2006) we need to ask whether this is (a) a relatively recent phenomenon, or (b) this is a survival of a very ancient sound-producing method.

As most of the prime territory of distribution of overtone singing (Tuva, Khakassia, Altai) is within the territory of the Russian Federation, and the second most important region – Mongolia - was also under the political and cultural influence of Russia (more precisely – the Soviet Union) during the major part of the 20th century, it is not surprising that the majority of early scholarly works on overtone singing were published in Russian. Here is a

brief account of the important publications and a few relevant ideas on the subject:

- The Russian linguist N. Baskakov described in the 1940s solo two-part overtone singing in epic singing traditions among the Altai mountaineers. He mentioned the existence of three different styles, known as *kuulep kaila*, *kargirlap kaila*, and *sygyrtip kaila* (*kai* is a generic name for overtone singing in Altai) (Baskakov, 1948).

- The Soviet archaeologist and ethnographer S. Vainstein proposed in 1980 that the origin of the Central Asian overtone singing tradition was connected to the Turkic ethnic groups from the mountainous and steep regions of the Sayan-Altai mountain grade, where the ancestors of the contemporary Tuva people lived. Vainstein roughly dated the origins of overtone singing by the 1st millennia.

- The Mongol linguist and musicologist, Jamtsyn Badraa, published in 1981 an article “Xoomei” and “Urtin Duu – Specific Phenomena of Mongolian traditional Classical Music” (published in Russian). The article is mostly devoted to the clarification of the terms *khoomei*, *hoomii*, *xoomei* and the unification of overtone singing with a melodic whistle through the teeth (*isgerex*) and playing instruments (*tsur* and *xulsun-xuur*) in a related musical-stylistic system.

- Khamza Ikhtisamov, an ethnomusicologist from Central Asia, in his 1984 article “Notes on Two-Part Throat Singing of Turkic and Mongol Peoples” concentrated primarily on the archaic features of the sound-producing method in different styles of overtone singing. Based on the study of two Russian scholars, B. Chernov and V. Maslov, Ikhtisamov concluded that the acoustic – physiological characteristics of the performer’s throat during overtone singing must have been characteristic for human societies before the development of speech and singing abilities (Ikhtisamov, 1984:180). Ikhtisamov dated the origins of overtone singing deep in the prehistoric times of 30-40 thousand years ago (ibid 180-181). Ikhtisamov discussed the use of the term *sygyt* (lit. “whistling” in Tuvan), the name of one of the most popular styles of overtone singing, in an epigraph dedicated to the Turkic chief Kiul-Tigin (died in 732). This term meant in ancient Turkic “to lament”, or “dirge”, or “to make yourself lament”. It is not clear whether the term was used in the 8th century to denote overtone singing during ritual mourning, but as we know, the repertoire of overtone singing does not have connections with burial rites. A connection to burial rites is considered to be one of the most stable in human societies and cultures.

- Carole Pegg's 2001 book "Mongolian Music, Dance, and Oral Narrative" gives a comprehensive analysis of the overtone singing tradition in Mongolia. According to Carole Pegg, overtone singing in Mongolia has several social functions: it is used to lull babies to sleep, to call yaks and, among the Baits, during part of a wedding celebration – "seeing of the bride." The Tsaatans, a group of people from Northwest Mongolia, use it during hunting. This singing style is physically very demanding. "The best *hoomii* performers are often champion wrestlers at the peak of their strength; and even professionals have injured the larynx, burst blood vessels in the eyes, and lost consciousness, particularly when performing *hamryn* and *turlegt hoomii*" (Pegg, 2002:1009-1010)

- Ted Levin became a member of the New York-based Harmonic Choir, when he heard the Tuvan recording and found one of his lifelong scholarly attractions. In 1987 he became the first American to do fieldwork in Tuva, and then helped Tuvan performers to start touring (from 1993 on) in the USA and other parts of the Western World. Levin stressed the use of certain overtones and the conscious missing of seventh and eleventh harmonics, which are not part of the pentatonic scale. "The resulting harmonic scale expresses the strongly pentatonic character of many Tuvan melodies, demonstrating that for performers of *khoomei*, the harmonic series is not simply a naturalistic sonic resource but is musically shaped and stylized in ways that reflect ingrained cultural preferences". Levin, 2002b:982). His recent book "Where Rivers and Mountains Sing", written together with Valentina Suzukei (2006) gives a comprehensive picture of the Tuvan overtone singing tradition.

- Mark van Tongeren, a Dutch scholar and performer, published a book in 2002 "Overtone Singing: Physics and Metaphysics of Harmonic in East and West", providing a look at this phenomenon both as a performer and a scholar.

- In her 2002 book "Tuvan Throat-Singing" (in Russian) Tuvan ethnomusicologist Zoya Kyrgys surveyed all existing ethnographic and historic materials connected to overtone singing in Tuva. The biggest existing variety of the types of overtone singing in Tuva, according to the scholar, proves the Tuvan origin of this phenomenon.

- Mongolian musician Tserendavaa holds another opinion. According to Tserendavaa, the tradition of overtone singing was born in Chandman, a region in western Mongolia. (Levin, 2006:69).

To understand the origins of the overtone-singing phenomenon, and to critically check the possibility of this singing style being extremely ancient, it is very fruitful to have a careful look at the region of distribution of overtone singing and to take into account the historical context of the groups of peoples practicing overtone singing. Geography and the ethnic history of this region brings the following facts to our attention:

(1) According to the data of archaeology and physical anthropology, the region of Central Asia underwent a major population change. The growing body of information suggests that almost till the end of the first millennia CE this region was mostly populated by peoples with different, mostly European (Caucasian) physical characteristics, and supposedly, culture. Besides growing archaeological and physical anthropological evidence, this older layer of the peoples from this region had been mentioned in Chinese historical records as well.

(2) Starting from the 9th century, major ethnic and population changes took place in Central Asia. New waves of peoples (mostly from contemporary China) replaced the previous populations in many parts of Central Asia. This process of a westwards movement of the East Asian population resulted later in a series of major conquest wars of the great Mongol Empire, reaching well into Central Europe in the 13th and 14th centuries.

(3) Physical anthropological studies of Central Asia by Russian anthropologists suggested that the old European substratum is still clearly evident among the peoples of certain regions of Central Asia (Alexeev, 1974). More specifically, this substratum is best preserved among the populations of: (a) western Tuva, (b) Western Mongolia, and (c) the peoples of the Altai-Sayan mountain ranges.

(4) Overtone singing is distributed among several peoples of Central Asia, and the strongest traditions were found among the following peoples: (a) Western Tuva, (b) Western Mongolians, and (c) the Altai-Sayan mountain region peoples.

(5) We have already discussed in a special “Case Study” the musical influence of the early Indo-Europeans in several European

polyphonic cultures, where the mixture of two different (polyphonic and monophonic) singing styles created a totally new polyphonic singing style with the element of both “parent” styles: with the drone, wide melismatic melodies and free rhythmic flow. I propose that in the case of overtone singing we again have the result of another extremely interesting **mixture of different (polyphonic and monophonic) singing traditions: the singing style of the earlier population of central Asia (supposedly carriers of drone polyphony) was mixed with the singing style of new populations (supposedly carriers of monophonic singing traditions).**

(6) The results of this mixture reflected the intensity of the new population influx in Central Asia. Characteristics of the contemporary population suggest that the contribution of the new arrivals was much bigger than the contribution of the older population. The same must be said about the singing traditions of this region. They reflect the much bigger contribution of the East Asian (monophonic) element in music traditions. That’s why there are no other “usual” types of vocal polyphony in this region, and that’s why one of the cornerstones of vocal polyphony – social interaction by means of vocal activity – is absent in the tradition of overtone singing.

(7) At the same time, the most persistent element of the previous (supposedly ancient European vocal polyphonic style – the drone – has survived the ethnic and cultural assimilation and is still present in the singing traditions of contemporary Central Asia. We will discuss later in this part one of the universal historical steps of the process of the loss of vocal polyphonic traditions: replacement of another singer (as polyphony is meant to be performed by more than one singer) by new technical means: “if no one is going to sing together with me, I’ll sing polyphony on my own”. This resulted, for example, in the creation of polyphonic (double, triple and even quadruple) blown instruments (we’ll discuss this issue a bit later, in a “case study” about Ancient Mesopotamian and Ancient Mesoamerican civilizations). In the case of Central Asia a brilliant artistic solution was found: without the help of a musical instrument, the possibilities of polyphony were found within the human voice-production system.

(8) As harmonics are a universal quality of any musical sound, it is possible that the technique of producing overtones was found (first accidentally) by several individuals independently from each other. Not all such discoveries lead to the establishment of a new singing style and the creation of a wide ethnic repertoire in this new style. For example, we may remember from the first part of this book that a form of overtone singing (*umngqokolo*) is known among Xhosa women and girls (Dargie, 1991). According to the scholar, “The style may have developed from a practice of small boys: they impale a beetle on a thorn, put it in their mouths, and isolate various overtones produced by the insect’s buzzing” (ibid 40-41). American country singer Arthur Miles also independently created an overtone singing style in the 1920s.

(9) Agreeing with the chronology of the origins of the overtone singing phenomenon in Central Asia, suggested by the Russian ethnographer, S. Vainstein, I suggest that the origins of Central Asian overtone singing must be connected to the processes of great population change and ethnic mixture, that took place in Central Asia from the 9th to the 10th centuries. The mixture of two different populations (supposedly bearers of polyphonic and monophonic traditions) on the territory of Central Asia must have given the original push for the creation of the phenomenon of overtone singing.

(10) Accidentally, the Chinese written sources also mention (from the same 9th century!) that peoples of Central Asia (when going into battle) were producing a strange voice – a mixture of low roaring sounds together with high whistling sounds (Kyrgys, 2002).

Therefore, although I do not agree that the Central Asian overtone singing style is an extremely ancient, pre-articulation phenomenon, I believe its origins are at least as old as the origins of European professional polyphony (also the 9th century). I suggest that the rich and dramatic ethnic history of the Central Asian region, where two different populations (supposedly carriers of monophonic and polyphonic singing traditions) had a large-scale ethnic and cultural mixture, triggered the creation of this unique singing style.

Case Study #8

The Nuristan Polyphony

The uniquely isolated tradition of vocal polyphony in the Hindukush Mountains requires a separate look. Without repeating what was said in the first part of this book about Nuristan polyphony, let us go straight to the main point.

We do not have many historical records about the Nuristan and their polyphony. Most of the existing records describe the inhospitable Nuristan terrain and the failure of Arab and Mongol conquerors who tried to subdue and convert the recalcitrant “pagan” mountaineers. The heavily wooded steep mountains of the interior Nuristan with fast mountain rivers (with the villages strategically positioned on the other side of the river) are mostly inaccessible even today for all but those on foot.

The legacy of the visit of Alexander the Great, who came to Nuristan in the 4th century B.C. is still a popular theme of discussions and local legends. According to historical tradition, the meeting between the people of Nuristan and Alexander the Great was a friendly one. The unusual physical features of the Nuristan men and women (with a large number of people with blue eyes and red and blond hair) had been sometimes discussed in the context of the prolonged visit of Macedonians to the Nuristan.

Another great conqueror, Tamerlane, came to Nuristan many centuries later with different, more aggressive aims. By the end of the campaign, after most of his horses were dashed to death against the rocks, Tamerlane turned back and sent his prayers of thanks to god for his safe return from the Kafiristan.

The population of Nuristan maintained their way of life and religion up to 1896, when they were conquered by Afghani Amir Abdur Rahman Khan, who forcibly turned them into Moslems. The deep changes that followed this transition, according to available information, did not alter their tradition of vocal polyphony.

I am not going to repeat the characteristics of Nuristan polyphony in detail, but to remind the readers, we may say that Nuristan polyphony is mostly a three-part tradition, with a drone in the middle of the texture and two melodic parts around the drone. The range is very small and sharp seconds are almost the only harmonic interval the listeners hear.

Florian Messner seems to be the first who put Nuristan polyphony in the context of European drone polyphonic singing with dissonant seconds, known from the Balkans, Caucasia, the Baltic region and even Melanesia

(Messner, 1980, in German. An English translation: 2013. See also Brandl, 1975). I would like to discuss in a bit more detail the existing parallels between Nuristan polyphony and the Lithuanian *sutartines* style.

Here are two different lists. The first list presents the list of features that demonstrate the differences between Nuristan polyphony and the *sutartines*. The second list discusses the features that are common between these two polyphonic styles.

So, these are the points that **differ** between Nuristan polyphony and Lithuanian secondal *sutartines*:

- Nuristan polyphony is primarily a drone type polyphony, while there is no drone in the Lithuanian secondal polytonal *sutartines*. Drone polyphony is present in Lithuania (as “collective *sutartines*”), but in a different style, heavily influenced by the late European professional music;

- Canon is the dominating type of polyphony in *sutartines* while in Nuristan there are hardly any traces of it;

- Polytonality is a “trademark” of the unique secondal *sutartines*. Secondal clashes in Nuristan polyphony and the two melodic centres are organized within one tonality, without real polytonal content;

- The leading rhythm in Nuristan is 6/8, while in *sutartines* it is 4/4;

- A change of key (or harmony) happens in *sutartines* after three bars, so the six-bar structure is equally divided into two sections. In Nuristan the change occurs within the three-bar structure;

- *Sutartines* were traditionally performed by women only, while Nuristan polyphony is performed both by women and men (separately and even together);

- In *sutartines* the number of performers is strictly limited by the tradition, allowing only two, three, or four performers to sing any example of *sutartines*. In Nuristan the number of performers is not limited, so bigger and not so strictly organized groups can participate in singing;

- Lithuanian *sutartines* is a two-part polyphony, while Nuristan polyphony is mostly three-part;

- Lithuanian *sutartines* is an example of a cappella singing, while in Nuristan musical instruments (most prominently the archaic harp *wadzh* and percussion) often accompany polyphonic singing;

- There are several well-defined styles of *sutartines* in Lithuania (including the canonic, heterophonic, drone types) while there is generally only one style of traditional polyphony in Nuristan;

- Some Lithuanian *sutartines* sub-types display the obvious influence of the European professional style, while there are hardly any traces of the influence of European professional music on Nuristan polyphony;

- And finally, sharing the fate of many other polyphonic traditions, Lithuanian *sutartines* was completely lost as a folk tradition, while Nuristan polyphony is still actively functioning in a society.

As promised, here is the second list, discussing **common elements** between the *sutartines* and Nuristan polyphony:

- Both traditions are based on the wide use of ostinato polyphony;
- Both traditions make wide use of the specific Lydian scale with the augmented fourth.
- In both traditions seconds are almost the only harmonic interval heard at any time;
- Melodies have a small range – mostly third or fourth (or augmented fourth);
- Rhythmic recitation on the same note is an important part of the melodic development of both *sutartines* and Nuristan polyphony;
- Melodic development of the leading parts is often based on the abundance of small jumps on the thirds;
- Crossing of the parts is used very widely, and the jumps on thirds around the other part are extremely popular in both traditions;
- In both traditions each melodic part usually has two centres for the melodic development;
- The shift of the melodic centre always happens on a distance of major seconds (down or up);
- The usual song structure is based on the repetition of three-bar musical phrases, forming six-bar musical sentences;
- Songs have two relatively equal leading melodic parts (although in Nuristan the third voice – drone - is also present);
- Songs usually start with one of the voices, and the other voice comes in after three bars;
- Both of them are often connected to dances;
- In both traditions secondal dissonances are present in both vocal and instrumental music;

The number of shared features is too big and too specific to consider them the result of convergent and totally independent development of these two geographically distant polyphonic traditions.

Although the Baltic region and the Hindukush Mountains are by no means neighbors, linguistic and physical features of Lithuania and Nuristan still allow us the possibility of some kind of relationship between these traditions: (1) both are members of the Indo-European linguistic unity, and (2) both show some similarity in physical anthropological features. The brilliant Russian scholar Nikolai Vavilov tried to explain the unique features of Nuristan physical appearance (a great number of blue eyes and blond and red hair among Nuristan women and men) by their unique and prolonged isolation in the mountains. It is well known that in very isolated populations the small pool of genes leads sometimes to the appearance of unique features. The other possibility is that both Lithuanian and Nuristan populations could be connected to related populations. I am not talking about the specific migration of the groups of people from Lithuania to Nuristan or vice versa. I am rather talking about the possibility of the belonging of both singing traditions to ancient European polyphonic traditions.

The historical connections of Lithuanian *sutartines* to the other remnants of the ancient European polyphonic unity (which survived in the mountains of the Balkans, Caucasia, Alps, of the forests of Polesie) are highly probable (about this see above the “Case Study”, dedicated to *sutartines*), but Nuristan is a bit more difficult to approach. Nuristan is about twice as far from Caucasia (the easternmost point of the acknowledged survival of the ancient European polyphonic family), as the Balkans, and this puts a shadow of doubt on the possible historical connections between the Nuristan and the European polyphonic family of cultures. Otherwise, if the Nuristan people and polyphony were found somewhere among the Balkan Mountains, they would blend very well there.

Before we go into a discussion of the possibility of Nuristan polyphony belonging to the ancient European family of polyphony, let us have a look once more at the lists of the shared (and dividing) features of Nuristan polyphony and Lithuanian *sutartines*:

The impressive list of the shared features is clear by itself, but the list of the differences between the *sutartines* and Nuristan polyphony, viewed from the **historical** perspective, can provide more useful information. So, here is the major part of the points of differences between Nuristan polyphony and secondal polytonal *sutartines*, together with brief comments from the historical perspective (see comments in square brackets):

(1) Nuristan polyphony is primarily a drone type polyphony, while there is no drone in the Lithuanian secondal polytonal *sutartines*. Drone polyphony is present in Lithuania (called “collective *sutartines*”), but without secondal dissonances, and heavily influenced by late European professional music. [Drone is definitely the most characteristic feature of European traditional polyphony, so according to this feature Nuristan polyphony shows closer ties to the ancient European tradition of polyphony than secondal *sutartines*].

(2) Canon is the dominating type of polyphony in *sutartines* while in Nuristan there are hardly any traces of it. [Although hailed as one of the most archaic types of traditional polyphony, canon is hardly found in any of the European polyphonic traditions. Therefore this feature also speaks about the closer ties of Nuristan polyphony to the ancient European tradition of polyphony than *sutartines*.].

(3) Polytonality is a “trademark” of the unique secondal *sutartines*. Secondal clashes in Nuristan polyphony and the two melodic centres are organized within one tonality. [As I have already mentioned earlier, the brilliant use of polytonality by the Lithuanians at least few centuries before Ives, Bartok or Stravinsky, is absolutely unique and does not fit either the features of ancient European polyphony, or the characteristic features of the polyphonic traditions - archaic or even contemporary - from any other parts of the world.]

(4) *Sutartines* were traditionally performed by women only, while Nuristan polyphony is performed both by women and men (separately and even together). [This feature is not so easy to classify, as in many European traditions women are the main singers of the polyphonic styles, although the examples of such important and archaic polyphonic traditions, as Georgians from Caucasia and Laberi from the Balkans, suggest that singing by both women and men must be the most archaic characteristic of ancient European polyphony.]

(5) In *sutartines* the number of performers is strictly limited by the tradition, allowing only two, three, or four performers. In Nuristan the number of performers is not limited, so bigger and not so strictly organized groups can participate in singing. [The very strict organization of the singing group by numbers is more of a later trait, not characteristic for ancient European polyphonic traditions, and polyphonic traditions are usually oriented towards the inclusiveness of the whole community.]

(6) Lithuanian *sutartines* is a two-part polyphony, while Nuristan polyphony is mostly three-part. [This is a very interesting feature, and I am going to discuss this issue separately very soon.].

(7) Lithuanian *sutartines* is an example of a cappella singing, while in Nuristan musical instruments (most prominently the archaic harp *wadzh* and the percussion) often accompanies polyphonic singing. [According to this feature I believe that *sutartines* shows closer connections to the ancient European polyphonic traditions, which are mostly a cappella.]

(8) There are several well-defined styles of *sutartines* in Lithuania (including the canonic, heterophonic, and drone types) while there is generally only one style of traditional polyphony in Nuristan. [Heterophony, as I tried to show, is more a result of the disappearance of the polyphonic tradition. Heterophony is a characteristic mostly of the Eastern European Slavic traditions, but not for many other archaic traditions of polyphony in Europe. The canon is in the same way very rare or absent among most European polyphonic traditions. Therefore, the “loyalty” of Nuristan polyphony to the simple drone polyphony with secondal clashes suggests closer ties of the Nuristan tradition to the ancient European tradition of polyphony than *sutartines*].

(9) Some Lithuanian *sutartines* sub-types display an obvious influence of the European professional style, while there are hardly any traces of the influence of European professional music on Nuristan polyphony. [Taking into account the cultural-geographic environment, of course, it was much more natural for the *sutartines* to be affected by European professional polyphony than for the Nuristan, who was so far away from Europe. At the same time, Nuristan was fiercely fighting for many centuries against their conversion to Islam, and it is fascinating that Nuristan traditional three-part polyphony hardly displays any serious signs of the influence from the West Asian melismatic singing style, suggesting that the level of the isolation and preservation of the ancient polyphonic tradition in Nuristan was very high. The recordings show that Nuristanians also sing songs that belong to the monodic world of West Asia, but this singing style does not show signs of integration with the traditional Nuristan three-part drone polyphony, and must be the result of the changes that were introduced since “Kafiristan” became “Nuristan” in 1896].

(10) And finally, sharing the fate of many other polyphonic traditions, Lithuanian *sutartines* was completely lost as a folk tradition, while Nuristan polyphony is still actively functioning in a society. [We may again explain this by the difference of the cultural-geographic environments between East Europe and the almost Central Asian Hindukush mountains, although we need to remember, that despite the fact of the disappearance of the secondal polytonal *sutartines*, the tradition of drone polyphony (although heavily

influenced by European professional music) is still very much alive in the same Lithuania. There must be something very vital in the drone type of polyphony itself.]

To summarize, we may say that even compared to the Lithuanian *sutartines*, Nuristan traditional polyphony shows an array of features characteristic to the ancient European tradition of vocal polyphony.

Let us now discuss the geographic factor of the possible connections of Nuristan polyphony with the ancient European family of vocal polyphony.

Is it possible to find the carriers of ancient drone polyphony so far east from Europe as Nuristan? In a previous “Case Study”, dedicated to overtone singing, we discussed the possibility of the presence of the carriers of the ancient European drone polyphony in Central Asia. Archaeological, physical anthropological, musical and Chinese written sources all point to the reality of this possibility. The most important regions for the distribution of overtone singing (like Tuva and West Mongolia) are about twice as far from the same Caucasia as Nuristan. Therefore, in the context of all this, it is not at all improbable to suggest that **Nuristan polyphony is a member of the ancient European drone polyphonic family**, and even more, taking into account their extreme geographic isolation, **Nuristan vocal polyphony could be one of the best isolated and best preserved member of the ancient European polyphonic family**.

For a further discussion of this topic let us have a look at the already discussed historical stratification of European polyphonic, monophonic and mixed singing styles in a “Case Study”, dedicated to drone polyphony and the migrations of Indo-Europeans. In the “conclusions” I outlined four different groups of European polyphonic traditions, most of them showing signs of external influences. These groups were:

(1) No external influences. Ancient European drone-dissonant polyphony without major external influences;

(2) A mixture of two styles (A). Ancient European drone polyphony with the influence of West Asian melismatic monophony (melismatic-rubato polyphony);

(3) A mixture of two styles (B). Ancient European drone polyphony with the influence of European professional polyphony (chordal-triadic polyphony);

(4) A mixture of three styles: ancient drone polyphony with the double external influence from West Asian melismatic melody and from late European classical polyphony (melismatic-triadic polyphony);

Amazingly, Nuristan vocal polyphony best fits the first category (drone-dissonant, or D/D polyphony), the group of cultures of ancient European drone polyphony without major external influences.

Now to another aspect of the comparative study of Nuristan polyphony. Three-part Nuristan polyphony with the drone in the middle of the polyphonic texture and the abundance of secondal dissonances shows particularly close parallels to the two European polyphonic traditions (both of them are “members” of the group of ancient European D/D polyphonic traditions that does not show any major external influences). These two traditions are (1) Laberi polyphony from Albania, and (2) three-part Latvian drone polyphony, recorded by Yurian at the end of the 19th century.

In all these three polyphonic traditions (Nuristan, Laberi Albanian and Latvian three-part polyphonic singing) the drone is in the middle of the polyphonic texture, surrounded from both sides by the melodic parts, actively clashing with the drone in secondal dissonances. This closeness is so obvious that the Laberi polyphonic style, for example, is typologically closer to Latvian three-part polyphony and Nuristan polyphony, than to the neighbouring Chameri polyphony, or to the other Balkan singing styles. In the same way Latvian three-part polyphony shows much closer typological parallels to Laberi and Nuristan polyphony, than to any other styles of polyphony, recorded in the Baltic region (Lithuanian secondal, heterophonic or drone *sutartines*, or Setu polyphony).

Two explanations are possible:

(1) Three-part drone singing with the drone in the middle of the texture, and with the secondal dissonances from both sides of the drone was part of the ancient European drone polyphony. This tradition was lost in many regions and survived only in the high mountains of Hindukush and the Balkans, or,

(2) Ancient European drone polyphony was based on two-part drone singing with clashing secondal dissonances. Three-part singing was later developed (independently from each other) from two-part singing by Laberi Albanians, Latvians and Nuristanians.

Explaining this closeness of the polyphonic traditions between Laberi Albanian, Latvian three-part polyphony and Nuristan polyphony might have

a fundamental importance for characterizing ancient European drone polyphony.

Although the existing information is not enough at this moment to make an informed choice between these two possibilities, the idea of “survival” seems to me more plausible in the light of the existing facts and historical tendencies. Three facts on which I rest my judgment are:

(1) Documented facts of losing traditions of vocal polyphony from different regions and continents suggest that there is a historical tendency towards a general decline of polyphonic traditions around the world;

(2) The “fate” of Latvian three-part polyphony also points in this direction. Latvian three-part singing was documented by Yurian at the very end of its existence, at the end of the 19th century (ironically, the same years as Kafiristan lost its independence to Afghanistan).

(3) Today only two-part drone singing is left in Latvia. Following this historical tendency it is not too far fetched to think that if there was a traveling ethnomusicologist, wandering around the European mountains at the end of the 18th century, a few more polyphonic traditions with clashing seconds would have been documented.

(4) The geographic regions where the Laberi Albanians and the Nuristanians reside are suitably isolated for the long survival of ancient features by the mountain ranges of the Balkans and the Hindukush. Geographically more vulnerable Latvia (devoid of the “shield” of high mountains) lost possibly one of the most archaic traditions of European polyphony by the beginning of the 20th century.

Besides the three above-mentioned polyphonic styles that are amazingly close to each other (Laberi Albanian, Latvian lost three-part singing tradition and Nuristan polyphony), some other traditions also show a certain similarity to the above-mentioned three-part drone polyphony. In these traditions the drone is in the middle of the texture, surrounded by two other parts, and full

of clashing dissonances. Few traditions demonstrate typological resemblance to this tradition:

- The West Georgian working songs “Naduri”, one of the most developed and complex group of songs from Georgia, consist of a three-part main section, and the four-part prolonged final section. Simpler three-part sections of the song consist of the drone in the middle of the polyphonic texture, and two melodic parts, often creating dissonant intervals with the drone. Four-part sections of “Naduri” songs, with two basses are also interesting. The lowest part of the four-part polyphonic texture, is the second bass, and is believed by Georgian ethnomusicologists to be a later addition to the three-part texture. If we have a look at the three high parts only (omitting the possibility of a late addition, the low bass), we can see the three-part texture, with the drone in the middle, surrounded with two other parts, sung by soloists, clashing with the drone. The soloist singing lower than the drone is almost constantly a major second lower under the drone.

- In some Bulgarian traditional songs from the “Shopluka” region (the region around the capital city Sofia) two-part singing is “enriched” by the appearance of three-part chords. The peculiar three-part singing tradition, independently discovered by Florian Messner and Tim Rice in the end of the 1970s, has elements of this singing style. Here the bass actually consists of two different parts, both singing the drone, and only at the cadences do they divide in a second. One of them is singing “straight” (continuing the drone), and another one is “curving” down, creating a clashing second under the drone. In some other songs from the same Shop region three-part songs are constructed as almost constantly sounding seconds in the two lowest voices (a peculiar double drone in seconds!).

- The tradition of embellishing the bass part with the repeating grace note from the second below (for example, known in Northern Greece, in Epirus) also might be considered in the context of the ancient polyphony consisting of the drone, surrounded by two other parts.

- Slight elements of this kind of three-part singing style can be also seen in some Polesie drone songs. In two-part songs, just before going into the cadential unison, bass (drone) singers divide into two parts, creating a three-part clashing chord.

Another interesting topic is the historical development of this ancient three-part style. This tradition disappeared before our eyes in Latvia; in Lithuanian *sutartines* the drone most likely disappeared, giving freedom to the two melodic parts; in the Shop region of Bulgaria and in Epir the

remnants of three-part dissonant singing survived only in the cadences; among the Albanian Laberi these songs were mostly turned into four-part songs; the same also happened in West Georgian working songs, where a more simple three-part section is now followed by a monumental four-part section. In this dynamic historical picture of changes, gains and losses, the tradition of Nuristan three-part drone singing might be the best preserved polyphonic tradition of ancient Europe, still surviving far from Europe, in the unique isolation of the Hindukush mountains.

Case Study #9

Ainu Polyphony

I became interested in Ainus in 1986, when in the physical anthropological literature I read about the unique physical features of the Ainus, the oldest inhabitants of the North Japan. I had no idea about Ainu music, but at the time I was fascinated by the coincidence of the geographic distribution of physical anthropological types and traditions of vocal polyphony, so I decided that if the coincidence of the distribution of different populations and polyphonic types was a reality, then Ainus must have had vocal polyphony. According to my knowledge of that time, no people had a vocal polyphony in that region, east of the overtone singing regions of Central Asia, and this was making my search for vocal polyphony in one of the most monophonic regions of the world even more tantalizing and exiting.

In the second half of the 1980s, in the Soviet Union, with “Perestroika” just beginning, but still without open contacts to the western world, with the KGB still opening all the letters going to or coming from other counties, without the possibility of telephone contacts to any other countries, and of course, without email and internet, any search for the information was depressingly slow. I remember very well, that in the **fastest cases** (providing that the correspondence was successful at all!) I was receiving the response mail from the other end after three months. A very important letter from the editor of “The Garland Encyclopedia of World Music”, for example, sent in May of 1989, I received in April of the following year.

I searched the libraries of my native Georgia and then Moscow, asked all my colleagues – ethnomusicologists about Ainu music, but could not get the definite answer. During that time I met in Georgia a Japanese amateur musicologists, who was interested in Georgian secular and sacred music, and although she told me that she happened to go to an Ainu village and even recorded their singing during a show performance(!), she could not tell me whether their singing was polyphonic or monophonic. She only told me they did sing in big groups. That was not good enough, as singing in a big group still might be in unison, as found in many monophonic cultures of East Asia. I talked several times about Ainus to Valeri Alexeev, an outstanding Russian physical anthropologist, who knew the Ainu problem very well from the physical anthropological point. He drew me a map of the possible migrations of European populations eastwards from Europe. He was expecting the news about Ainu music from me as well. But the response was very slow in coming. I lost faith that I could find the information about Ainu music within

the Soviet Union, I wrote a letter to my good friend Minoru Morita in Japan and was set for at least the three months “waiting period” when I suddenly had some luck.

On 10th December 1986 I was talking to my colleague from Siberia, Yuri Sheikin (currently the head of the Faculty of Traditional Musical Culture at the Arctic State Institute of Culture and Arts in Yakutsk, Republic of Sakha, and the winner of Fumio Koizumi award). “Yuri”, I asked him while we were waiting for the suburban train near Moscow, “do you know anything about Ainus and their music?” I still precisely remember his words and the intonation he pronounced these words: “Oh, do you know what a polyphony they have!!” After he pronounced these words he had to take care of my safety as the train was approaching and in my state of mind it was not safe to stay close to the train tracks on a Russian snowy winter day. He not only told me this exciting news, but a few seconds later he also informed me that he had a book by Tanimoto Kazuyuki about Ainu traditional music with transcriptions and the accompanying recordings (Kazuyuki, 1965). I called Valeri Alexeev the same day, and three days later, on December 13th we spent eight hours in his Moscow apartment discussing this exciting news.

In the first part of this book I mentioned Ainu polyphony as the most isolated tradition of polyphony on our planet. Living on the very fringe of the Eurasian supercontinent, on the Kuril Islands and on Hokkaido, Ainus are about 3-4 thousand kilometers away from the nearest regions with vocal polyphonic traditions (Taiwan in the southwest and Tuva and Mongolia in the west).

The idea, that Ainu people developed their polyphony in total isolation was theoretically possible, but highly improbable. To start with, I hope the reader remembers that there is hardly a single documented case of the evolution of polyphony from monophony. Therefore I look very skeptically at the possibility of someone “developing” polyphony from monophonic singing traditions. And of course, there is also the uniquely isolated position of Ainu language, culture, and particularly physical type, mentioned earlier. These unique features of Ainu culture and physical type suggest that Ainus made a long trip to arrive to the Kuril Islands and North Japan. From the very first meetings with the Ainus it was clear that they were of different ethnic origins from the prevalent population of East Asia. Without going into detail, we could mention, for example, the generally very scarce development of facial hair in East Asian populations. Ainus, on the contrary, have the highest level of development of facial hair in the world. Their hair form is also different. This feature, together with a few other unique features, point

towards possible southern and/or western connections: Australian Aboriginal and European populations are known for their thick facial hair. So these two directions are the possible source of Ainu ethnic origins. Westwards (European) connections were more prominent in the earlier scholarly works, and southwards connections became more prominent in the later period (see the review in: Cavalli-Sforza et al., 1994:231-232). Contemporary scholars often disregard the physical differences of Ainus and unite them with other East Asian populations (ibid, 232).

If we take into account the unique polyphony of Ainu people, Australian connections must be ruled out, as Australian Aboriginal singing traditions are one of the most monophonic in the world. The same is so with East Asian populations, carriers of the most monophonic singing culture among human populations. Talking about the southwards connections, from the musical point of view it would be more plausible to connect Ainu polyphony to the polyphony of the indigenous Southeast Asian populations. This population constitutes a large part of the national minorities of South China and Vietnam, as well as part of the populations of other Southeast Asian countries. Their vocal music is quite prominently polyphonic, and vocal polyphony of the Taiwanese aboriginal peoples (by the way geographically the closest polyphonic tradition to the Ainus), are a good example of their vocal polyphonic traditions. Although musically this connection makes perfect sense, the physical features of the Ainus do not seem to support these (Taiwanese and South East Asian) connections.

The only connection, that does not contradict the fact of the presence of polyphony in Ainu singing traditions, as well as their physical features, is the connection to European traditional polyphony and population. In the previous “Case Studies” we have already seen that there is a strong possibility (supported not only by musical, but the combination of archaeological, physical anthropological, and written sources) that the carriers of old European vocal polyphony came as far east as Central Asia and West Mongolia. Valeri Alexeev was sure that archaeological and physical anthropological data suggest that European populations came very far in their earlier migrations, reaching the easternmost fringes of Eurasia, and maybe even going further via the Bering Strait to the American continent (See about this later). According to Cavalli-Sforza, “there is no evidence of human occupation of Siberia until 35.000 B.P (Klein, 1980), when signs of human presence begin to appear..., *showing people and cultures similar to those seen in Europe* (italics mine, J. J.) at the beginning of this period”

(Cavalli-Sforza et al., 1994:197). Therefore, the presence of European population in North-East Asia is a scientific fact.

Musically speaking, Ainu polyphony is not so obviously European, as Nuristan polyphony. Out of two most important elements – (1) drone and (2) dissonant harmonies Ainu polyphony does not use the drone (well, almost – see the examples of Ainu polyphony from the first part of this book), although dissonant harmonies (the same secondal dissonances) are actively present in their vocal polyphony. The drone type of polyphony, dominating European polyphonic traditions from the most isolated mountain regions, is rather substituted by the wide use of canon among Ainus.

It might look amazing, that with this feature (wide use of canon instead of drone), Ainu vocal polyphony shows interesting parallels with Lithuanian *sutartines*. In fact, Lithuanian *sutartines* is structurally closer to Ainu polyphony, than to any other European polyphonic tradition. Of course, there are plenty of differences between them as well. For example, (1) there is no use of polytonality among Ainus, (2) the number of performers is not so strictly limited among Ainus, as among *sutartines* performers, and (3) secondal dissonances are not so prevalent in Ainu singing. Despite these differences, the typological similarity between the Ainu polyphony and *sutartines* is much more striking, than the differences, because the two most important structural elements of both polyphonic traditions - (1) the wide use of **canonic** singing and (2) **secondal** dissonances are the same.

Theoretically there are two possibilities to explain this stylistic similarity:

(1) The use of canon and secondal dissonances in such geographically isolated regions, as Lithuania and North Japan suggests, that in these two cultures we have a unique case of **survival** of the earlier European tradition of polyphony, which must have been distributed much wider in the past; or:

(2) North Japanese Ainus and Northeast European Lithuanians arrived to the similar results of using canonic singing and secondal dissonances **independently** from each other.

Out of these two possibilities the model of “independent development” seems to me more plausible than the model of the “survival of archaic features”. I rest my judgment by the following premises:

- The importance of the drone type of polyphony for ancient European polyphonic traditions seems to be beyond doubt, as the drone is

overwhelmingly represented in geographically isolated regions of Europe and beyond (in the most isolated mountain ranges, forests, and islands).

- It is very likely that the drone was also part of Lithuanian and Ainu polyphonic traditions. Both in Lithuania and among Ainus the drone was subsequently lost and the canon was introduced.

- Unlike European **professional** polyphony where canon and imitation are of crucial importance, there are hardly any **traditional** vocal polyphonic cultures (apart from Lithuanian *sutartines* and Ainu polyphony) that are based on the wide use of canonic singing. There is something specific in the principle of “delayed” repetition of the same melody (the main principle of canonic singing) that is much closer to professional polyphonic composition than to the folk polyphonic composition.

Therefore, Ainu traditional music confirms the unique position of Ainus in the context of the East Asian ethnic and cultural picture. Their tradition of polyphonic singing, arguably the most isolated on our planet, points towards their westwards (European) or southwards (Taiwan and other Southeast Asian) connections. Together with their physical anthropological features, their tradition of vocal polyphony points more towards the European connection of Ainu people. Discussing Ainus physical features and their hairiness, Cavalli-Sforza cites Alexeev’s 1979 work on Siberian peoples. Alexeev noted that there are some isolated Mongoloid groups who show hairiness, although Alexeev (like Cavalli-Sforza himself) believed that North Asia was initially populated by Caucasoid groups, and considered hairiness as the possible substratum of the Caucasoid populations. To summarize the Ainu problem, Cavalli-Sforza concludes: “It seems reasonable to discard the myth of a Caucasoid origin of the Ainu” (Cavalli-Sforza et al., 1994:232). In the light of the presence of vocal polyphony, absolutely unique in East Asian region, I would not rush to discard the possibility of European (Caucasoid) connections of Ainu. Of course, for a comprehensive discussion of the historical and ethnic origins of Ainu people all the elements of their biology and culture must be taken into consideration. I hope that the unique (for the whole East Asian region) tradition of Ainu vocal polyphony will be seriously taken into consideration in this discussion.

Case Study #10

Southeast Asian Polyphony

November 14th 1986 was the last day of the international conference on traditional polyphony in Georgia. The conference was working in the foyer of the big hall of the “House of Creative Recreation of Composers” built by the Soviet government in the picturesque mountain resort Borjomi. Oscar Elschek was leading the last session. I delivered my paper on the origins of vocal polyphony, where I extensively spoke about the correlation between the geographic distribution of the physical features of different populations and vocal polyphony. This was the last paper of the conference. I was very happy how the paper with such a controversial content was received. After the session was formally closed, an ethnomusicologist from Nalchik (the capital city of Kabardino-Balkaria in North Caucasia), late Tamara Blaeva approached me. “Joseph Mindievich, you mentioned in your paper that there is no polyphony in East Asia, including Vietnam, right?” “That’s right. I have no data about polyphony from that region” I answered. “My husband is Vietnamese. He is a musician, composer, and I know from him that there is a tradition of vocal polyphony in Vietnam. He has recorded examples, and I can send you them if you are interested.”

What can you say? I always disliked the most unscholarly (in my opinion) saying “the exception proves the rule”, but the situation looked for exactly this kind of the “last resort for the bad theory”. At that moment I had no idea about the presence of vocal polyphony in Vietnam. [By the way, this information is not easy to find out even today. For example, the special Garland Encyclopedia article on Vietnamese minorities does not mention the tradition of vocal polyphony.] The only thing I could recall in that very moment on November 14th, 1986 about Vietnam, was the article I read in the central Russian anthropological journal “Soviet Ethnography” on the odontology (population research of the teeth) of the population of Vietnam. I remembered that one of the main conclusions of the article was that the population of the mountainous central and northern parts of Vietnam was very different and must have had a different origin from the main ethnic group – the Viets. “Tell me, please”, I asked Tamara Blaeva, who was waiting for my reply, “is this polyphony in Vietnam distributed among the populations of the Central and North Vietnam mountains?” She looked at me with great surprise “How do you know that? That’s exactly where it is!”

Next year, on May 27th I met Tamara’s husband, Vietnamese composer, Nguen Van Nam in Nalchik, North Caucasia, who gave me very interesting

and useful information about the vocal polyphony among Vietnamese mountain populations, and sent materials for the 1988 polyphonic conference in Borjomi, Georgia.

I am not going to discuss here in detail the complex and not fully understood ethnic and cultural history of southeastern Asia. Generally speaking, the contemporary population of this region consists of two major elements: (1) an earlier layer of indigenous peoples, occupying most of southeastern Asia, including southern China (particularly rich archaeological examples of their culture had been unearthed in Taiwan and Vietnam) and (2) the east Asian populations, who came later from more central and northern regions of contemporary China, assimilated and pushed the indigenous populations towards more mountainous and forest-covered regions of Southeast Asia (Cavalli-Sforza, 1994:206-207).

The stratification of vocal polyphonic traditions and the populations of Southeast Asia strongly suggest that the tradition of vocal polyphony must have been a cultural trait of the earlier, indigenous population of this region. This ancient tradition survived together with its bearers mostly in the forest-covered tropical mountains of Southeast Asia. Other questions that could be raised in connection with the polyphony of Southeast Asia are the possible links (via Assamese and Southern Indian tribal communities) (1) to the sub-Saharan polyphony on the West, and/or (2) to the polyphony of some Indonesian minorities and further, to the polyphony of Melanesian and even Polynesian peoples. Hopefully future studies in the field of traditional polyphony will illuminate these questions.

Case Study #11

From the Atlas Mountains to Bahrain

Readers may remember the unusual three-fold division of the African continent, suggested in the first part of this book. This was based mostly on the fact of the presence of the unique, for the African continent tradition of vocal drone polyphony among Tuaregs. Tuaregs live between Sub-Saharan Africa and North Africa, in the inhospitable Atlas Mountain ranges and the Sahara Desert. The two neighbouring regions from south and north from the Tuareg's residence are musically totally different. Sub-Saharan Africa is the largest and most active polyphonic region of the world. North Africa, on the contrary, is one of the most monophonic regions of the world.

With their tradition of vocal polyphony Tuareg music is generally closer to sub-Saharan African music, which is also polyphonic. At the same time, the difference between the sub-Saharan African polyphony and the Tuareg polyphony is based on an element of crucial importance. Tuareg polyphony is based on drone polyphony, whereas in sub-Saharan Africa drone is hardly ever used. Therefore, Tuareg traditional polyphony cannot belong to sub-Saharan African family of vocal polyphony.

Two possible historical models might explain this isolated position of Tuareg polyphony in Africa.

(1) Tuareg polyphony is a totally separate and isolated tradition of vocal polyphony, with no traceable links to any other big polyphonic family; or,

(2) Tuareg vocal polyphony is a part of a larger polyphonic family, separated from the other members of the same "family" for some geographic or historical reasons.

Considering this issue in the wider Eurasian-African context, the second model seems to be much closer to the historical reality. Although Tuaregs live in Africa, where their polyphony is almost a one-off phenomenon, their polyphony finds plenty of parallels among European polyphonic traditions. The readers may remember geographically isolated archaic traditions of vocal drone polyphony on the islands and the mountainous regions of the northern beaches of the Mediterranean Sea. The idea of Tuareg-Berber contacts with the ancient European world is not alien to linguists as well (Allieres, 1979, See also Cavalli-Sforza et al, 1994:264). According to

Cavalli-Sforza, “Caucasoids arrived in the western part of North Africa from the Iberian peninsula at an early time, perhaps 20 kya [20 000 years ago] or more” (Cavalli-Sforza et al., 1994:193). The well-known hypotheses about the possible genetic relationship of Basque and Caucasian languages with the Berber languages further complements the links of Tuareg polyphony with the ancient European polyphonic traditions (see Gordeziani, 1985; Gamkrelidze & Ivanov, 1990; Cavalli-Sforza et al., 1994:222).

So, according to our model, Tuareg vocal polyphony historically was a part of a large polyphonic family that was occupying most of the territory around the Mediterranean Sea. We could call this family the “Mediterranean family of vocal polyphony” but similar traditions are found distant from the Mediterranean Sea regions as well. For example, polyphony of the big forest region between the Ukraine and Belarus, Polesie, or the polyphony of the Baltic countries, or even the polyphony of Nuristan in the Hindukush Mountains show the obvious signs of belonging to the same polyphonic family. Another possible name of this “super-family” of vocal polyphonic traditions could be “the European family of vocal polyphonic traditions”, but even this name would not include the regions like Nuristan and the Atlas mountains in North Africa. The wider geographic names like “West Eurasian”, or even “West Eurasian-North-African vocal polyphonic family” would be more precise for the existing reality for the stratification of drone polyphony across Eurasia and North Africa. Let us not concentrate too much on terms. Whatever name we use, it is important to know that this term denotes the polyphonic family that includes polyphonic traditions from different parts of Europe, North Africa and parts of Asia.

Another interesting issue connected to the Tuareg polyphony is the presence of obvious elements of monophony in their singing traditions. We have already discussed the European polyphonic traditions that show traces of the deep structural influence of Middle-Eastern type monophony. Such cultures (as found in the East Georgian table songs, the singing of Albanian Chameri, the province Albacete from eastern Spain, or the polyphonic singing from Corsica, Sardinia and Sicily) combine drone polyphony with free flowing, richly ornamented melodic lines. The same can be said about Tuareg polyphony, which also bears the obvious signs of the interaction with the monophonic singing traditions (although Tuareg polyphony is usually rhythmically strictly organized).

Of course, to explain this presence of the monodic singing influences on Tuareg music, we do not need to look very far for the source of influence. The appearance of Arabs and the Moslem religion in North Africa in the 7th

century is well documented even to the extent of the precise year – 688. But I do have some mild reservations about explaining the monophonic elements in Tuareg music by the influence of Arabian musical traditions from the 7th century. I'll explain why.

As I tried to argue earlier, in the cases of the influence of monophonic music on polyphonic music the age of the influence makes a big difference. For example, in the case of the influence of Arabian music on East Georgian singing, starting also from the 7th century, the layers of the two different musical styles are still clearly identifiable. The genuine mixture between the monophonic and polyphonic styles and the creation of the new singing style (as found among East Georgians, Chameri Albanians, Albacete Spaniards, or Corsicans), I believe requires a longer period of interaction of the monophonic and polyphonic singing styles. I tried to argue that the creation of this mixed style was connected to the influence of the Indo-European migrations that, according to archaeological and physical anthropological evidence, took place in Eastern Georgia around the 2nd millennia BCE.

We cannot use the migration of Indo-Europeans for the explanation of the Tuareg mixed style of drone melismatic polyphony. According to our knowledge, Indo-European languages never reached the African continent. At the same time, the presence of Semitic peoples (Phoenicians) in North Africa is well documented well before the appearance of Arabs in the 7th century. I have already mentioned, that according to the main characteristics, musical cultures of early Indo-Europeans (Armenians, Iranians, Tajiks, Dorians) were very close to the stylistic feature of Semitic and Turkic language speakers. Therefore, I suppose that the genuine mixture of monophonic and polyphonic styles, present in Tuareg traditional polyphony, could be the result of the influence of the Semitic (supposedly monophonic) traditions on indigenous Berber-Tuareg (supposedly polyphonic) singing traditions.

The presence of the remnants of the drone polyphonic singing traditions among Tuaregs in currently monophonic North Africa is not a unique occurrence for the North African – Middle Eastern region. Another very important tradition of vocal polyphony is the songs of the **pearl divers from Bahrain**, the largest island in the Persian Gulf. If readers remember from the first part, the tradition of pearl collecting around Bahrain was a thriving enterprise for the local populations at the beginning of the 20th century. At around 1930 a few important factors altered this situation: (1) an economic depression following the Wall Street crisis in 1929 slowed down the

business, (2) the finding of oil on Bahrain started a new and more lucrative business (1932), and (3) the mass manufacturing of cultured pearls by Japan created severe competition on the world market. These changes eventually stopped the pearl diving business. According to Røvsing-Olsen, the traditional singing of pearl divers, continuing as the indispensable part of the regional business **at least** for the last 4000 years, ended in 1956-1957. Even earlier, more than 5000 years ago, Bahrain (known as “Delmon” or “Dilmun”), at that time closely connected to the civilization of the Sumerians, was the most important point of trade between Mesopotamia and the Indus Valley civilizations. The ancient songs of the pearl divers survived during the second half of the 20th century in the *dars*, or “music houses”, where the former pearl diving boat crewmembers meet to sing their traditional songs with the cups of tea and coffee. In 1978 there were 14 such “music houses” left on Bahrain (Røvsing-Olsen, 2002a:89).

There is a certain typological link between the vocal polyphony of Tuaregs and Bahrain pearl divers. Most importantly they display (1) a drone type of polyphony, where one (or two) soloists sing against the group of singers who sing the drone, and (2) both of them display the obvious sings of the influence from Middle Eastern monophonic music.

Following the historical tendency of the disappearance of vocal polyphonic traditions in many cultures all over the world, I do not look seriously at the possibility of the independent and late “invention”, or evolution of vocal polyphony from the local monophonic traditions on Bahrain. Most likely the local drone is the survival of the ancient practice of this region. In one of the later “case studies” we are going to discuss the possibility of the presence of vocal polyphony among Sumerians. The earliest notated piece of music in human history (recorded with the use of the Sumerian alphabet) was found in Sumer, and this record indicates the presence of multi-part (two and three part) music in Sumer. There are other possible survivals of ancient drone polyphony from the Middle Eastern region. Summarizing the available information on vocal drone in the Middle East, Røvsing-Olsen mentions “Egyptian work songs and dance songs”, Sufi ceremonies from different countries, Bedouin double chorus song called *ahalla*, “Mawled singing in Dubai”, and the United Arab Emirates where the drone sometimes is above the leading melody (Røvsing-Olsen, 2002:93).

Therefore, following the musical characteristics of the polyphonic singing of Bahrain, I suggest to unite the vocal polyphony of pearl divers with the extended “West Eurasian-North African polyphonic family”.

Case Study #12
“I’ll Follow the Sun”:
Round-the-World travel ticket
or the vocal polyphony of Native Americans

I always loved the idea of travel to faraway countries, and the globe is one of my most favorite objects from my childhood. This was quite a fruitless passion for a person, born and raised in the Communist Soviet Union. My former compatriots would still remember that any travel outside of the Soviet Union was almost a miracle. That’s why until the Communist regime started to crumble from the second half of the 1980s, I traveled outside of the Soviet Union only once – it was a two-week visit in Socialist at the time Hungary in August 1977. It was still a miracle and my friends were not tired for long months asking me to tell them about the life “outside of the wired fence”, as we sometimes called the Soviet Union. Later, after we moved to Australia in 1995, we started to travel, and the first really big travel was a round-the-world tour during the last year of the 20th century. Our round-the world ticket covered the mouthwatering route from Melbourne to Los-Angeles, Chicago, London, Paris, Istanbul, Tbilisi (the capital of Georgia) and back to Melbourne.

I do not know if any readers thought about this, but viewing the forthcoming exciting route around the world on a small globe on my desk, I remember having a thought about the direction of our round-the-world travel. “Everyone moves around the world going either in a western direction, or in an eastern direction”. Of course, from the point of view of the shape of the globe the ideas of “up” or “down” are purely arbitrary. I often imagine, when I am talking on the phone to my relatives and friends in Georgia, or Europe, how they are strangely “upside down” for me (or I am “upside down” for them). So, theoretically it does not make any difference whether we move around the world eastwards/westwards or southwards/northwards. For example, if you start your travel from Australia, you could just as well go northwards and visit Indonesia, China, Japan, the Russian Far East, and then fly over the North Pole, go through Canada, the USA, Mexico, Peru, Brazil, and then from Argentina (or Chile) you could fly over Antarctica to Australia again. Do you think this route is less interesting? And if you want to make your travel more exciting and challenging, you could even try to spend a few days on Antarctica as well.

Well, maybe this unusual direction of round the world travel does not differ from any other “usual” itineraries, when you are watching the globe on

your desk. Maybe some airline companies will some day even offer this kind of unusual round-the world travel routes “across the North and South Poles” tours for a change, but the difference that the direction of the real round-the-world travel can make is enormous. Particularly, if planes and large comfortable ocean liners had not been invented yet. I am talking about our ancestors, amazing travelers, who on foot colonized the vast regions of the world long before ocean liners and later planes came into existence.

The big difference is that in real life it is much easier to travel long distances eastwards or westwards, than southwards or northwards. The reason is very simple. If we move to the north, it will be getting colder every few hundred kilometers, and if we move to the south, it will be becoming increasingly hotter. In the southern hemisphere the directions for “hotter” and “colder” temperatures are naturally reversed. On the other hand, if you travel westwards (or eastwards), you may travel in relatively comfortable temperatures for tens of thousands of kilometers. The position of the Sun and the degree its rays fall on the surface of the earth is crucial for this. Direct sunlight in the tropical region, a moderate degree of the sun’s rays falling on the earth in more moderate regions, and at the poles the sun’s rays falling on the earth at a lower degree are chiefly responsible for the drastic differences between the temperatures on our planet.

Sunlight is not the only facilitator (or the challenge) for large-scale migrations. Another obvious factor is the geography of continents. Continents have not been designed for easy travel on foot, and are interspersed with seas, big rivers, mountain ranges and other natural challenges for travelers. Therefore, although our distant ancestors did not have to apply for a tourist or student visa to travel and settle on new territories, they were constrained in their travels by these two important factors: (1) the availability of the more or less comfortable ecological zones to travel and to settle in new territories (subject to the availability of the sun’s rays), and (2) the natural geography of continents.

Roughly speaking, we could divide our planet into three huge ecological zones: (1) cold, (2) hot, and (3) moderate. The hot (or Equatorial) zone is a single belt, going around the world roughly along the equator. Both “cold” and “moderate” zones are each of them two, one in each of the hemispheres. The “Cold” zones are at the North and South Poles, and the “moderate” zones are sandwiched between the “hot” equatorial and “cold” pole zones.

Why do I need to talk about these obvious things? When we are talking about large-scale migrations, we need to take into account these very simple geographical and ecological factors. A combination of the two factors (the

position of the Sun and the natural geography of continents and big regions) determines the direction of the major, or strategic migrations in human history. Based on a special study of the variation of gene frequencies and their principal components associated with latitude and longitude (Piazza et al. 1981), Cavalli-Sforza concludes: “Longitude showed a major effect, not surprisingly, given that most of human genetic variation is placed on an east-west axis that reflects the most important population movements” (Cavalli-Sforza et al., 1994:142)

These factors explain, for example, why the traces of sub-Saharan African populations (living mostly in a tropical environment) are not found in Central or North Europe, or in Central or North Asia. The only available point to reach the New World (the Bering Strait) was also beyond the comfort climatic zone of sub-Saharan African populations.

Because of the same climatic constraints Europeans did not go deep into tropical Africa until the 19th century. And even in the 19th century this was not easy – read about the travel of David Livingston or Henry M. Stanley.

Because of the same climatic constraints East Asian populations did not go deep into the tropical forests of Southeast Asia and did not reach Australia until relatively recent times.

So, large-scale travel towards north or south seems to be extremely difficult to conduct. On the other hand, travel possibilities towards the east and west were open to every population willing to travel to new territories. This is the main reason why so many great travelers in human history and prehistory were “following the Sun”, or, alternatively, were going towards the “place where Sun rises”. There is a great ecological wisdom in these symbolic destinations. Follow the sun and you will stay warm.

Different human populations were formed in different regions of the world and different ecological conditions. Some were formed in the tropical “belt”, and others in the moderate or even cold conditions.

Sub-Saharan African populations were formed in the tropical belt. Naturally constrained from the westwards migrations from Africa, the eastward route was not very easy either, although it still was not impossible. In the contemporary world the populations, possibly related to sub-Saharan African populations, are found in an eastward direction from Africa - in several pockets of the southern and northeastern tropical regions of India, up to Melanesia.

European populations were formed in the relatively moderate and cold climatic conditions. An eastward large-scale migration was the natural direction for them as well. And their traces are found through the whole of

Eurasia, and according to some archaeological and physical anthropological data, they also reached the American continent.

For the **East Asian** populations both ways – east (to America) and west (to West Asia and Europe) were open, and as we know, they used both ways for their natural territorial expansion. Their prehistoric “eastern campaign” brought East Asians to both North and South America, and their “western campaign” during the much later, middle centuries brought them up to the territory of Central Germany.

Discussing environmental adaptations of early humans, Coon wrote: “Simply by observing the geographical distribution of living peoples, we can see that no single subspecies is limited to a single climate. Caucasoids live all the way from Norway to India. The aborigines of Tasmania, who were spiral-haired Australoids, went about nearly naked in a climate as cold as England’s. Mongoloids may be found from the Arctic to the wet tropics, and both the Australian aborigines and the South African Bushmen, whose ranges are more limited, live through broiling heat and freezing weather at different seasons, with a minimum of cultural assistance” (Coon, 1963:59). Despite the correctness of Coon’s argument, the dividing force of the “tropical belt” still stands.

Because of the above mentioned climatic constraints on “north-south” travel there had been hardly any major prehistoric conflicts between the sub-Saharan African populations with the European or East Asian populations; or between the East Asian and Australian Aboriginal populations. On the other hand, European and East Asian populations were residing in the same “climatic zone” of Eurasia (Europeans in the west, East Asians in the east), and this fact resulted in their mutual coexistence in Eurasia with the common mixture of the whole range of human neighbouring relationships.

After this long discussion about the human long-range migrations (that could be called a “Meridian Migration Model”, or MMM) I think we are ready to talk about the polyphonic elements, found among Native Americans.

Bruno Nettl’s more than 50 years old article is still arguably the best publication on this topic (Nettl, 1961). I am not going to repeat the description of the elements of vocal polyphony among North American Indians. To briefly summarize, we can recall, that larger and smaller elements of vocal polyphony were found in the traditional singing practice of American Indians in many regions of North America, most notably among the Northwest coastal tribes and Salish Indians of British Columbia, and the Eastern USA Indian tribes. The most widespread type of polyphony is drone

(for the detailed discussion of the available information see the section about North American Indian polyphony in the first part of this book).

Discussing the available information on vocal polyphony among North American Indians from the historical perspective, Nettl suggests two possible interpretations:

“The question is, then, whether there was a *bona fide* development of polyphony in North America. A basic rhetorical problem is the distinction between a culture capable of inventing polyphony, and one capable, because of its prior musical development, of absorbing polyphony brought from elsewhere” (Nettl, 1961:360) Then Nettl discusses the evolutionary approach towards the origins of polyphony and assumes that “monophony [perhaps] preceded polyphony in each culture. If this is the case, were the Indians about to evolve a polyphonic style? Why are the references so sparse and the recordings at a minimum? And did the development of Indian polyphony in North America come as a result of influence from the outside, or was it indigenous?”

“One possibility, of course, is that the Indians formerly had an elaborate polyphonic style, which had died out before there was intensive contact with the whites, and which still exists in isolated remnants. Such a case of retrogression, of moving from polyphonic to strictly monophonic music, would be unprecedented in music as we know it. On the other hand, the widely separated instances of one particular type, the drone, tends to strengthen this argument, since these isolated instances could be interpreted as survivals of a widespread practice. If the surviving types were more complex or specialized ones than, say, the simple drone, the possibility of an early polyphonic culture in North America would have to be taken very seriously. Under the circumstances – and assuming that a simple phenomenon, such as drone, stands a chance of being invented or discovered several times independently – the opposite must be considered a greater possibility; that is, that the Indians were beginning to discover polyphony, but that it had not been generally accepted except, perhaps, by a few tribes” (ibid, 361).

Reading this historical discussion about the scattered traditions of vocal polyphony among North American Indians, written more than 50 years ago, is very interesting. Nettl suggested the possibility of the gradual disappearance of the tradition of vocal polyphony among American Indians and its survival in many isolated regions, although he himself considers this kind of “retrogression” “unprecedented in music history”. Earlier in this part of the book I discussed quite a few documented cases of the gradual disappearance

of vocal polyphony in different regions of the world. Therefore, the possibility of the “retrogression from polyphony to monophony” is by no means “unprecedented in music history”. On the contrary, the idea of the development of vocal polyphony from monophony, discussed by Nettl, as a more plausible model to explain the presence of elements of vocal polyphony among North American Indians, would be really unprecedented in the realms of traditional music. Therefore, with our current knowledge of the historical dynamics of vocal polyphony, the suggestion of Bruno Nettl about the gradual disappearance of vocal polyphony among North American Indians and the survival of this tradition in isolated regions of North America sounds very realistic.

If we try to explain the presence of vocal polyphony in different parts of North (and South) America, we are coming to the very much-debated problem of human migrations to the American continent.

During our discussion of the MMM (Meridian Migration Model) we mentioned the well-known fact that more moderate and colder parts of Eurasia were populated by the two major populations – Europeans (in the west, mostly around Europe) and East Asians (in the east, mostly around Central and North China). Regarding the first settlers of America, during the early 20th century it was mostly believed that the Native population of the American continent were descendants of East Asian groups that crossed the Bering Strait more than 10 thousand years ago. This model was re-examined later, and the presence of a European element was noted. The absence of some important East Asian physical features (like epicanthus) among many American Indians peoples, and the presence of other atypical for East Asian population features (big noses, for example) is widely known. Russian physical anthropologist Valeri Alexeev delivered a paper in Yellowknife, Canada, in 1987, on the settlement of the American continent by the early waves of European populations who came there via the Bering Strait. According to Cavalli-Sforza, the European population and culture was the first to settle North Asia from about 35 000 BP (Cavalli-Sforza, 1994:197) and this is the possible time for the appearance of the first waves of humans in North America from North Asia (Cavalli-Sforza et al, 1994:303-308; Cavalli-Sforza, 2000:62).

Scholars generally agree that there had been at least three migration waves to America. The presence of a European component has been suggested only for the first wave (around 35-15 thousand years ago). The second wave brought Na-Dene peoples to America (peoples like Dene, Apaches, Navajos, about 15-10 thousand years ago), and the third wave is

connected to the appearance of the Inuit and Aleut populations (about 10 thousand years ago or later. See Cavalli-Sforza et al., 1996:307-308). Classification of the languages of the American Indians into three groups (Greenberg, 1987) also suggests three big waves.

The Bering Strait is not the only route that scholars suggested for the appearance of Europeans to North America. A new route via the ice-covered Atlantic Ocean directly from Europe was also proposed. There are also suggestions about the earlier (around 37 000 years old) migration via the Bering Strait, during the previous ice age, and still another hypothesis suggested the arrival of the earliest human groups to America from the Pacific. Generally the more agreed model among archaeologists and anthropologists is that the first Americans arrived from Siberia about 35-15 thousand years ago and then spread to Central and South America (Cavalli-Sforza et al., 1994:308).

Now let us have a look at the singing traditions of the American Indians in the light of the different settlement models existing today. The debate about the settlement of the American continent is far from being finally settled. According to Cavalli-Sforza, “America, in particular South America, is genetically the most variable part of the world” (Cavalli-Sforza et al., 1994:337).

What can we say in this regard according to the polyphonic data? The East Asian populations are carriers arguably of the most monophonic singing traditions among human populations, therefore plenty of elements of vocal polyphony that American ethnomusicologists recorded in different isolated pockets of North America strongly contradict the model of exclusively East Asian origins of American Indians. On the other hand, the possible presence of European populations among the early settlers of America receives support from the singing traditions of Native Americans. This support is more specific, than the simple presence of vocal polyphony per se. The type of polyphony (drone) also points to the European direction. The readers may remember from the review of the Native American traditions of vocal polyphony that the drone had been recorded both under the main melody, and above the main melody. This feature is also characteristic of polyphonic traditions in European populations.

If we try to find out the possible route as to how European drone polyphony could appear in North America, theoretically two ways are possible: the eastern (via the Bering Strait) and western (via the ice-covered Atlantic Ocean), but the route via the Bering Strait looks much more preferable. This is because, as we discussed during the previous “Case

Studies”, there are signs of the presence of European drone polyphony among contemporary populations of Central Asia (Tuva, Western Mongolia and the adjacent territories) and East Asia (Ainus). Therefore, the long-range migrations of European populations deep into Asia might be reflected in the musical traditions of Central and East Asian peoples.

Therefore, summarizing this case study, we can say that the vocal traditions of the American Indians support the suggestions given about the European elements in their settlement history, and the most likely route for this gigantic transcontinental migration must have been via the Bering Strait. This does not rule out other routes, and in the light of the amazing tenacious traveling abilities of our ancestors we should not be very surprised if strong evidence is found to confirm that human populations did reach America via more than one route.

Case Study # 13

Vocal Polyphony in Ancient Civilizations: Mesopotamia and Mesoamerica

One of the main problems in the research of early forms of vocal music is that singing does not fossilize. It is a different story with musical instruments. You can discover different musical instruments in the archaeological remains, and by studying them you can receive plenty of useful information about the music that was played on these instruments. In case of the blown instruments you can sometimes even have “first hand” information about the scale system of the music that was played hundreds and thousand of years ago. In regard to singing the most you can learn from the archaeological artifacts, are the paintings (or statuettes) of the people singing, sometimes in conjunction with playing instruments or dancing. Those interested in vocal polyphony (like myself) are always fascinated by the ancient drawings depicting groups of people singing together. And here come the unanswerable questions: were they singing in unison, or in harmony? And if they were singing in harmony, what kind of harmony or polyphony was it?

Are these questions really unanswerable? This “case study” discusses the method that could help us to read the archaeological records in search of the vocal polyphonic traditions of the ancient world.

The method is very simple and straightforward, and is based on the **parallels between vocal and instrumental music**.

Readers might remember that this book was originally perceived, researched and written as a book wholly dedicated to the problems of **vocal** polyphony. Detailed interaction between vocal and instrumental polyphony is a huge new sphere, which I was carefully avoiding for two main reasons.

(1) The scope of the book is already and understandably wide, and bringing new information about musical instruments from hundreds of cultures from different parts of the world would make this book almost unreadable.

(2) Although I have been actively researching the sphere of traditional polyphony for more than thirty years, my main interest always has been directed towards vocal polyphony. Therefore, I must say that despite the ironic fact that after I had been invited as a guest scholar-ethnomusicologist in a popular Australian TV series to discuss musical instruments from different cultures, and some of my friends

consider me an expert of musical instruments, my actual expertise in this sphere is quite limited.

So why then am I going to go against my own principles and discuss here the interaction between vocal and instrumental polyphony? There is only one reason for this. Because I believe **instrumental polyphony can provide us with very useful information about the history of vocal polyphony**, information that we would be unlikely to receive from any other source.

On one hand it seems natural, that the vocal and instrumental music of any given culture must be interconnected in many robust and subtle ways – musical, psychological, social, historical, and political. What we play on musical instruments must be closely connected to what we sing. On the other hand the links between vocal and instrumental polyphony is far from simple. Recognizing the complex nature of the interaction between vocal and instrumental polyphony, and the further need in this promising sphere, I want to discuss here only the possible links between **vocal polyphony** and the **blown polyphonic instruments**.

Looking at the different polyphonic types in my native Georgia, I noticed that the bagpipes from the different regions of Georgia were playing the same type of polyphony that was characteristic of the vocal music of these regions. In Racha the bagpipe was mostly playing the simple drone and ostinato figures, whereas in contrapuntal Achara the bagpipe played a more active polyphony. And on the double *Stviri* in Kartli they play a simple drone and ostinato polyphony. Looking at other cultures proved that this was not a unique occurrence to Georgia, and that in many regions vocal polyphony and blown instrumental polyphony are very close to each other. After the Georgian ethnomusicologist Ketevan Nikoladze started researching the parallels between polyphonic blown instruments and vocal polyphony, these links became more obvious (Nikoladze, 1986, 2003).

At least some of my colleagues would say that there is hardly anything extraordinary in this fact. Yes, you can certainly see that on polyphonic double blown instruments people often play the type of music they sing. The facts of the close connections between the double blown musical instruments and the tradition of vocal polyphony were noted by scholars from different countries (see, for example, Kvitka, 1973 for Russia; Kachulev, 1965 for Bulgaria; Tinurist, 1980 for Estonia; Rachiunaite-Viciniene, 2002 for Lithuania, Nikoladze, 1986, 1986a, 2003 for Georgia. See also Emsheimer, 1964:43-44).

Interestingly, the idea of the close relationship between the polyphony of blown musical instruments (double and triple blown instruments) finds support in the regions where this correlation between the vocal polyphony and double blown instruments is ostensibly not working. For example, double blown instruments are known among Central Asian peoples (Uzbeks, Tajiks, Turkmens), although their vocal traditions are mostly monophonic. To answer this question, we must take into account not only the fact of the presence of a double blown instrument per se (the presence of two reeds), but **the construction of the instrument and the type** of music, played on these instruments. Central Asian double blown instruments play in unison, and unlike the many double instruments from the Mediterranean region, both reeds are understandably of the same length, with the identical number of holes on each reed.

Therefore, in discussing double blown instruments, the type of instrument must be taken into account: are both reeds of the same length? Are all the holes identical? The answer to these simple questions can provide us with some basic knowledge about the type of music played on these instruments. Therefore, distinguishing a **structurally monophonic double blown instrument** (with identical length reeds and an identical number and system of holes) and a **structurally polyphonic double blown instrument** (with non-identical reeds and a different system and number of holes) from each other is methodologically extremely important.

Of course, it is theoretically possible (although less likely), that a traditional player could play polyphonic music on the structurally monophonic double blown instrument. The reversed case, when the performer plays monophony on the structurally polyphonic double blown instrument (say, with a melodic pipe and a drone pipe), consciously trying to play in unison, is much more difficult, although we will see later that the skepticism of scholars sometimes have very little or no boundaries, particularly when it comes to accepting the presence of polyphony in ancient musical cultures.

Sometimes both (polyphonic and monophonic) types of double blown instruments are present in different regions of the same country. For example, Ancient Greece knew both polyphonic and monophonic types of double blown instruments *aulos*: (1) the one that was considered to be the purely Hellenic instrument had the same length reeds with identical holes on them (a structurally monophonic instrument), and (2) another one was considered non-Hellenic, a “barbaric” instrument, it had reeds of a different length, with a non-identical set of holes on them (a structurally polyphonic

instrument) (See: Oxford Classical Dictionary, 1979:710). This fact of the presence of two different types of *aulos* correlates with the fact of the mainstream monophonic singing culture of the Ancient Greeks, and the presence of the traditions of vocal polyphony in the mostly mountainous regions of the Balkan Peninsula (including Epir and Rhodes in Greece, where the polyphonic tradition was alive in the 20th century).

An important detail in correlating the traditions of vocal polyphony and the double blown instruments is that, double blown instruments seem to become particularly important for the culture when the tradition of vocal polyphony is **declining**. In Georgia, for example, double blown instruments are found mostly in regions where the vocal tradition is not as strong as in other regions. The absence of double blown instruments in very active polyphonic traditions could be connected to the total domination of vocal choral practice in musical and social life. For example, the musical activity of Pygmies was traditionally almost exclusively vocal and choral. It seems that blown polyphonic instruments become more important when social and choral ties in the community are getting weaker. The psychology behind this phenomenon is something like this: “If there is no one else to support my singing with the other part, I’ll do this for myself”.

The readers might interpret this connection between blown instruments and vocal music as an indication of the general link between vocal and instrumental forms of traditional music. Interestingly though, another big group of musical instruments, string instruments, do not show this kind of close connection to vocal traditions. Plenty of cultures with monophonic singing traditions have very developed polyphony played on string instruments. For example, many of the Central Asian cultures with monophonic singing traditions have the polyphony of string instruments (but not the polyphony of double blown instruments).

This specific closeness of blown instruments with vocal traditions is most likely to have a physiological-psychological basis and be connected to the **process of breathing**, paramount for the physiology of both singing and playing blown instruments (Jordania, 1985, 1989:224-227; Nikoladze, 1986). Because of the breathing the musical phrasing on vocal and blown instrumental music is also very similar.

I was thrilled to discover, that a very deep connection between singing and blown instruments had been noted by Ancient Egyptians. The same hieroglyph (showing the bird – another very symbolic sign) was used by Egyptian writers to depict both (1) singing, and (2) playing the flute (Gruber, 1941:172).

The general closeness of blown instrumental polyphony and vocal forms of polyphony has potentially revolutionary implications for the study of the history of vocal polyphony. As the musical instruments are among the best-preserved artifacts in the archaeological records (particularly when they are made of materials like bone, or fired clay), they can provide quite accurate information about the monophonic or polyphonic types of music, including the type of polyphony and scales. If the closeness between polyphonic singing and polyphonic blown instruments is taken into account by ethnomusicologists (and particularly by music archaeologists), the information provided by ancient musical instruments could considerably widen our scope of the knowledge about the singing practices of past epochs.

Two examples of ancient civilizations that might have known vocal polyphony will be discussed below.

Ancient Mesopotamia

According to Kurt Sachs, a double oboe appears in very early written Sumerian documents (Sachs, 1937:100). This instrument from Ancient Mesopotamia was generally of a drone type (“Both reeds were sounding together, one of them playing the melody and the other holding the same note”, Sachs, 1937b:85). Does this mean that Sumerians were acquainted with the tradition of polyphony? There are few other sources of information (besides the fact that Sumerians used double blown instruments) that could shed a light on this matter.

Maybe the most important, or at least the most famous, are written examples of music from Ancient Mesopotamia. Ancient Sumerians, most likely the inventors of the writing system, the wheel, the system of time units from 60 seconds to twelve months, intensive agriculture, legal civil and administrative systems and schools, are credited with the invention of the music writing system as well. The same Curt Sachs, one of the best experts of the music of Ancient civilizations, wrote in the 1930s:

”Relatively recently an important discovery was made. This discovery enriches our meager knowledge of ancient Babylonian music. This discovery is particularly important, as it is the only example of Babylonian musical culture that is available to us. In the Berlin Museum there is a tablet with writings from the Sumerian epoch. The writings represent a poem in the Sumerian language about the creation of humans. Next to it there is a translation of this text into the Assyrian language. Scholars investigated the writings in Sumerian on the margins of the tablet. These writings represent the usual Sumerian syllables, but they are arranged in a way that they do not

make any sense. The author of this article managed to decipher this writing, which turned out to be a system of music transcription. There are 57 syllables, and 18 of them (like our own do, re, mi, fa, sol, la, ti) denote the single notes. All the other syllables denote the chordal combination of two and even three sounds. Later research suggested that this excerpt represents the recording of the harp part, which is accompanying the voice, singing the melody. Semitone melodic moves are thoroughly avoided. Only the five tones within the octave are used. The rest, three or even four tones are used only when modulating to another mode. From the full scale

C D E F F# G A B C

the musician from Babylon uses only the following scale sequences:

C D E G A C

C D F G A C

D E G A B

D E F# A B

“In these melodic sequences the semitone is always absent. It is not used either in diatonic nor even the chromatic phrases. The harp is following the melody in unison, simultaneously accompanying the melody with two and three-part chords, consisting of fourths, fifths, octaves, seconds, and double octaves. The music makes an impression of great inner unity and reminds one of Chinese music (the same way, as the system of the seasons of the year)”.

“The importance of this discovery is in the fact that this is not only the first and the only example of Babylonian music, but the only example of musical culture of pre-Hellenic epoch. Besides, this is the first example of multiphonic instrumental music, and it gives us at least some idea of what and how was performed on the multi-string harp” (Sachs, 1937:103-104). Therefore, the great German scholar suggested that the Sumerians instrumental music was polyphonic.

After the 1930s, when Kurt Sachs wrote these words, the archaeological research brought a few more “first-hand” musical material to our knowledge. A few dozens tablets with apparently musical notations were found from Ancient Mesopotamia, particularly during the 1960-1970s. A few different readings of these notated examples were suggested (see the discussion in West, 1994). The most widely known is the interpretation made by Anne Draffkorn Kilmer, a scholar who played an important role in interpreting and publishing the Ancient Mesopotamian texts related to music theory. Kilmer interpreted the interval names as an indication of two-part music (the upper

part as a vocal line and the lower line as an accompaniment). Therefore, Kilmer also pointed towards the presence of instrumental polyphony among the peoples of Ancient Mesopotamia (in this case in Hurrians from Ugarit, the ancient royal residence in contemporary northern Syria) (Kilmer, 1971, 1974).

Kilmer's transcriptions caused a major controversy mostly because scholars could not believe developed two-part music could exist in the Ancient Mesopotamian epoch. As West puts it, "One's immediate reaction is skepticism at the notion of this kind of harmony existing in any ancient music" (West, 1994:173). Other scholars also expressed the same kind of skepticism (Wulstan, 1974; Duchesne-Guillemin, 1975, 1980:11-18). As support for her suggestion of the possible presence of polyphony in Mesopotamian music, Kilmer mentioned the study conducted by Hans Hickmann.

Hans Hickmann earlier proposed that two-part music with drone was known in Ancient Egypt, and even made a transcription (Hickmann, 1952, 1970:138-140). Scholars were (and some still are) cautious about this revolutionary interpretation (for example, see Manniche, 1991:30-32).

Therefore, we have at least three interpretations of the Ancient Mesopotamian (and Ancient Egyptian) music, made by Kurt Sachs, Hans Hickmann, and Anne Draffkorn Kilmer, where scholars propose that the Ancient Mesopotamians (and Egyptians) knew and performed polyphonic instrumental music, and the crucial argument against this idea, to put it simply, is that scholars do not believe that it was possible that these ancient peoples could have already developed polyphony a few thousand years ago.

As we can see, the main problem is again the deeply rooted belief of musicologists that polyphony evolved later as the natural development of primordial monophonic music. Of course, if we are ready to critically reconsider this blind belief in the light of the documented history of human musical cultures (discussed earlier in this book), we will be able to see that polyphony is in fact gradually **disappearing** (instead of **appearing**) throughout human history. And if we do accept this profoundly important historical tendency of the gradual disappearance of polyphonic traditions, we will be able to see this whole controversy about the polyphony in Ancient Mesopotamian music in a new light. Our model of the gradual disappearance of polyphonic traditions, and therefore, a wider earlier distribution of polyphonic traditions, strongly supports the suggestions of Kurt Sachs, Hans Hickmann and Anne Kilmer.

But this is not the whole story. According to our current knowledge and the suggested model of the gradual disappearance of the traditions of vocal polyphony, it would be natural to propose that Ancient Mesopotamians had **not only instrumental, but vocal forms of polyphony** as well (Jordania, 1989a). Let us now have a look at what we have to support this bold claim, besides the general model of the gradual disappearance of the traditions of vocal polyphony in different parts of the world.

- First of all let us have a look at the surviving traditions of vocal polyphony from this region. Polyphonic singing has been a part of the ancient tradition of the pearl divers from Bahrain. This uninterrupted tradition of pearl diving has been documented **at least** for the last 4 thousand years, and Bahrain, or the ancient Dilmun (Delmon) has been a vital part of Ancient Mesopotamia from the earliest (Sumerian) period. Although the theoretical possibility that Bahrain pearl divers “developed” their polyphony from monophony may still exist, the conspicuous absence of such evolutionary transactions in traditional singing cultures does not allow much chance for this possibility.

- A strong vocal polyphonic tradition among the oldest layers of the populations of the Balkans and the Caucasus, living in the most isolated mountain regions also support this view.

- Drone polyphony, documented among Tuaregs, arguably the best survival of the indigenous North African population and culture, also supports the suggestion made by Hickmann about the presence of drone polyphony in Ancient Egypt, and generally strengthens our argument about the presence of vocal polyphony in Ancient Mesopotamia.

- The fact that choir singing in the Sumerian temples was an everyday practice, is also known to scholars. Choirs were known under the name “Nar” (or “Nar-Nar”).

- Even the transcription of Kurt Sachs, made as an example of instrumental music, makes more sense if considered as an example of vocal music. I mean the intervallic content of the musical piece. According to Sachs, the intervals used in the music he transcribed were “fourths, fifths, octaves, seconds, and double octaves” (Sachs, 1937:103). Octaves, and particularly double octaves seems a bit out of logical sequence in this line, because the other intervals mentioned are much smaller – seconds, fourths, fifths. (the Russian music historian Rozenshild even skips the double octaves when citing the Sachs intervals. See Rozenshild, 1969:15). On the other hand, if we consider this music to be vocal, instead of the “octaves” and

“double octaves” we will have merging two (or three) vocal parts in unison, which is a common practice for many polyphonic traditions.

- Even from recent (20th century) experience of transcribing different musical traditions ethnomusicologists know that in vocal-instrumental genres it is the **vocal part** that is the first and foremost to be transcribed. In the Kazakh epic tradition, for example, performed by a singer with the vigorous accompaniment of the two-string *dutar*, it was only the vocal line that was usually transcribed, without the instrumental accompaniment (Kunanbaeva, personal comm.). It seems to me very odd to imagine that in the same combination of singing with instrumental accompaniment, Sumerians would transcribe only the accompaniment, leaving the all-important vocal part without notation at all.

- The evolution of musical paleography is also interesting in the light of our discussion. The first music writing system in human history was invented by Sumerians (the one we are discussing) and it represented the **precise** system of writing (I mean precise in pitch). This system was using letters and syllables of the Sumerian language for each sound, as we would use the alphabet letters today A, B, C, D, E, F, G, to indicate the pitch. This Ancient Mesopotamian system was around for at least a couple of thousand years, and even the surviving examples of Ancient Greek music were written down with letters. This makes the Sumerian music writing system the longest running music transcription system in human history. Historically the next system of notation – the neumatic system of Medieval Europe (Byzantine, about the 8th century) was based on the **approximate** indication of the movements of the melodic line. This system was serving mostly the monophonic singing traditions of early Christian church singing. The third system of notation (which is still in use today) started few centuries later. The third system was again the **precise** system of writing, and it is widely accepted, that the invention and wide distribution of the third (contemporary) system of precise writing was needed to write down the new **polyphonic** music texture. The seemingly strange twist that the musical writing system did during its four thousand years of existence (it started as a precise pitch system with the Sumerians, became approximate in medieval monophonic Europe, and then came back to the precise system again in polyphonic European professional music) I suggest must be connected to the polyphonic nature of the Ancient Mesopotamian and contemporary European music and monophonic character of early Christian music.

- As the transcription of Sachs and Kilmer represents more of an example of parallel polyphony (not so much the drone polyphony), this brings one

more possible question and one more possible player into the picture. Dwellers of the highest mountain ranges of Europe, the Svanetians from western Georgia, living in the impenetrable mountains of the Caucasian Mountain Range, with the signs of unbroken cultural continuity for few thousand years, show startling structural closeness to this (Mesopotamian) type of polyphony, with the excessive use of the harmonic intervals of seconds, fourths and fifths, and with a relatively limited use of the drone polyphony. They employ mostly parallel and ostinato type polyphony in a three-part vocal texture. It might be interesting for the readers to know that the closeness of certain elements of Svanetian and Sumerian culture was noted about a century ago. Sachs wrote about the survival of a Sumerian type harp in Georgia (more precisely in Svaneti, where it is still in use. Sachs, 1937:98). One of the hypothesis links the isolated Sumerian language to Georgian, and particularly the most archaic Svanetian language (see the review in Gordeziani, 1985). There are also promising linguistic parallels with the Sumerian language and mythology in Svanetian songs and names for places as well. I do not want to go into details into this topic, obviously the theme for another multidisciplinary study.

To conclude this section, we can say that the (1) examples of **notated music** from the ancient Sumerians and Hurrians (most likely of polyphonic music, as suggested by Sachs and Kilmer), (2) existing tradition of **choir singing** (Nar-Nar) in Sumerian temples, (3) the presence of non-logical octaves and double octaves in Sumerian three-part music, better explained by the **vocal character** of this polyphony, (3) **survival of ancient vocal polyphony** in isolated mountain regions of Caucasia and the Balkans, as well as the ancient polyphony of the Bahrain pearl-divers (all of them having a deep connection with the Ancient Mesopotamian civilizations), (4) much **less probability of Sumerians recording only the instrumental part** without recording the all-important vocal part, (5) invention of the precise system of notation, a better tool for the recording of **polyphonic music**, and (6) even the possibility of more direct links between Sumerians and Svanetians, the dwellers of the western Georgian mountainous region, famous for their unbroken cultural heritage and ancient **three-part polyphony with seconds, fourths and fifths**; together with the presence of the **double blown musical instruments** in Ancient Mesopotamia, strongly connected to the cultures with vocal polyphonic traditions, and finally, all these arguments coupled with the **general historical tendency of the disappearance of the traditions of vocal polyphony** give me grounds to propose that at least some peoples of Ancient Mesopotamia (Sumerians and Hurrians among them) had

a tradition of vocal polyphony, and that at least some of the first recorded examples of human musical culture from the 3rd–2nd millennia BC represent examples of vocal polyphony.

Ancient Mesoamerica

Ancient Mesoamerica represents quite a different story. Unlike Ancient Mesopotamia, we do not have (at least so far) any examples of recorded music from this region, and the written sources are not so deep and rich. On the other hand, Ancient Mesoamerica is arguably the richest region of double blown musical instruments, true heaven for music archaeologists. Therefore our discussion will concentrate more around the mentioned earlier connections between vocal polyphony and the double blown musical instruments.

Multiple duct flutes and the problem of polyphony became one of the popular topics of scholarly discussions and publications, particularly in the 1960s. Some of the scholars suggested that Ancient Mesoamerican civilizations knew polyphony, but there is some skepticism as well. Let us listen to Dale Olsen from the Florida State University:

“Music iconography can reveal information about musical context, but it cannot tell us many details about techniques of playing. It can suggest the big picture but not the little picture, the focus of musical detail. For example, the player of the single-headed drum pictured in figure 11 is probably playing with a mallet, but we can not tell how he hits the drumhead (in the middle? On the rim of the skin? With his fingers? Also with his palm?) Similarly, the player of the three-tubed flute in figure 12 is obviously playing with his fingers, but we cannot tell which part of the fingers (tips or middle joints). Nor can we tell which holes he covers with which fingers (this would be important information to know for the purposes of determining whether or not ancient Mexican played multipart music on their multi-tubed flutes” (Olsen, 1998a:15).

Some scholars on this subject are more certain that the Ancient Mesoamerican peoples knew instrumental polyphony:

- Charles Boiles (1965:218), based mostly on the archaeological evidence from the Totonacapan region in Veracruz, where he found triple flutes made of clay, suggested that a particular notion of harmony could be explored based on these type of instruments.

- Samuel Marti (1968:210) came to the same conclusion, on the basis of the discovery of quadruple vertical flutes from Teotihuacan.

- Daniel Sheehy (1998:601) wrote: “Extensive historical evidence supports the claims that during many periods and in numerous areas of what is now Mexico, music was complex and important. Tubular duct flutes with multiple tubes that were apparently played simultaneously, unearthed on the east and west coasts and perhaps going back more than two thousand years, point to the existence of polyphony”.

- Jose Raul Hellmer (1960) noticed that quadruple vertical flutes produce not only chords but two or more melodic lines.

- Robert Stevenson (1968:84), the author of the most comprehensive study of the ancient instruments of Ancient Mesoamerica, also agreed that pre-Columbian cultures had harmony; however, he insisted that notion of multipart texture has to be understood within the concept of parallelism.

Arturo Chamorro and Dale Olsen still have some reservations about the equivocal acceptance of the idea of polyphony in Ancient Mesoamerican cultures: “Archaeological discoveries of the twentieth century have revealed the former use of ceramic tubular duct flutes with holes (many with multiple tubes), globular flutes (some with multiple chambers) with and without holes, and other ductless aerophones. There is evidence pro and con for the existence of polyphony or multipart texture in ancient Mexico” (Chamorro, 1998:555). According to Olsen, “Ancient multiple duct flutes have been discovered in other parts of Mexico and as far south as Guatemala. Their existence suggests that multipart musical textures were used in Mexican and Central American antiquity, though a theory of polyphony is debatable, since no ancient flutist survive to prove or disprove it, and multitubed duct flutes are no longer used in this area” (Olsen, 1998:8).

If the readers remember the central thesis of this book, regarding the origins of polyphony, that polyphony did not evolve late in human history as the natural evolution of monophonic singing, and that polyphony seems to be an extremely archaic feature of human cultural history, it is easy to understand that despite all the possible shortcomings, I do support the idea of the presence of instrumental polyphony in Ancient Mesoamerican civilizations.

But this is not the end of story. Should I propose that Ancient Mesoamerican cultures knew not only the instrumental, but vocal polyphony? I simply have to, because the sheer number and the spectacular variety of multitubed flutes in Mesoamerica, unrivalled in the world, does not leave much doubt for me that the people who played these instruments were familiar with vocal forms of polyphony as well.

I am by no means the first (or alone) in proposing the presence of vocal polyphony in ancient Mesoamerica. Samuel Marti summed up the historical sources and the eyewitness accounts to propose in the 1950s that Ancient Mesoamericans knew not only the instrumental, but vocal polyphony as well (Marti, 1968 [1955]).

Let us first of all have a closer look at the survived instruments. Multitubed instruments may provide the most useful information about the possible tradition of vocal polyphony in Ancient Mesoamerica, as the type of vocal polyphony and polyphony of blown instruments show strong connections across the cultures. Most importantly, this includes the information (1) about the type of polyphony and (2) the harmonic intervals used in vertical coordination.

Type of polyphony.

- The information about the type of polyphony is quite precise. A large number of the double, triple and quadruple instruments contain at least one drone tube. There are instruments with two drone tubes as well (Boiles, 1965; Marti, 1968). This suggests that the tradition of drone polyphony must have been very familiar to Ancient Mesoamericans.

- The suggestion of vocal polyphony in Ancient Mesoamerica finds support from the elements of vocal polyphony surviving and recorded in the 19th and 20th centuries among many isolated regions of North and South America (see the section about polyphony among Native Americans in the first part of this book);

- Most of the polyphonic elements recorded among Native Americans, particularly from the Northwest and the East Coast of North America, as well as Q'eros from the Andean mountains (arguably the best cultural survival of the region), are based on the use of drone polyphony, showing a remarkable similarity with the type of polyphony of the multitubed instruments from Ancient Mesoamerican cultures;

Harmonic intervals.

- It is much more difficult to speak about the harmonic intervals of Mesoamerican polyphony, because the choice of the actual notes and their combinations that a player may prefer totally depends on the cultural preferences of the player. So, the same musical instrument in the hands of different players might produce totally different styles of music. In the beginning of the 1980s I was quite shocked to see that Khevsurs from the high mountains of eastern Georgia were playing the Russian *balalaika*, although the music they played on this instrument was as different from Russian instrumental and vocal-instrumental music as generally are the

Khevsurian and Russian musical styles. According to their own words, Khevsurs were using *balalaika* as a louder substitute for their traditional *panduri*.

- There is one particular type of instrument though that might give us a better chance to understand the intervallic vocabulary of Ancient Mesoamericans. This is a specific double flute made from clay. Both tubes are ostensibly the same length, and both have the same number of identical holes. Although this description points to the monophonic type of double instrument, this double flute has a very interesting (in fact, unique) distinction from other monophonic instruments. These two tubes do not have identical shapes. Out of two tubes one is straight, and the shape of the another one has a small curve, or “twist”. So although the absolute length of both tubes is the same (from the mouthpiece to the end of the tube), the length of the vibrating air column is bigger in the “twisted” tube (Marti, 1971:72). Therefore, if we try to play on this instrument, covering simultaneously the same holes on both tubes, we will get the constant sounding dissonant interval (roughly the major seconds).

Of course, the suggestion that Ancient Mesoamericans were playing in parallel seconds is very hypothetical, as there are plenty of different ways of playing this kind of double flute “with a twist”, not only by covering the same holes of both tubes simultaneously. And still, the idea of playing in parallel seconds must be taken into consideration seriously. Let me say a few words to support this supposition:

- Double blown instruments with similar length tubes and identical holes (I am talking about the unison double instruments from other regions) are mostly played in unison, with the player covering the same holes simultaneously. With the identical holes on both tubes on the Mesoamerican double instruments it seems natural that the player would cover (at least sometimes) the same holes on both tubes, creating parallel seconds. Otherwise, if the instrument was constantly played with the hands of both fingers constantly using different (non-secondal) sound combinations, then what was the purpose of making of a double instrument with such an inventive shape?

- In a “Case Study” of American native musical cultures, following the suggestions of archaeologists, physical anthropologists and molecular biologists, I proposed that the surviving elements of vocal polyphony among American Indians might be connected to the carriers of European singing traditions, as Europeans were supposedly among the first human groups who reached the American continent. **Drone** type of polyphony and **secondal**

dissonances are basic characteristic features of European type vocal polyphony. The drone character of polyphony is quite obvious from the Mesoamerican multitubed flutes and the surviving elements of vocal polyphony of Native Americans from different regions of America. The double flute “with a twist” gives an indication that dissonant seconds could as well be part of the polyphony of Ancient Mesoamerican peoples.

Of course, none of these considerations and facts gives the definitive support to the preposition that Ancient Mesoamericans were familiar to the vocal forms of polyphony with the drone and secondal dissonances. At the same time it seems to me that together they give quite a substantial combined support to this idea. And of course, if we remember the central idea of this book, that **vocal polyphony is not a late phenomenon that evolved from the initial monophony**, and that the traditions of vocal polyphony show the overall historical tendency of **decline and disappearance** in all major regions of the world (including the North and South Americas), the presence of vocal and instrumental forms of polyphony among Ancient Mesoamerican cultures seems very natural.

There is another possibility to view the tradition of vocal and instrumental polyphony in Ancient Mesoamerica in a historical perspective. Readers might remember, that the blown polyphonic instruments often become particularly important in cultures when the tradition of vocal polyphony is waning. The sheer number of the multitubed polyphonic blown instruments in Mesoamerican culture might be indicating that the tradition of vocal polyphony was in a state of decline and disappearance during the creation of the hundreds and thousands of multitubed flutes.

Small Appendix to this “Case Study”: The unique passage between the Hemisphere: The Andes

South America seems to be the only region on our planet where the populations of the colder climate (European and East Asians) managed to go beyond the hot and unfriendly “tropical belt” and to settle in the southern hemisphere in prehistoric times. Before that Europeans and East Asians did not succeeded (at least in large numbers) going beyond the “tropical belt” and settling in sub-Saharan Africa, tropical island Southeast Asia, or Australia.

Why South America? For hundreds of thousands of years European and East Asian populations lived not so far from the African and South-East Asian tropical regions, but they did not cross the hot “tropical belt”, and then, suddenly, as soon as they got into America, they went down to the very bottom of South America, right through the unfriendly “tropical belt”. I propose there is a good geographical reason for this. Unlike tropical Africa and tropical Asia, South America has a unique geographic-ecological “passage” between the northern to southern hemispheres, allowing the dwellers of the colder climate to go through the unfriendly tropical hot and wet rainforests. I am talking about the South American mountain range (the Andes) that goes through the “tropical belt”, and therefore provides a bridge, a passage for the populations used to the moderate and colder climate environment.

Andes is the world’s second highest mountain range (after Hymalaya, of course), and the world’s longest mountain range. Most importantly for our discussion, it is the **only** major mountain range that runs from northern to southern hemisphere through the Equator.

I do not need to argue that mountain ranges always create a certain microclimate (cooler and less humid) and harbor most of the resort human settlements in tropical countries, particularly for non-indigenous residents. According to Cavalli-Sforza, “The Andean chain forms the backbone of the continent and is very different from the east. It runs from the extreme north to the extreme south and is relatively similar ecologically in spite of the great variation in latitude” (Cavalli-Sforza et al., 1994: 332).

If you have a look at the world map of the malaria affected regions (the biggest killer in the history of humankind, particularly for the newcomers in the tropics), you will be able to see that the only malaria-free zone in tropical South America runs as a thin line through the continent in high altitude regions of the Andes. Although it is believed that Malaria was introduced in South America by Europeans, it’s geographic distribution is very symptomatic.

Therefore, my argument is, that when Europeans and East Asians reached Central America, the Andes provided them with the only existing land passage on our planet to travel safely from the north hemisphere to the south hemisphere. This must be the reason that South America is the only region on our planet where the descendants of European and East Asian populations settled in the southern hemisphere in prehistoric times.

Case Study #14

Polynesian Polyphony

The settlement of the Polynesian Islands is one of the biggest puzzles of large-scale human pre-historic migrations. The fact itself that humans populated such vastly distanced isolated islands, as, for example, the Rapa Nui (Eastern Island), is quite amazing. Unlike scholars, studying most of other human pre-historic migration routes, scholars of the history of Polynesia sometimes had to prove that people could reach Pacific Islands without the late European sophisticated marine technique. Dr Thor Heyerdahl sailed a balsa raft from South America to the Polynesian islands. Dr David Lewis sailed a traditional Haitian catamaran from Tahiti to New Zealand without sophisticated contemporary instruments. Ben Finney made several trips on a Hawaiian double canoe. Of course, no scholar would doubt the idea that, say, East Asians (or even Europeans) could actually walk the long distances to America via Siberia and the Bering Strait, but Polynesia is different. The Polynesian islands are dispersed in the biggest ocean on our planet, surrounded by thousands of kilometers of open ocean waters.

The Polynesian case does test our trust in the traveling abilities and spirit of our ancestors. It seems to me natural, that as time goes by, and as the studies of “historical genetics” of human DNA (particularly mitochondrial DNA) matures, more and more facts of human large-scale migrations will come to our knowledge, and our trust and respect for our traveling ancestors will increase. But at the moment we need to rely on the existing facts.

In the juxtaposition of linguistic, historic, ethnographic, physical anthropological, archaeological, genetic and other data, each providing sometimes contradicting information, quite outstanding polyphonic traditions of Polynesians had been mostly neglected. The main reason for this neglect is (again!) the deep belief of music scholars and general public in the late origins of polyphony. “What valid historical information could Polynesian polyphonic traditions provide, if, most likely, Polynesians developed their own polyphony quite late, say, in the 15th or 16th centuries, before the first contacts with European sailors, long after settling on Polynesian Islands?” – that is the question that believers of the late origins of polyphony would be asking. We may remember, that some European musicologists could not even face the facts and accept reality that Polynesians “already” had polyphony when Europeans arrived there (Kaepler et al., 1998:15).

I am very sorry, if the readers are already tired of me repeating the same idea again and again, but I can’t help myself, so I need to repeat once again,

that the idea of the late origins of vocal polyphony from monophony is a myth, unsupported by the existing facts. Multiple examples of the disappearance of vocal polyphonic traditions from different parts of the world on one hand, and the conspicuous absence of the facts of the “natural evolution” of vocal polyphony from monophony on the other hand suggests that polyphony is gradually disappearing in human cultures. Therefore, I believe that **the fact of the presence of vocal polyphonic traditions in any of the regions of the world, in any of the cultures must be treated as a possible very valuable source of the ancient history of this region/culture.** This is particularly important in the cases when the tradition of vocal polyphony holds an important place in the traditional social life and culture. This undoubtedly is the case in Polynesia.

Readers might remember that Polynesia is one of the three world’s richest regions in regard to traditions of vocal polyphony. Unlike two other richest polyphonic regions – sub-Saharan Africa and Europe, which had been populated by the carriers of indigenous vocal polyphonic traditions (sub-Saharan Africans and Europeans) for many millennia, Polynesia has been populated relatively recently and obviously by the newcomers. The question is **where from.** The possible source of the outstanding vocal polyphonic traditions of Polynesia is the main topic of this “Case Study”.

Strategically surrounded mostly by the monophonic Americas, East Asia and Australia, Polynesian polyphony is one of the most interesting and most isolated polyphonic regions of the world.

First of all, a closer look at the regions around the Pacific Ocean reveals that Polynesia is not actually surrounded by carriers of monophonic traditions only. Elements of polyphony had been found among American Indians in both North and South America (including in the old Mesoamerican civilizations), in Japan among the Ainus, among the indigenous populations of Southeast Asia (the minorities living mostly in the mountain regions of Taiwan, Vietnam, South China, and other countries of this region), in Micronesia, and most importantly, the strongest vocal polyphonic traditions in this region (after the Polynesians) are found among Melanesians.

Therefore it will be closer to the historical reality if we try to find the links that Polynesian polyphony shows with other polyphonic regions of the Pacific region.

From the whole Pacific region the Polynesian tradition of vocal polyphony has the closest parallels with the vocal polyphony of Melanesians and Indigenous peoples of Southeast Asia. The only controversy that follows this “western” connection of Polynesian vocal polyphony, is that the tradition

of vocal polyphony is the weakest in the western regions of Pacific, and it is increasing from the western regions to the eastern regions of the Pacific Ocean. Only minor elements of polyphony are found in Micronesia. In Melanesia polyphony is more pronounced, and most of Polynesia is profoundly polyphonic. This controversy is quite important and puzzling, as you would expect the reversed picture of stratification of the traditions of vocal polyphony - the strongest in the west (closest to the region where this tradition might originally come from). Besides, the idea of the intense migrations from Melanesia to Polynesia and subsequent “transportation” of the traditions of vocal polyphony from Melanesia to Polynesia looks also unlikely due to the obvious differences in physical type between the Polynesian and Melanesian peoples.

If we look wider in the search for typological connections of Polynesian polyphony, it must be stated that the closest typological links exist with the European polyphonic traditions. Marius Schneider was possibly the first who mentioned an unusual closeness of European and Polynesian vocal polyphony in his “History of Polyphony”. According to Alan Lomax, “Coding from many of the most distant reaches of Oceania indicate that certain features common to the Old European style [Old European style for Lomax are polyphonic singing traditions of the mountain regions of Europe] were almost surely present before contact with European explorers in the eighteenth century. The song traditions of Oceania and Old Europe share a distinctive cluster of traits – textual complexity plus precise enunciation plus cohesiveness plus polyphony – major features of Middle European folk hymnody...” (Lomax, 1968:90).

The biggest counterargument for any possible connections between Europe and Polynesia is the huge distance between these two regions. Europe and the South Pacific are on the opposite sides of the globe. And it is not only the distance that makes this connection unrealistic, but also the fact they are in different hemispheres. I tried to argue earlier, that crossing the hot and wet tropical “ecological belt” for the dwellers of moderate and cold regions of the world must have been extremely difficult, and this was the reason that both European and East Asian populations traveled extensively along the axis east-west, or “following the Sun”, without crossing the tropical line. If there was not this huge distance between Europe and Polynesia, and if Polynesia was situated, say, somewhere in the Atlantic Ocean, “only” a couple of thousand kilometers from Europe, there would most certainly be a widely acknowledged historical connection between the vocal polyphony of Europe and Polynesia. But Polynesia is on exactly the opposite side of the globe

from Europe, across many thousands of kilometers and across the unfriendly “tropical belt” for the dwellers of the moderate and cold climatic regions.

Amazingly, there is a theoretical possibility that might be worth discussing, at least from the musical point of view.

As we have seen in a “Case Study” discussing the possibility of vocal polyphony in cultures of the ancient Mesopotamian and Mesoamerican civilizations, there is a possibility that traditions of vocal polyphony existed wider in North and South America (including old Mesoamerica). Discussing these traditions, we came to the conclusion that the main characteristic features of American polyphony were typologically very close to European polyphonic traditions (the same drone, or even the double drone, and maybe the secondal dissonances).

The presence of European features of Polynesian polyphony might be explained by the at least partial migration of groups of people from South and Central America to Polynesia. This route was popularized by the controversy, following the claims of Thor Heyerdahl about the initial migration of groups of people from South America to Polynesia. The long controversy resulted in the acknowledgement by most scholars that there has been an at least sporadic contact between Polynesians and South American Indians. For example, bringing and cultivating the South American sweet potato (with the same name) in Polynesia would be impossible without such “personal” contacts. Bellwood and Cavalli-Sforza provide at least some theoretical support to Heyerdahl’s hypotheses (Bellwood, 1989; Cavalli-Sforza et al., 366-369) If we take into account the amazingly strong polyphonic traditions of Polynesians (and I tried to convince readers that the traditions of vocal polyphony must be taken into consideration very seriously), then the contacts between the supposedly European polyphonic elements of South America and Polynesia must have been more than “sporadic”. (Survey of different ways of colonizing Pacific see Bellwood, 1989.)

The very strong polyphonic traditions of Polynesians provide circumstantial support to the idea of the possible relatively late migration of groups of people from Europe to Central America via the Atlantic Ocean as well. This possibility, generally dismissed as totally unrealistic, receives at least some confirmation from the historically quite well documented migration of Indonesians to Madagascar across the whole Indian Ocean. The distance between Indonesia and Madagascar is the same as between Europe and Central America, and the direction is the same as well – from east to

west, in both cases supported by the dominant ocean currents. (By the way, most of the ocean currents also “follow the Sun” from east to West.)

This ancient migration of European groups to Central America, however slim it might seem today, is supported by the possibility of a further southern migration and the crossing of the difficult “tropical belt” by dwellers of the colder non-tropical regions in the Andes as we have already discussed.

However fantastic and unrealistic it may seem, it is my duty to note, that the musical data does support the “round-half-the-world” travel of Europeans from the Mediterranean Sea to Central America, and then, via the Andes Mountain passage, to Polynesia. Crucial points of this support are as follows:

(1) The presence of the European type drone polyphony with the characteristic secondal dissonances in Ancient Central America (in instrumental, and possibly in vocal music as well);

(2) The presence of drone polyphony among the Q'eros, a unique high mountain survival of pre-Inca culture and population;

(3) The presence of more polyphonic traditions among a few other peoples of the Andes region; and

(4) The presence of the European type drone vocal polyphonic traditions in Polynesia.

I fully realize that at the moment these facts of the presence of the European type drone polyphony in Mesoamerican civilizations, in high mountain regions of the Andes and Polynesia are not sufficient to support the romantic hypothesis raised by Thor Heyerdahl about the possible pre-Contact links between ancient Europe and Mesoamerica, with the subsequent continuation of travel via the Andes to the Polynesian Islands. But if at any point in the future any additional support for this bold and currently unrealistic transcontinental travel through two oceans and the “tropical belt” comes to the knowledge of scholars, then the tradition of European type drone polyphony, found in Mesoamerica, in the Andes (including Q'eros) and Polynesia must be taken into consideration very seriously.

Case Study #15

The Beatles:

Ancient Sounds in Hit Parades

Paul McCartney and George Martin had a few interesting discussions about the orchestration of The Beatles “Yesterday” (the first song where the very unusual string quartet was used on a rock-band recording). “Mozart would not have used that minor seventh”, said George Martin to Paul, and that gave Paul even more incentive to put this seventh into the arrangement. Of course, John Lennon loved this “bluesy” minor seventh. On another occasion Martin did not like the idea when Paul said he wanted one of the violins to keep the high “A” during the last appearance of the immortal melody of “Yesterday”. “You can’t double the third!” George Martin said to Paul. “You wanna bet?” answered Paul (Coleman, 1995:46). I think many would agree, that this long hovering “A” gives the last appearance of the melody some special beauty and even poignancy.

George Martin, as usual, was absolutely correct from the point of view of the sacred rules of professional harmony – many music students would remember that according to classical harmony, doubling of the third was considered a big mistake. In the 18th and 19th century European composers were openly criticized for the lack of professionalism for making such blunders (like doubling the third, or even, God forbid, having parallel fifths).

Paul McCartney was correct from the point of view of the highest authority of musical art – our ears. George Martin finally agreed with him, because despite his strong classical musical education, going against the established rules was an important part of his own creative nature.

Every epoch has its own aesthetic rules, its musical language, connected to the whole set of specific technical elements. For most of human history most people were raised in a musical environment of a single culture, therefore they were familiar with one “musical language” only. It was almost impossible for them to comprehend the music based on a different set of rules. For example, according to James Porter, “Beethoven and Haydn ... clearly puzzled by the modality of the [Scottish] tunes and effects derived from bagpipe technique (such as a double tonic or a free pentatonic structure), could not understand why some tunes did not end on the “tonic” or home key” (Porter, 2000:367). Even these composers, deservedly ranked among the greatest in human history, “failed to understand the modality of the tunes. Even when they found them attractive, they cast them in continental harmonies” (Porter, 2000: 372-373).

If we look at the history of European music it is not difficult to see that professional and traditional musical languages often existed side by side, sometimes misunderstanding each other. Traditional music was often perceived by the professional composers as simple and even “primitive”, at best deserving a new life by harmonizing traditional tunes with new professional harmonies. Despite this arrogance of professional musicians, the traditional musical language was sometimes well ahead of the development of the musical language of professional music. The Lithuanian traditional singing style *sutartines* used polytonality much earlier than Ives, Bartok or Stravinsky. Georgian composers Dimitri Araqishvili and Zachary Paliashvili recorded but never used complex traditional polyphonic songs from Guria, western Georgia, because the Gurian songs harmonic language was too dissonant and too complex for them. For the same reason one of the greatest pioneers of contemporary professional music, Stravinsky openly admired western Georgian polyphony.

In this “Case Study” we will concentrate on the musical language of arguably the most creative band in the history of popular music, the Beatles. I will try to trace the origins of several elements of the Beatles musical language, revolutionary for European popular music and Rock-n-Roll. I’ll try to argue that some of the most revolutionary elements of the Beatles musical language have interesting parallels with the traditional polyphonic cultures of archaic polyphonic Europe. Some of these topics, concerning the closeness of the Beatles legacy with traditional musical cultures (particularly of British peoples) are known from more than 400 books, published about the Beatles, but some will be discussed for the first time. I organized this “Case Study” into separate sections.

Unity of the music creator and the performer . The strict division of all functions across society was one of the cornerstones of professional music in Europe. This division included a whole range of professions, ranging from the composer, performer or performers, and conductor, to the music copier and music critics. Even listeners were supposed to follow the strict rules of the game (for example, how to behave, or when to remain silent and when to clap). This tradition was so strong in European music, that even Rock ‘n’ Roll mostly followed the trend. For example, “King of Rock ‘n’ Roll” Elvis had not written any of the songs he performed. On the other hand, in a traditional society a performer is a creator (or at least co-creator) of the music he (or she) performs. By establishing the trend of writing their own songs, the Beatles brought

back this ancient tradition of the unity of the creator and the performer.

It became a standard after the Beatles for the rock bands to write their own songs. They were certainly not the first rock musicians to do this, of course, but their phenomenal success gave a strong message to the existing or the new bands to write their own material, and therefore, to be not only the performers, but creators of their own songs (it was difficult for me to believe that even such a “self-contained” rock band as the Rolling Stones were not writing their own songs before they had a positive example from the Beatles).

Writing music together. Maybe one of the biggest differences between the professional and traditional polyphonic cultures is the process of creating music. Composing music professionally is very much an individual enterprise. On the contrary, composing music in a traditional polyphonic society is a group activity. Readers might remember the examples of creating new compositions in western Georgia, Polynesia or among Bushmen from the first part of this book. Sitting together for hours and putting different parts together to come up with a shared polyphonic composition is usual for traditional singers.

Acknowledging the crucial difference between these two models of music composing, I would like to propose the existence of two music-composing models: (1) **individual** (we could call it “mono-brain”) and (2) **group** (or “multi-brain”). I am not talking about the well-known but not very clear idea of the “collective” authorship of traditional songs, when several generations of creative singers may contribute to the development of a song (implying that song had an individual author, whose name is lost). I am talking about the polyphonic cultures, where the very **process of initial creation of the song is also a group activity**. These two different music-composing models fundamentally affect both the composing process and the final product.

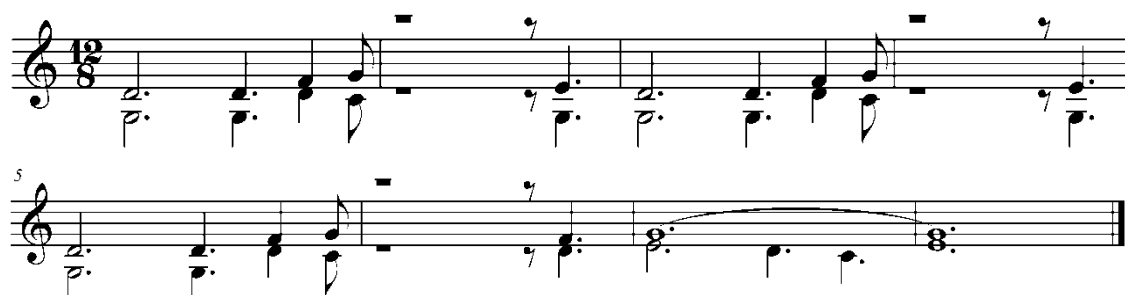
Professional composition is entirely constructed by an individual, and the composing process is very much “authoritarian”. That could be the reason why professional polyphonic compositions contain so much imitation, strict parallelisms, and are generally more vertically organized. On the other hand, in traditional society, when two or more creative talents are trying to put their individual creative power to work for the shared composition, the process has more “democratic” features. That’s why the traditional compositions are usually less based on imitation, have more contrastive (non-parallel) movements between the parts, and are more melodically (rather than harmonically) organized.

The Beatles was a wonderful example of group creative activity. There was no clear leader, or even a main singer of the group. This was a novelty that gave some initial headache to George Martin: “When I first met them, there was no obvious leader. They all spoke in turn, and I went home wondering which one of them was going to be the star. My thinking was so colored by the success of people like Tommy Steele and Cliff Richard that I couldn’t imagine a group being successful as a group. I felt that one of them was bound to come out as having a better voice than the others. Whoever that was would be the one, and the rest would become like Cliff Richard’s backing group, the Shadows. I was quite wrong”. (Martin, 1979:124). Fortunately for all of us, Martin liked going against the established rules and trends and accepted the idea of a group.

Most importantly for our topic, writing music for John Lennon and Paul McCartney, particularly in the first period of their partnership, was very much a shared creative act. Paul describes their process of writing a song the following way: “We would sit down with nothing and two guitars, which was like working with a mirror. I could see what was he doing, and he could see me. We got ideas from each other. In fact, it was better than in a mirror because if he plunking away in D, I could see where his fingers might go and then I could suggest something. So that was like writing from the ground up. ‘She loves you’, ‘from me to you’, ‘This Boy’ were all written that way, as were most of the earlier songs” (Smith, 1989:201). Their (Lennon and McCartney) composing model was obviously a “group model” of music writing, widely employed in traditional polyphonic cultures, and very different from the “individual” model employed by professional composers.

This early period of intense use of the “group model of composition” resulted in some very interesting and unusual voice leading of the Beatles. Their song from the first single, “Love me do”, is a good example of this kind of unusual harmonizing:

Fig. 14. Love me do, vocal harmonies



The combination of the fifths, thirds and sixth, with the melodies moving sometimes in parallel motion and sometimes against each other, would hardly be written if this all was the brainchild of the single composer.

During the later period of the existence of the Beatles, this immediate co-writing practice was mostly replaced by more individual efforts, although both Paul and John would still share ideas about the new songs, and particularly, if they were “stuck”, they knew where to go. Writing music as a creative communication apparently was particularly important for Paul McCartney. During his post-Beatles years McCartney wrote songs together with different musicians (Danny Lane, Eric Stewart, Elvis Costello, Stevie Wonder and Michael Jackson. See Coleman, 1995:127-128).

As with many from my generation, I have been a Beatles fan from my early teen years, when their music went through the unfriendly Communist “iron curtain” as if it did not even exist. My personal interest in music, playing the guitar and studying the English language started when I tried to work out their outrageous chordal progressions and play their songs. Watching them from a distance, I came to the conclusion, that one of the factors that contributed to the break-up of The Beatles as a group, was the inner creative conflict of Paul McCartney, the de facto leader of The Beatles during their final years. On one hand, Paul always relished and very much enjoyed the “group model” of songwriting with very open creative communication (that’s why he tried so many songwriting partners after John Lennon), but on the other hand, his perfectionist attitude towards the final product was taking over at some stage and did not allow too much creative freedom to his songwriting partners. George Harrison in particular was suffering from Paul’s perfectionist and sometimes single-minded working style. In a well-known argument recorded in the film “Let it Be” George is getting frustrated as Paul wants him to play what Paul wants to be recorded. In another case, when recording Paul’s classic “Hey Jude”, Paul did not like George’s idea of the guitar answering Paul’s opening phrases. In a recent (2006, May) TV interview with Parkinson Paul McCartney was talking about playing almost all the instruments on his last album, as a means to have more creative control on the final production: “I was actually all geared up to play with my band, but he [producer, Nigel] said...on a second week he said: “I’d like to try something different. I want you to play a lot of instruments”. So he got me drumming a bit... Which I *love* to do. And I think the trick for me... I thought of it afterwards...it’s possible what has happened is that... I write a song, I bring it to the studio, and then, the drummer, kind of takes over and

he writes the drum part, whereas if I play it, I'm still sort of composing, I'm still writing the guitar, the base, the drum..."

Performance style. Arguably the most loved Russian rock-musician, Andrey Makarevich, the front man of the most popular Russian rock band "Time Machine" said about the Beatles, that listening to their music for the first time for him was like taking the cotton buds out of your ear for the first time in your life. I agree with him and I think many, whose lives were enriched by the Beatles music would also agree, that there is something very important in this simple and maybe awkward comparison.

If we try to characterize the Beatles performance style (first of all, their singing style), this would be a performance with no reservations, very open, full of emotions, including exciting panting and shouting.

"Up until then there had been nothing to involve young people to quite the same extent. The rock-and-roll gyrations of Tommy Steele and Cliff Richard were clinical, anaemic, even anaesthetic, compared with the total commitment of the Beatles, which somehow got down to the very roots of what the kids wanted," wrote Georgia Martin about the British rock scene in the beginning of the 1960s (Martin, 1979:125).

The European classical tradition of music performance has always been based on the professional control of the vocal apparatus. Singing with excited shouts was as unimaginable for the classical European tradition, as singing in "bel canto" style for the rock-musician. In this regard the performance style of rock music was again very close to the performance style of the traditional music, particularly traditional polyphonic music.

In my opinion, the electrifying emotional power of the Beatles music was based on two important elements: (1) the performance style, coming from Rock 'n' Roll, and based on honestly and openly expressing emotions, and (2) the sophisticated harmonic and melodic language that will be discussed very soon. Let us remember: despite the very limited harmonic vocabulary (only three-chords!), Rock 'n' Roll swept the world with its honesty of emotional expression. The Beatles magnified this emotional intensity, coming from the Rock 'n' Roll performance style, with hundreds of new inventive harmonic combinations and melodies.

The performance as a social experience. The readers may remember the crucial difference in the models of relationship between the performers and listeners in different styles and genres of music from the introduction of this book. European classical music represents maybe the most rigidly

divided model of the social interaction between the performers and the listeners. Listeners are not supposed even to clap between the parts of the symphony, let alone the encouragement of the performers during the performance. On the other end of the relationship models between the performers and the listeners is the traditional polyphonic society. Here the society is not even divided between the performers and the listeners, as all the society is expected to be involved in the performance. Therefore, there are no listeners at all.

One of the crucial elements of contemporary rock and pop-music is the unparalleled (in classical music or even jazz) close connections between the performers and the listeners. Emotions that are pouring from the stage elicit strong emotions from the audience. And although the reaction of the audience might be deafening and distracting for the performers, this loud response is a vital and generally very positive part of live rock performances. Participation in the electrifying atmosphere is crucial for the rock-concert goers. Here are the Beatles' drummer's words from the interview with the British media on 12th December 1972:

Q.: "Was the Wembley show in any way a nostalgic experience for you?"

Ringo: "Very much so. They were screaming and shouting and I love that."

Q.: "So you enjoy the scream then?"

Ringo: "Oh yeah. If they had been quiet when I played I would have died. I wouldn't have known what to do" (Badman, 1999:86).

So if you ever go to a rock concert, do not complain "it was too noisy". People go to rock concerts not only to listen to the music, but to participate as well. To participate the same way, as the guests participate in singing at a Georgian wedding, or the members of the community participate in an African village celebration (clapping, singing, stomping, and dancing). We could compare attending a classical concert and a rock concert to a reading of the brilliantly written essay about the Carnival in Rio, and being in Rio in the midst of a crowd during the carnival. If you do not like too much noise, you'd better stay home and read the book.

Harmony of The Beatles songs. Arguably the biggest contribution that the Beatles made to the development of contemporary popular music was the new exiting harmonic language. In the early 1960s classical 12 bar blues and Rock 'n' Roll were still mostly based on the basic harmonic progressions of European classical music: the use of Tonic, Dominant, and Subdominant harmonies (in a C-major key the C-major chord is a Tonic, G-

major chord is the dominant, and F major chord is the Subdominant). Basically speaking, the only difference harmonically was that Rock 'n' Roll used the Subdominant after the Dominant (this harmonic change was strictly forbidden in the classical tradition).

The Beatles were often praised for their innovative harmonies, although the praise of professional musicologists shows they were mostly still looking at the Beatles legacy through the window of European classical harmony. For example, arguably the best-known praise that came from a professional musicologist was for their use of the “Aeolian cadence”. This is one of the simplest cadences in classical harmony, and to praise the Beatles for the use of this cadence sounds like praising Ian Thorp because he can swim, or Michael Schumacher because he can drive a car. The harmonic genius of the Beatles is in the fact, that most of their harmonic progressions cannot be classified within the very restrictive system of classical functional harmony.

For the development of harmonic language of popular music The Beatles did what the romantic composers did for the development of harmonic language of classical music – they brought all the unrestricted richness of chordal changes and new colorful modulations. Before the “harmonic revolution” of the Romantic composers (like Schubert, Chopin, Tchaikovsky or later Rachmaninoff) the harmonic language of “classical” music was unbelievably strict and limited. For example, if the key was C-major, the composer could not use an F-major chord after G-major, or E-minor after D-minor, or F-major after the D-minor, and forget about using chords like B-minor, or E-flat major, or even B-flat major at all – these kind of harmonies were totally out of limits of classical harmony. I remember that preparing students for the oral test for the Classical style chordal progressions was relatively easy, as each chord in Classical harmonic language had only two or three options where it could “legitimately” go. For example, in the C-major key, a G major chord could go only to C major or A-minor (by the way, G-major followed by A-minor is the mysterious “Aeolian cadence”), E minor could be followed only (!) by F-major; F major had the biggest number of options – it could go to C-major, D-minor, D-major, or G-major. Of course, preparing students for the aural test of the “Beatles style harmony” would have been much more difficult, as chords can go to any other chords without formal restrictions.

Despite the assertions of George Martin that Paul and John were first and foremost tunesmiths (see: “the ability to write good tunes often comes when someone is not fettered by the rules and regulations of harmony and counterpoint. A tune is a one-fingered thing, something that you can whistle

in the street; it doesn't depend on great harmonies", Martin, 1979:139-140), they first and foremost revolutionized the harmonic language of popular music.

European classical music traditions were based on the unchallenged primacy of the melody (melody was considered the "soul of music"), so creating the melody (or "theme") was usually the first and most important stage of constructing a new composition. In traditional polyphonic cultures, on the contrary, musical composition was primarily concerned with the richness of the harmonic language.

Both Paul McCartney and John Lennon emphasized the crucial role of harmonic development in their songwriting. They spoke directly that they were often starting the new musical ideas with the chord progressions. Here are Paul's words, indicating that harmony usually was the initial element that would suggest to him the melodic idea of a new song:

"I knock a couple of chords off, and it suggests a melody to me. If I haven't heard the melody before, I'll keep it" (Gambaccini, 1976:79).

John Lennon's words from his very early (1964) interview give even a better insight of the importance and primacy of the harmonic element in his songwriting:

"If I found a new chord (I used to) write a song around it. I thought that if there were a million chords I'd never run out. Sometimes the chords got to be an obsession and we started to put unnecessary ones in. We then decided to keep the songs simple and it's the best way. It might have sounded okay for us but the extra chord wouldn't make other people like them any better. That's the way we've kept it all along" (Turner, 1994:54).

Interestingly, aware of their own revolutionary harmonies, at the beginning Lennon and McCartney were a bit concerned not to make their songs musical language too complicated. Their second number 1 hit – "From me to you" (which they wrote during a bus ride on a tour) contained some new harmonic colors, including the wonderful change of key, going through the minor dominant chord. After writing the song, they were concerned, that "the music was a bit on the complicated side and it "wouldn't catch on with the fan's". [Let us not forget, that at this moment The Beatles had only one number 1 hit, and the longevity of their success was by no means guaranteed!] Fortunately, Paul's father calmed them down (Turner, 1994:30). Paul's father was absolutely right – their fans followed them in all their harmonic endeavors with fascination (unless they discarded harmony completely as in "Revolution #9").

Steve Turner also emphasizes the importance of harmony in the Beatles' songwriting, particularly during the early years: "In the early days, the Beatles had concentrated mainly on mastering the musical side of the songs – chord construction, arrangement, and delivery. Dylan was the first recording artist to affect them primarily as lyricists" (Turner, 1994:60).

Lennon's well-known fascination with deep meaningful lyrics combined with his love of colorful harmonies created an interesting mixture. Predilection towards deeper lyrics among songwriters often leads to the excessive recitation [repeating of the same pitch many times in a melody] and a more monotonous and simple harmonic language. This is usually the case with artists who put the meaning of the lyrics above all other elements of the song. A great example is Bob Dylan, arguably the most influential lyricist of popular music. Unlike such artists, Lennon also had a great love of colorful harmonies, so this mixture gave birth to some of his very interesting songs, where the recitation is coupled with the inventive harmonic progressions (in a song like "Julia", "Help", or "Lucy in the sky with diamonds").

It was not a coincidence that Lennon was so deeply impressed by Beethoven's brilliant use of Neapolitan harmony from the opening of the 14th ("Moonlight") sonata, that he wrote his choral masterpiece "Because" under the deep impression of Beethoven's music (Turner, 1994:194).

The particular importance of the harmonic element in Lennon/McCartney puzzled music critics, because sometimes it was not even clear which of the singing parts was the "main melody". Tim Riley wrote about "If I fell": "...the melody itself seems written as harmonized – both lines are so lyrical it's hard to say just which one is the "melody". The intertwining harmonies are so strong that they seem to carry the entire song along behind them" (Riley, 1988:102). Here we can recall the puzzling absence of the "main melody" from Georgian (and other cultures) polyphonic songs. I believe that musicologist's search for the "main melody" does not make much sense in such compositions, because it is not the melody, but the combination of the different parts, the resulting harmony is the "soul of music". The same is the case, for example, for the song "Julia". The melody of "Julia" is mostly a long monotonous recitation on one note, but the combination of this simplest melody with the cascade of colorful harmonies represent the "soul" of this sublime music.

The ambiguity of the tonal centre is another feature that connects the Beatles harmonic thinking with at least some traditional polyphonic cultures.

The tonal centre (or the “tonic”) is very easy to define in classical music (or even in “classic” Rock ‘n’ Roll), as compositions usually start and finish with the tonic harmony. The tonic here is the only fully stable harmony. In traditional polyphonic cultures, on the contrary, it is difficult even to speak about the presence of the “tonic”. The genius of Beethoven was needed to do what Mozart or Haydn never did – to begin a musical composition with other than the tonic harmony. In the very beginning of his 17th sonata, Beethoven starts with the dominant chord: the first inversion of an A-major triad in the key of D major (Csharp, E, A). In the next, the 18th sonata, Beethoven starts with the subdominant instead of the tonic in the key of A-flat (a D-flat major chord with added sixths, of, more formally, a B flat minor 5/6 chord). The Beatles classic “And I love her” is a great example of starting the song with the non-tonic (subdominant II) chord and generally using tonally ambiguous harmonies. “All my loving”, “Hello, Goodbye” and “Paperback writer” start with subdominant chords (II and IV), “I wanna hold your hand”, “Oh, Darling”, “I feel fine” and “Revolution” start with the dominant chord (V), and “She loves you” starts with the Submediant (VI). Another of the Beatles classics, “Michelle”, starts with the tonic chord, but the unusual sound in the bass overturns the stability of the tonic harmony.

The ending of songs on non-tonic chords is something that even Beethoven did not attempt to do. Classical pieces (at least music from the Viennese School of composers – Haydn, Mozart, and Beethoven) always finish with the tonic harmony. It seems to me that classic Rock ‘n’ Roll also always comes to the tonic at the end. For traditional songs, where the idea of the tonic is often alien, finishing on unusual places is perfectly acceptable. For example, for a popular Spanish (Flamenco) harmonic progression (A-minor, G-major, F-major, E-major), finishing on the “dominant” (E-major) chord is normal. To name the few songs that finish on other than the tonic harmony, we could recall the Beatles songs, “From me to you” (which finishes on the Submediant), “And your bird can sing” and “Help” (which finishes on the Subdominant). “For no one” (which finishes with the Dominant chord), “And I love her” (which finishes with the major Submediant).

One of the interesting features of the Beatles harmonic language was the wide use of the **Secondal connection of chords**. I am talking about the chord progression like I, II, III, IV (C-major, D-minor, E-minor and F-major). You cannot find even a single instance of the use of this harmonic progression in any of the compositions of Mozart, Haydn or Beethoven. This kind of chord progression was not part of Rock ‘n’ Roll either. In traditional polyphonic

music, on the contrary, secondal connections between the harmonies are the most usual (in Georgia and the Balkan traditions, for example). The Beatles used a lot of I, II, III, IV harmonies, for example, in “Here there and everywhere”, or IV, III, II, I in “Long, long, long”. I, II, III chords were used very early in a song “ask me why” on their first LP, and in “If I fell”. The secondal progression VI-flat, VII-flat, I appears in songs like “With a little help from my friends” (in a coda) and “Ps I love you.” Interestingly, in a later rendition of this latter, very much underrated early song (“PS I love you”) Paul McCartney slightly changed the original chordal progression, and instead of D, Em, D, A, Bm, A, B-flat, C, D, he put D, Em/D, D, A/C-sharp, Bm, A, B-flat, C, D. So in a new version of this song the bass moves exclusively by seconds during the whole verse.

By the way, this song has one of the most amazing chord sequences in the opening of the song. On a very simple melody hardly anyone other than the Beatles would have used any other than G and D major chords. The Beatles put between the G and D triads a brilliant C-sharp seventh chord.

The structure of the Dominant chord. The appearance of the D7 (Dominant seventh chord) was crucial for the formation of the classical system of harmony. This chord (G7 chord in a key of C-major) is named “Dominant” because it is “dominating” the whole tonal system in classical harmony. This chord, with the specific diminished fifths between the third and the sevenths of the cord, was the main element that distinguished classical functional harmony from the medieval modal harmony or traditional harmonies of different polyphonic traditions. Traditional music (unaffected by European professional music) does not use this chord. Although The Beatles still widely used the “classical” D7 chord, they started using the other chord as well, sometimes known among jazz and pop musicians as “Suzi” (play on a piano an F-major chord with the right hand and G in the bass with the left hand and you’ll get “Suzi”). This new type of dominant chord does not contain the crucial (for Classical harmony) diminished fifth (b-f in a chord G, B, D, F). Instead it uses G, F, A, C, G. For example, in a song “Hello, Goodbye” the “classical” cadencial chord progression (K6/4, V7, I) is replaced with K6/4, V7, V”suzi”, I (listen to the words “you said goodbye, I said “hello”. V”suzi” sounds on the words “I said...”).

Dissonances. The wide and innovative use of dissonances is another important element that brings the Beatles musical language closer to ancient European traditional polyphonic cultures. My colleagues would remember

that dissonant chords and harmonies were considered in professional classical music “auxiliary” to the consonant harmonies. There were rules to be observed when using the dissonances – one had to know how to prepare and resolve dissonances. Of course, in the 20th century music dissonances were fully “emancipated”, but classical harmony rules of using the dissonances were very restrictive. Chopin’s brilliant harmonic language was often considered “too dissonant” by his peers. In the Rock ‘n’ Roll of the 1950s and the 1960s dissonances were created mostly by the use of the blues notes against the major triadic and seventh chords (T, S, D chords). Chords based on other than third intervals were very seldom.

The musical language of the ancient European traditional polyphonic cultures, still surviving in mountainous isolated areas, is based on the wide use of harsh dissonances. In these traditions (as found in the mountain ranges of Caucasia and the Balkans) dissonances do not need any “preparation” or “resolution”. That’s why secondal Sutartines and west Georgian dissonant harmonies were so much ahead of the development of European harmonic language in the 18th and 19th centuries. European professional music only reached the same level of acceptance of dissonances roughly during the musical impressionism (Claude Debussy) and later.

The Beatles love of the dissonant chords and intervals is acknowledged, but still underrated. I will not describe here their use of parallel fourths and fifths, often mentioned in the published works, but want to briefly discuss one particularly interesting case of the use of the sharp dissonance. Stunning vocal harmony is heard in a song “Drive My Car”. At the end of the verse, on the words “you can do something in between”, John and Paul are reciting together during two bars on “F” (John) and “G” (Paul), a second apart from each other. Most importantly, this is happening on the harmonic background of an A7 chord. The resulting chord (A-F-G) is one of the harshest harmonies you can hear in popular music. Incidentally, this chord is identical to the chord that starts the medieval west Georgian church-song “Centuries and Epochs” (here too this chord is used for reciting):

Fig. 15. Harmonies from The Beatles song “Drive my Car” (the recitation before the chorus)

The figure shows two staves of musical notation. The top staff is labeled 'McCartney-Lennon harmonies' and contains a treble clef with a series of eighth and sixteenth notes, representing a vocal melody. The bottom staff is labeled 'A7 chord' and contains a bass clef with a single note on the A line, representing the harmonic background.

**Fig. 16. Medieval West Georgian church song “Zhamta da tselta”
(opening recitation)**



The love of dissonant harmonies was, I believe, one of the main driving forces of the long lasting interest of George Harrison in Bulgarian traditional singing, famous for the secondal dissonant clashes, during the 1980s.

Drone. The use of the drone is quite usual for classical harmony, although it is very unusual for the dynamic Rock ‘n’ Roll. Drone is also widely used in traditional polyphonic cultures (particularly in Europe, but not in Africa). Unlike professional classical music, where the drone is mostly used in the bass, in traditional polyphonic cultures the drone is often used in the middle and the top of the polyphonic texture as well. If we look at the use of a drone in the Beatles songs, we will see that the drone is mostly used on the top of the texture, and sometimes in the middle.

The Vocal drone on the top of the harmonic texture is used in “You won’t see me”, where the simple but brilliant vocal harmonies are almost “stealing the song”, and in a dynamic “Sergeant Peppers lonely heart’s club band” (Reprise), where out of two leading parts the top one is actually reciting the text on the tonic (F) of the F-major key, and after the modulation, on G (in the G major key).

The Instrumental drone on the top is held for almost the whole song in compositions like “You’ve got to hide your love away” (where the high drone is held on a tonic) and “Getting better” (the drone is on 5th step). Drone also appears for the most important, dramatic last appearance of the melody in several songs. Among such songs are: “Eleanor Rigby” and “Yesterday” (the violin holding the high drone in both songs, on the tonic in “Eleanor Rigby” and on a very unusual third in “Yesterday”), and “Back in the USSR” (the high pitch guitar playing a drone on the tonic). The use of the drone in the middle of the harmonic texture, where it is held against colorful harmonic changes and even modulations, is outstanding in “Blackbird”. The use of the drone in the lowest point of the texture (the most widespread in classical music) is very rare among the Beatles, although John Lennon’s “Tomorrow never knows” is completely based on a long bass drone. And of course,

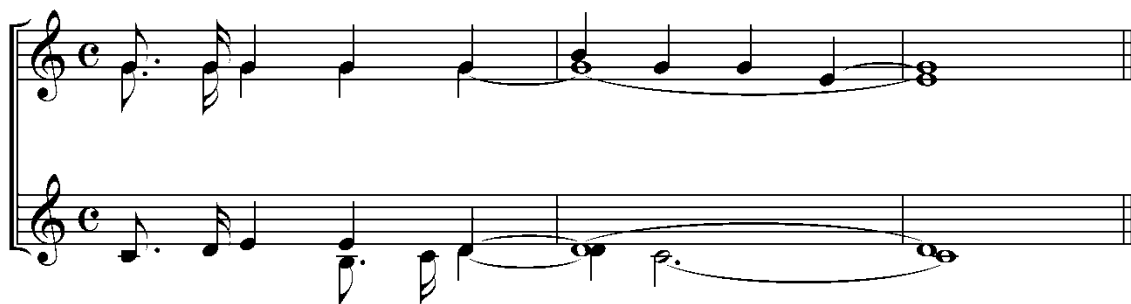
George Harrison's "Indian" songs with the use of Indian instruments are mostly based on the use of the drone in the lowest range.

Vocal harmonizing. The guitar sound and general instrumental texture was crucial for pop and particularly rock music followers. Paul McCartney relished himself first and foremost as a bass player, then as a singer, and then as a songwriter. Elvis Presley could himself play a guitar and this was in the eyes of the young Beatles a major achievement. Despite this high rank of guitar playing, the Beatles were primarily a brilliant vocal band. Harmonizing was a crucial part of the Beatles sound. Many of the harmonic innovations that I was talking about, were realized in vocal harmonizing. Harmonizing was particularly active during the first period of the Beatles existence, when the songwriting between John and Paul was mostly based of the "group model". During the later period they did not have question-and-answer hocketing style songs with active and dynamic vocal interaction (like "It won't be long", or "Tell me why") and harmonizing generally declined.

Paul McCartney was mostly responsible for the richness of the vocal harmonizing style of the Beatles. His vocal harmonizing in many of Lennon's songs was crucial to the final sound of the song. It is difficult to imagine songs like "If I fell" and "Because" without Paul's high harmonies. In these songs his harmony successfully competes with the original leading melody. During the second period of their partnership it was mostly Paul harmonizing in John and George's songs (I am talking not about the wordless harmonizing [like "doo", "ah" or "la-la-la"], freely used by the Beatles, but about the active contrapuntal intertwining of the melody and harmonizing parts, both using the verbal text).

The brilliant vocal harmonies from the introduction of the song "Paperback writer" epitomize most of the elements I was discussing about the Beatles music language: starting the song with non-tonic harmony, pure a cappella sound, expressing the idea not with a melody, but with a combination of melodies, a richness in the four-part harmony, a wide use of several drones and clashing dissonant seconds:

Fig. 17. Opening a’cappella harmonies of “Paperback Writer”



Conclusions

Profound changes occurred in many important elements of popular music, particularly from the second half of the 20th Century, no question about that. Contemporary means of technology, sound-recording, media, communications, globalization, the legal system, issues of performance rights and a booming marketing system created a phenomenon that is difficult to compare to any other musical (or cultural) phenomenon in the history of humankind. At the same time, as I tried to demonstrate with the example of the Beatles, a few very important elements of ancient traditional polyphony came back in the rock-musician’s songwriting practices, performance style, and even their harmonic and melodic style. According to these elements the legacy of the Beatles is closer to the traditional polyphonic cultures than to early classic Rock ‘n’ Roll. Some of these elements are:

- The **Group creative** process and the **unity of composers and performers**;
- The Music is **composed and recorded orally**, mostly by individuals **without classical music education**;
- **No formal rules of harmony or counterpoint** – the ear is the only legitimate point of reference;
- Unparalleled (in classical music or even jazz) **close connections between the performers and the listeners**;
- Unrestricted **richness of chordal changes** and new colorful modulations;
- Partial **diminishing of the role of pure vocal melody**, and particular **importance of the harmonic element** (sometimes puzzling professional musicologists, unable to decide which of the harmonizing melodies is the “main melody”);
- **Ambiguity of the tonal centre**; beginning and finishing musical composition with other than tonic harmonies;

- Wide use of the **secondal connection** between the chords;
- **Changes** to the all-important (for the classical musical system) **dominant** chord;
- The wide and innovative use of **dissonances**;
- Wide use of vocal and instrumental **drones**, particularly on the top and in the middle of the musical texture.

Many of the elements that were successfully used by the Beatles, were later used by other rock and pop-bands. In some cases certain elements were particularly widely used by bands. For example, both “U2” and “Cold Play” started using drones in a high range in a large number of their songs.

Conclusions of the Second Part

The second part of the book is coming to an end. This part was fully dedicated to the comparative perspectives of the research of traditional polyphony. Without going into detail, let us look at a few of the most important conclusions to sum up the second part of the book:

- The documented cases of the disappearance of polyphonic traditions in different regions of the world, and the absence of cases of the evolution of polyphony from monophony in traditional music suggests that the general historical dynamics is the gradual disappearance of vocal polyphonic traditions. Therefore, **the idea of the late evolution of polyphony from monophony, dominating the musicological and ethnomusicological literature for more than a century, is totally unsupported by existing facts and must be discarded.**

- Some characteristic features of vocal polyphony show extraordinary stability. The type of polyphony, vertical coordination of parts, and the social organization of the singing group are the most stable elements of polyphonic traditions, allowing scholars to conduct wide comparative research.

- European polyphonic traditions, based on the use of drone and dissonant vertical coordination between the parts must be an extremely ancient phenomenon. Despite the language change in most of the European countries, following the migration waves of Indo-Europeans, Finno-Ugric peoples, Arabs and Turks, the ancient tradition of European vocal polyphony survived in the geographically isolated regions: high mountain ranges, forests, islands, and continental fringes.

- A part of European polyphonic traditions bears the traces of complex external influences from the West Asian monophonic singing traditions and the late influence of European professional polyphony. The other part shows the relatively complete survival of the ancient tradition of vocal polyphony.

- Heterophony, as a separate type of polyphony (where a big group of singers sing the main melody in unison-heterophonic style), is not an evolutionary “transition point” from monophony to polyphony. Geographic distribution of heterophony in East Europe (the largest region of heterophonic polyphony) suggests that heterophony originated as a result of the mixture of ancient European polyphonic and East and Central Asian monophonic singing styles.

- The origins of overtone singing must be connected to the complex ethnic and historic processes that took place in the territory of Central Asia from around the end of the first millennia A.D.

- Some elements of the Lithuanian traditional polyphonic style *sutartines* show parallels with the ancient European drone-dissonant polyphony and must be extremely old. On the other hand, the use of polytonality and canonic forms must be a relatively late phenomenon. I propose that three-part singing with the drone in the middle and secondal clashes between the parts (a tradition that is known from neighbouring Latvia, the Balkans, Caucasia, and Nuristan) must be the ancestor of both secondal polytonal *sutartines* and the drone (“collective”) *sutartines* singing styles.

- Nuristan polyphony from the Northeastern Afghanistan impenetrable Hindukush Mountains could be one of the best survivals of the ancient European tradition of three-part vocal polyphony with the drone in the middle, small range melodic parts around the drone and clashing secondal dissonances.

- Southeast Asian polyphony is a singing style of the aboriginal populations of Southeast Asia, southern China and Taiwan, pushed to the mountainous and forest regions by the migration waves of East Asian populations from the Central regions of China during the last centuries.

- Tuareg drone polyphony is a unique phenomenon within the African context, surrounded by the sub-Saharan African parallel polyphony from the south and monophony of Arab population from the north. On the other hand, in a broader Mediterranean and Euro-African context Tuareg polyphony shows obvious links with the ancient European drone polyphony. I suggest uniting Tuareg polyphony into the “European polyphonic family”.

- Ainu Polyphony, the most isolated vocal polyphonic tradition on our

planet could be connected with the migration of (1) the population from southeastern Asia and Taiwan, or (2) Europe. The presence of a European population in Central Asia and even North America (according to the physical anthropological, archaeological and molecular biological evidence) strengthens the idea of possible European connections of Ainu polyphony.

- Elements of vocal polyphony of the American Indians, scattered among different tribes of North, Central and South America, strengthen the suggestion of a growing group of scholars about the participation of European populations in the early settlement of the American continent.

- Strong traditions of Polynesian vocal polyphony should not be neglected in the long running discussion on the settlement of the Polynesian Islands. Links of Polynesian polyphony point towards three regions: (1) the polyphony of Southeast Asian autochthonous population, (2) the polyphony of Melanesian populations, and (3) European polyphony via the American continent. Typologically Polynesian polyphony is closest to European traditional polyphony.

- The wide geographic distribution of ancient European vocal polyphony must be connected to the dominating direction of large-scale human migrations – going eastwards or westwards. The same way East Asian populations were also spread very widely, although mostly north of the Equator. South America and Polynesia seem to be the only regions where the European and East Asian populations settled the Southern Hemisphere in prehistoric times (possibly via the Andean Mountain “passage”).

- The historical model of the gradual disappearance of the tradition of vocal polyphony in different regions of the world suggests that the general skepticism towards the presence of polyphony in ancient Mesopotamia and Mesoamerica is unfounded. I suggest that the Sumerians, Hurrians, and the cultures of Mesoamerica must have been familiar with vocal polyphony as well.

- Internal links between singing and playing blown instruments (based most likely on a shared system of sound-producing - *breathing*) can revolutionize our understanding of the distribution of vocal polyphony from an ancient period.

- The polyphony of the pearl-divers of Bahrain could be an extremely ancient phenomenon, connected to the singing traditions of Ancient Mesopotamia.

- The well-documented late origin of European professional polyphony is unique in the history of human musical culture and should not be

extrapolated on other (traditional) polyphonic traditions. The origin of European professional polyphony was itself a result of the mixture of west Asian (early Christian) monophonic singing practice and ancient European polyphonic traditions.

- Professional and traditional polyphonic cultures use very different models of music writing, transmission, and performance. The creative genius of the members of the Beatles brought back to contemporary popular music many systemic elements of traditional polyphonic cultures. According to some important features of the creative process and elements of musical language, the Beatles were closer to traditional polyphonic cultures than to the “classic” Rock ‘n’ Roll.

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Part 2 has come to an end. We discussed a wide range of topics connected to the comparative and historical perspectives of the polyphonic traditions from different regions of the world. We have approached the “moment of the truth” – the very origins of polyphonic singing. This problem will be discussed in the third, and final part of the book, in a wide interdisciplinary context of the evolution of human communication, intelligence, language, speech, and even morphology.

PART 3

CHORAL SINGING

IN HUMAN EVOLUTION

A brief summary instead of an introduction

Going back in our prehistory chapter by chapter, we are getting closer to the origins of human choral singing. In the first part of this book we reviewed the contemporary stratification of vocal polyphonic traditions. In the second part we discussed a few historical issues connected to traditional polyphony. In this, the third part of the book, we are going to discuss the origins of human choral singing in the wider context of the evolution of *Homo sapiens*.

Discussing contemporary stratification, we found out that polyphonic and monophonic singing traditions are represented roughly equally on our planet. This does not mean that both polyphony and monophony are equally represented in every continent and every major region of the world. On the contrary, some major regions are “extremely polyphonic” (like sub-Saharan Africa, the mountainous regions of Europe, and Polynesia), and other regions are almost entirely monophonic (like East Asia, or Australia).

In the second part of this book we conducted a series of comparative studies, and came to a number of conclusions, including conclusions about the stability of vocal polyphony, “primary” and “secondary” forms of polyphony, and the role of migrations in shaping the contemporary stratification of polyphonic cultures. Most importantly, we came to the conclusion that the general historical tendency of vocal polyphonic traditions is a **gradual disappearance**. We found that historically well-documented cases of the decline and disappearance of vocal polyphonic traditions come from every continent of our planet. The facts of the gradual disappearance of vocal polyphonic traditions that I presented must be only a tiny tip of a huge iceberg. On the other hand, documented cases of the evolution of vocal polyphony in traditional music from monophony are totally absent. This tendency strongly suggests that our planet is getting more and more monophonic with every decade, century and millennia. Therefore, I suggested that the belief of music scholars about the late origins of vocal

polyphony from monophony is not supported by the existing facts and must be discarded.

According to my model, **the earlier we go in human and hominid prehistory, the more polyphony will be found, and ultimately, the origins of polyphony must be somewhere in the very process of the evolution of our human ancestors in Africa, before their dispersal throughout different continents of our planet.** Before we start addressing questions about the age and the evolutionary reasons for the origins of vocal polyphony, I would like to discuss the hypothetical “primordial polyphony” that must have been shared by the first representatives of our ancestors that stepped out of the African continent about two million years ago.

Sounds of the Ancient Choir: Primordial Vocal Polyphony

Any reconstruction of a “primordial language” or a “primordial culture” is a highly speculative business. Reconstruction of “primordial” polyphony is not much different. To reconstruct a phenomenon that according to my model existed many hundreds of thousands or even millions of years ago, we need hard evidence, which is unlikely to ever enter our knowledge. The only possibility for such a deep historical reconstruction is to find some common features that characterize a big part of the live vocal polyphonic traditions from different parts of the world.

When we look for common features, we need to remember that the phenomenon itself – vocal polyphony – is in a long process of decline and disappearance. Vocal polyphony, for some evolutionary reasons once a much-needed phenomenon, lost its “survival value” at some point of human prehistory. Another interesting point is that, according to my model, some human populations started losing polyphony much earlier, while other populations kept it for a much longer period of time. As a result, in some populations the tradition of vocal polyphony is already lost (for example, East Asians and native Australians), and other populations are on the same historical route as well. We will discuss the reasons behind this evolutionary “change of luck” of vocal polyphony and the reasons why populations started losing polyphony in different times later in this part of the book.

But let us take one problem at a time. The first in line is the reconstruction of the hypothetical “primordial polyphony” that could have been the common ancestor of all (or at least most) polyphonic traditions.

Here is a list of the possible characteristic features that could have been present in our distant ancestors. This list was compiled after a comparative study of vocal polyphonic traditions from different regions of the world, and particularly the singing traditions of two major polyphonic “families” – sub-Saharan African and European. We will be taking into account the “primary” and “secondary” forms of vocal polyphony we discussed in the second part of the book.

- The choral singing of our distant ancestors was most likely based on the **antiphonal and responsorial alternation** of two groups, or of a soloist and a responding group. This is a true universal feature for both polyphonic and even monophonic cultures and there is hardly a human musical culture on our planet without any elements of the deep-rooted tradition of responsorial singing.

- Choral must have **included everyone**, all layers of society. This feature is very characteristic for traditional polyphonic cultures, where everyone is expected to participate at some level and there are no formal listeners at all. For many representatives of polyphonic cultures even just listening to somebody else’s singing is not natural, and they try to sing along (or tap along) together with the performers. The singing of women only (or men, or other social groups) seems to be a relatively late phenomenon.

- The **rhythm** of choral singing must have been very **precise and vigorous**. This feature is by no means universal for all surviving polyphonic traditions. For example, several Mediterranean polyphonic traditions that bear signs of the mixture of the old European and Middle Eastern monophonic singing traditions have a non-precise “rubato” rhythm. At the same time, most of the polyphonic traditions that do not show signs of the mixture with the Middle Eastern type monophonic music are based on precise rhythm. Precise rhythm absolutely dominates in sub-Saharan singing traditions, and in many European and Polynesian polyphonic traditions.

- The choral singing of our ancestors most certainly was **accompanied by a dance**, clapping and generally bodily rhythmic movements involving all participants. This kind of syncretic unity of singing and dancing is conspicuous in all more or less archaic musical traditions. This ancient syncretism must have very deep roots in our consciousness, as even today when we hear the rhythmic music, we instinctively want to follow it with tapping, stomping or bodily movements.

- The use of **body percussion** is also highly probable for the ancient communal singing of our ancestors. Even higher is the possibility of group

stomping, creating a steady basis for the singing rhythm. When we hear rhythmic music we have an urge to follow it, and stomping is one of the basic and most usual means to do this.

- The singing style of our ancestors most likely was **loud and straight**. Most archaic polyphonic singing traditions are still extremely loud. With every member of the society participating in singing, dancing and clapping you would not expect to hear the somber sound of quiet and gentle choral music.

- I think we can talk about the meter-rhythmic characteristics more precisely. As most sub-Saharan Africa music is based on **duple rhythms (2/4, 4/4)**, and the same is true for many west Georgian polyphonic traditions, and this simplest rhythm is arguably the most widespread in different cultures of the world (both polyphonic and monophonic), I suggest that duple rhythm could be a part of ancient common polyphony as well. Related meter 12/8 (known from the singing of Central African Pygmies and possibly best known as jazz swinging rhythm) is another good nominee for the rhythmic characteristics of the earliest human polyphony.

- The tempo most likely **became faster** during the performance when the **pitch** was rising. This feature is a usual part of archaic dance-songs. They start at a relatively slow or medium tempo and the tempo gets faster and the pitch rises during the performance in growing excitement. Most music teachers are well aware of the general tendency of music students to play faster and faster as the piece approaches the end.

- The **type of polyphony** is naturally a very important feature for our topic. Out of the “primary” types of polyphony we can consider types such as drone, parallelism, and ostinato as the possible initial elements of archaic polyphony. Not all of them show universality in the most important polyphonic regions. Here are my considerations on these types of polyphony:

- The **Drone** could be a good nominee for the claim of the primordial universality. Drone is generally absent in sub-Saharan Africa, this most active “heaven of traditional polyphony”, although there are certain African cultures where drone is strongly present (e.g., among Maasais in East Africa, of Kpelle in West Africa). Besides, the drone polyphonic singing style, particularly with secondal dissonances, is scattered so widely and in so spectacularly geographically isolated regions of the world (mountains, islands, and deep jungles), that we have to consider the possibility of D/D (drone-dissonant) polyphony being one of the oldest types of group singing.

- The **Parallelism** that dominates sub-Saharan African polyphony is present in many polyphonic traditions in other parts of the world and could

be another good nominee for universality, but the European polyphonic tradition's obsession with the drone (and not so much parallelism) casts some doubts on parallelism as well. Although it is important to note that, arguably, one of the most archaic and the best preserved European polyphonic traditions, those of the west-Georgian Svanetians from Europe's highest Caucasian mountains, use more parallel than drone polyphony. This fact definitely increases the strength of parallel polyphony's claim on ancient universality.

- Of all types of polyphony we can safely say that **ostinato is the most universal type of vocal polyphony** that was (and is) present in most traditional polyphonic cultures. There are hardly any polyphonic traditions that do not employ the ostinato principle (based on multiple repetition of the same short phrase) to some extent. Multiple repetition (of phrases and/or sections of a musical piece) is the very essence of musical language, and repetition is the active ingredient of the emotional power of music on the human brain, so universality of ostinato should not surprise us. Therefore, the hypothetical primordial polyphony must have been heavily based on the ostinato principle.

- I have to suggest that there was **no separate function of a bass** in the ancient primordial polyphony of our ancestors. If this idea seems too controversial to the informed readers, I would like them to pay attention to the fact that Sub-Saharan African polyphonic singing does not seem to be using a bass as a functionally separate part. It is more a "lowest part" in sub-Saharan parallel polyphony than a distinct "bass" as we know it from many other cultures from around the world today. The Pygmies' singing knows no bass part either (although according to Simha Arom, the specific part called "mother of the song" has the function of the bass part in Pygmy four-part polyphony. Personal communication from October 12th, 2008). Even African ostinatos are not necessarily in a lower register. If we have a look at presumably the most ancient type of the drone polyphony (represented in the Balkan, Nuristani, Flores, or Latvian traditions), we can see that the drone is in the same range as the leading solo melody. The drone must have initially appeared as a long (pedal or recited) sound in the middle (or high) range, not necessarily in the lowest range.

- The yodel also has a claim for inclusion among the characteristics of ancient polyphony. It is by no means distributed in a lot of cultures, but nevertheless, different forms of yodel are present in isolated pockets of European, sub-African and even Pacific polyphonic cultures.

- Verbal text must have been absent or kept to a very minimum in this primordial polyphony (as it is in the polyphony of the Pygmies). Interjections and nonsense syllables must have been prevalent at this stage.

- It will not be very original for me to suggest that the more likely scale basis for the most ancient form of primordial polyphony could have been an anhemitonic pentatonic.

- Another specific feature that could unite the big European and African polyphonic families seems to be the **principle of the third substitution** of the melodic tones. This principle is at work in such polyphonic cultures as faraway from each other as the San (Bushman) from South Africa, Georgian, and European professional polyphony.

So, to summarize, we have the following description of the ancient “primordial”, or “proto-polyphony”:

This was loud, responsorial singing of a large mixed group, rhythmically very precisely organized (most likely in a duple rhythm), accompanied by rhythmic movements, stomping and body percussions (and probably stone hitting – see later). The tempo rose during the singing/dancing, as well as the pitch, together with the general dynamics. Polyphony was based on ostinato, parallelism, or drone polyphony, vertical coordination was probably based on secondal dissonances, there was little or no text (mostly interjections), and the function of a bass was not yet separated.

This characteristic raises one specific question that needs to be addressed later in the discussion. This is a **precise rhythmic organization of human singing activity**. As we have already mentioned, there are quite a few species on our planet that can sing and create new melodies. Some of them could even beat humans in melodic creativeness and complexity. But **what makes human musical activity unique is the very precise metro-rhythmic organization of musical texture**. No other species on our planet have such a vigorous and precise sense of rhythm. As Estreicher once noted, Africans have an “in-built metronome” that gives them an extremely precise sense of rhythm (Estreicher, 1964). I think many would agree with me that this is a characteristic feature not only of Africans, but of humans generally. As the animal kingdom around humans does not provide such examples of precise rhythmic sense, there must have been some evolutionary forces at work that

were responsible for the creation of this unique “metronomic” precision in the brains of our ancestors.

Another interesting problem, connected with the same rhythmic nature of human musical activity, is the almost **hypnotic influence that a loud and simple beat has on our brain and body**. It is not only the human’s good sense of rhythm that is amazing, but also the strong urge to join in this rhythm by stomping, dancing, drumming, or finger snapping (this phenomenon is known as “entrainment”). I do not think that our psychological “addiction” to strong rhythms could have arisen together with the relatively late developments of musical “culture”. There must have been other deeper and more evolutionarily important factors at work that created this phenomenon. We will address this very important question very soon.

A few preliminary questions and answers

Now, in the third, final part of this book, it is time to ask directly the most difficult questions and to hear if there are any straight answers to these questions:

- **When was the phenomenon of vocal polyphony born?**
- **Why was the phenomenon of vocal polyphony born?**
- **Why is the tradition of vocal polyphony disappearing?**
- **Why is the contemporary distribution of the tradition of vocal polyphony so uneven throughout the different continents and regions of the world?**

Before we discuss these and many other problems in more detail, here are the extremely brief answers on these questions:

- **When was the phenomenon of vocal polyphony born?**

The first elements of future human choral singing must have appeared first after separating the lineage from the great African apes, around 4-6 million years ago. The evolutionary paths of non-singing apes and singing human ancestors were forever separated. The next stage was the more important, when a rhythmically precisely organized group singing tradition was established after our human ancestors descended from the trees to the ground. This was long before the appearance of *Homo sapiens*. Humans did not create polyphony. We may even say that vocal polyphony was a major

contributor in creating human society and even human language, intelligence and morphology.

- **Why was the phenomenon of vocal polyphony born?**

We could ask this question in other words as well: what was the survival value of polyphonic group singing in human evolution? According to the proposed model, vocal polyphony had two crucially important functions in early hominid evolution: (1) defense of their territories and lives from major African predators, and (2) obtaining protein rich food via confrontational scavenging. I suggest, that group singing (and dancing) was an important part of a survival strategy of early hominids, which I call Audio-Visual Intimidating Display (AVID). This new survival strategy was badly needed after our human ancestors moved from the trees to the ground and exposed themselves – slow-running and not-so-well-armed primates – to the formidable African ground predators. Apart from the impressive, rhythmically united and intimidating “lion dance”, a number of other morphological and behavioral changes were involved in AVID, and we will discuss them later.

- **Why is the tradition of vocal polyphony disappearing?**

According to the proposed model, after humans shifted to articulated speech, vocal communication was marginalized as a redundant system of communication. Mind that I strictly separate language and speech. As a result, human musical abilities started to decline. The early evolutionary selection for better singing abilities and the precise sense of rhythm was replaced by the selection for precise articulation. Primordial polyphony gradually shifted to the realms of human musical “culture” and started disappearing millennia–by millennia, century–by century, and decade–by decade.

- **Why is the contemporary distribution of the tradition of vocal polyphony so uneven throughout different continents and regions of the world?**

According to the proposed model, the uneven distribution of vocal polyphony throughout our planet is connected to the peculiarities of the origins of articulated speech in different human populations. Articulated speech appeared long after the emergence of human language and intelligence, and long after humans left their homeland in Africa and settled in different regions of the world. According to the suggested model,

different populations of *Homo sapiens* shifted to articulated speech in different epochs. Therefore, the process of the disappearance of vocal polyphony started in some populations earlier than in others. According to the suggested model, East Asians and Australian Aborigines were the first to shift to articulated speech (or spoken language), followed by European and sub-Saharan African populations.

Discussing these and other related topics, we will often leave the borders of musicology, sometimes going into problems that are much bigger than the problems of the origins of vocal polyphony. I am sure that, in the same way as the origin of language is not only a linguistic problem, the origin of vocal polyphony is not a musicological problem only.

Now we are ready to discuss these issues in more detail.

An Ape Who Refused to Stop Singing

Not everyone has a voice but everyone makes noises to communicate. I remember when I lost my voice during a bad bout of influenza few years ago, I clicked my fingers to get attention from family members. A huge number of species, co-residing on our planet, do not have voices at all. The buzzing of mosquitoes, for example, is not designed to scare us on a hot summer evening. It is an important means for mosquitoes to find each other for the sake of the future generation of little bloodsuckers.

Sound perception and voice production are so intimately linked with each other that it is often overlooked that these two phenomena were acquired in very different epochs of our evolutionary prehistory. Sound perception appeared at a very early stage in the evolution of the animal kingdom. Even insects are equipped with organs of sound perception. Our vocal ability of sound production is much "younger" than the ability of sound perception ("much younger" in this case is about 500 million years younger). One of the consequences of the non-synchronous development of the organs of sound perception and voice production is that "...although the vocal tract has undergone significant changes in morphology over evolutionary time, our peripheral auditory system has remained in a relative state of stasis" (Hauser, 1996:219). In the evolutionary process a real voice (produced by the vocal chords) first appeared among amphibians. Insects and other living creatures, that lack a voice, communicate with sounds created by different parts of their body. Therefore, in an evolutionary sense, body percussion is much older than singing.

Sound perception has always been more important to living creatures than voice production. Even if you are a teacher or a professional singer, you would not be spending more than 10-15 per cent of your total time talking or singing. According to Pease (1984:9) the average person talks about 12 minutes a day. OK, I agree that we all may know some exceptional individuals who do not fit this average, but anyway, our ears are much more active than our vocal tract, because our ears receive different sounds all the time, even when asleep. There is some evidence that pre-natal children can hear and remember musical stimuli and can even recall it after their birth (James et al., 2002). Besides, we can produce only a relatively small range of sounds ourselves, but we can easily distinguish thousands of different sounds that come to our ears from different sources every moment of our life.

Evolutionary “asynchrony” is a powerful factor that affects our abilities often without realizing that the acting force behind some contemporary events and problems is in our evolutionary past. For example, because of this “evolutionary asynchrony” sound perception is represented among animals (and humans) much better than voice production. Let me briefly discuss three examples:

“No, sorry, I can not sing!” As a music teacher and a choir leader for a number of years, I have heard these words many times from my students, sometimes from very musically talented ones. Is this possible? Good musicians who cannot sing in tune? Yes, it is possible. Some individuals (I believe some are among the readers of this book as well) can hear musical compositions and distinguish even the smallest errors in pitch during a performance, but they still cannot sing a simple melody in tune. Such individuals are sometimes labeled as “being without a musical ear”. This is not correct, because an inability to sing in tune is not connected with problems of the ear, hearing and musical creativity. This is a problem of voice production, which is a distinct phenomenon.

Individuals with incorrect pitch production can even be great musicians. The well-known German composer Richard Wagner is a perfect example of this kind of discrepancy between outstanding musical hearing (and creativity) and incorrect voice production. Wagner was unable to sing even his own melodies in tune. I believe the “Wagner Ear Phenomenon” is connected to the evolutionary asynchrony between the origins of sound perception and voice production. The real absence of a musical ear (“pitch deafness”) also exists, although it is much more rare among humans. Pitch deafness always causes incorrect voice production, while incorrect voice production does not

necessarily mean pitch deafness. (By the way, according to my own observations as a choir-leader for the number of years, it seems to me that men suffer much more from the inability of precise tone control than women.)

Well, music history knows more extraordinary cases as well. Arguably the greatest composer of all times, Beethoven was profoundly deaf by the time he wrote his 9th Symphony, arguably the pinnacle of human musical creativity. A deaf composer sounds as paradoxical, as a limping footballer with one short leg, or a guitar player with non-functioning fingers, although human adaptability has no limits, and like Beethoven, Garrincha, a Brazilian footballer, and Django Reinhardt, a Gypsy guitar player, were among the all-time greatest performers in their fields despite their physical limitations.

So, dear reader, if you cannot sing in tune, this does not mean you cannot be a musician. If you love music, you can still play an instrument, or compose, or, if you cannot do any of these, as we musicologists say, “you can always become a musicologist”.

“I want my fis!” Those of us who has been privileged in our lives to have children might still remember some of the cute names that our children used to use to indicate different things. Would it be easier for our children to understand us if we speak to them in their own “cute language”? Apparently not. Scholars who study the problem of the acquisition of language and speech by children, indicate that young children can hear (and decode) articulated signals (words) much better and earlier than they can pronounce them (Menyuk, 1972:14, 28; Morais, 1991:61-62). Here is a classic conversation between a child and an adult about an inflated plastic fish: “‘This is my fis’. – ‘This is your fis?’ – ‘No, my fis!!’ – ‘Your fish?’ – ‘yes, my fis!’” (Berko & Brown, 1960:531).

The child, hearing and understanding the correct pronunciation of "fish", still cannot pronounce it correctly. This phenomenon, known as the "Fis Phenomenon", is another outcome of the evolutionary "asynchrony" of the origin of sound perception and voice production. It was suggested that even before a child can produce single word utterances, s/he can comprehend syntactic structures, or sentences (see Golinkoff et al., 1987)

“My dog understands me!” Many dog owners would agree that it is enough for our dog to hear the word “walking” or “outside” (even without talking to them directly) and they instantly show with all their communicative skills that they are extremely happy that their master has

finally made the best decision of the day. This is another well-known outcome of evolutionary "asynchrony" of the origins of sound perception and voice production: many animals (e.g., cats, dogs, horses, apes) can distinguish spoken signals and react to them, but they cannot produce articulated sounds themselves.

Kanzi, a bonobo, a smaller and much more peaceful relative of the chimpanzee who puzzled many defenders of human uniqueness, successfully proved that he can react not only to simple speech signals (like "go" or "give me..."), but can understand and react adequately to very complex new sentences like "Give the doggie some carrots", or "Put the toy gorilla on the pot" and "can you throw the dog to Kelly?" (Savage-Rumbaugh et al., 1993:116). Panbanisha, Kanzi's stepsister, proved that Kanzi was not a single genius among the bonobos. Alex, the gray parrot, proved that you do not have to be a relative of humans to comprehend at least a few human words and even to use them properly (Pepperberg, 1998).

Not unlike animals, humans can also learn to understand plenty of sounds made by other species as well. This knowledge sometimes can be life saving. Everyone who has read Jim Corbett's brilliantly written accounts of hunting man-eating tigers and leopards in the Himalayan foothills in India, will remember that his life often depended on his ability to hear and correctly understand other animal's calls (like cheetal and kakar), indicating the presence and location of a man-eater. Our distant ancestors, living closer to nature, were definitely much better at "reading" animal sounds than we are today. Animals can also distinguish calls of other species and use the information contained in these calls successfully in their everyday life without the ability to produce these calls themselves. Of course, animals that can **copy** other species calls can use this ability for their advantage, like the same Jim Corbett, who attracted his last man-eating tigress by making a call of a tiger looking for a mate.

Still, making vocal sounds for communication does not mean singing. "Although it is often stated that man is the only primate that can talk, it is rarely noted that he is also the only one that can sing" wrote Frank Livingstone rather controversially in his 1973 article, arguing that the Australopithecines mostly communicated by means of singing. Singing as a means of communication in our non-talking ancestors has been investigated by other scholars as well (see, for example, Otto Jespersen, 1895; Brown & Greenwood, 1991; Richman, 1993, Mithen, 2005). In comparison with the ubiquitous vocal communication among animals, singing is a much more

complex phenomenon. And despite this complexity, singing is still present in many unrelated species (like the humpback whale in the ocean, the flying nightingale and the gibbon from the jungle treetops (see Payne, 2000; Marler, 1970, 2000; Nottebohm, 1971, 1972; Bright, 1984; Geissmann, 2000). Maybe the species closest to us that can “sing” is the gibbon. The conspicuous absence of singing among the great African apes suggests two alternative possibilities: (1) humans developed singing abilities later, **after** separating from our closest living relatives about some 6 million years ago, or (2) humans and apes all had singing (possibly at a different level) some 7-10 million years ago, but the great African apes **abandoned** singing for some unknown to us evolutionary reasons (we will discuss this possibility very soon).

Times to Fight: The Role of Singing in the Physical Survival of Early Hominids

If we want to understand the origins of the human ability to sing, we should note that the evolutionary cost of singing (and generally, loud vocalizations) is extremely high. Singing reveals the whereabouts of the singer to every prospective predator in the vicinity. So you must be big and strong to habitually afford loud and long vocalizations (like lions, wolves, whales). There is another option if you love hearing your voice – you must be able to fly, like avian birds, or at least, be able to take a quick refuge high in a tree, like gibbons. So, if you are not big and strong, or cannot fly, or quickly escape high into the trees, you’d better shut up and be as quiet as possible if you want to survive. A singing rabbit would not reach an old age.

Another crucial fact about singing (and loud vocalizations) is that there is a tremendous environmental pressure on singing for those species who live on the ground. **It is much safer to sing for the species that live in the trees.** In the trees you can live according to your weight. So, if you are lighter, you can live on a “higher floor” (or thinner branches) and be safe from heavier predators, who can only hunt on the “lower floors” (or bigger branches), or on the ground. For example, if you are a 10 or 20 kilo primate, a 40-50 kilo leopard can not reach you (unless you’ve been caught off guard on the ground or lower branches). Living on the trees, our ancestors were on a relatively safer “higher floor” of the jungle ecosystem. By the way, a leopard

itself often saves its own life and its food from menacing lions or hyenas by climbing trees, as lions are too heavy to follow leopards, and hyenas, like dogs, cannot climb trees.

When our ancestors descended from the trees, the situation changed drastically. **Unlike the trees, where you can live according to your weight and avoid undesirable confrontation with bigger and heavier predators, animals as different in size as rabbits, wolves, lions, rhinoceros and elephants share the space in the same “ground level”.**

To my knowledge, this drastic difference between living conditions in the trees and on the ground has never been discussed in the literature, although the importance of the “tree factor” seems to me absolutely crucial for understanding the beginnings of singing behavior in human evolutionary history.

The restricting power of the ground for singing behavior becomes obvious if we compare the list of singing species in the trees and on the ground. As we know today, over 5400 species, living in the trees are ardent singers (mostly birds and primates). Now let us have a look to find out how many of the animal species, living on the ground, sing. The answer is very simple – none. Actually, there is one singing species who lives on the ground – that’s us. Yes, we humans are the only species that live on the ground and sing. Apart from the trees, there are a few species who live in the water who sing (whales, dolphins, seals and sea lions) but no other species (apart from humans) sing on the ground. Although human uniqueness has been claimed in many different spheres, to my knowledge this incredibly important fact has never been discussed before.

Mithen mentions the importance of living away from the trees as a factor leading to establishing bigger hominid groups in order to escape predators (“Away from the cover of the trees, safety can only be found in numbers...”. Mithen, 2005:126), although he does not mention the importance of “the tree factor” for the singing behavior, or the absence of singing among ground living species.

And one more important fact to understand the restricting power of the predator-infested ground for singing lovers:

When birds, arguably the most ardent singers of our planet, sit on the ground, they do not sing. Birds, like most of the tree dwellers, go down to the ground because different types of food naturally end up on the ground, but if they go down to the ground for a meal, they need to accept the fear rules of the survival game: they may certainly find a meal on the ground, but they may become a meal for someone else as well.

Amazing, but this fact also has not been discussed specifically in the published literature, although in a wonderful book by Catchpole and Slater on bird singing there is a special discussion that birds need to be clear from the ground to sing (mostly for reasons of sound transmission. Catchpole & Slater, 1995:76-78). On my question whether birds do not sing when they sit on the ground, Peter Slater replied: “It is certainly true that birds do not usually sing when they sit on the ground but, as with all else in bird song, there are exceptions (e.g., Lyre-birds in their display arenas, flightless species). One reason will certainly be the predation threat from ground predators such as mammals which might be attracted” (letter from March 3rd, 2008). So, even such ardent singers as birds, when they visit the ground, stop singing. No wonder no other ground living animal species indulges in singing.

Another indication of a more violent and dangerous lifestyle on the ground (compared to living in the trees) is the ubiquitous presence of teeth among most ground animals. On the contrary, tree living birds have no teeth, mammalian bats being the only exceptions from this rule (Garfield, 1972:411).

I hope the readers now have a better understanding of how truly unique our singing ability is. The well known fact that human ancestors spent millions of years living in trees before they went to the ground gives us a clue to understanding the origins of human singing behavior. I believe All the above-mentioned facts strongly suggest that **singing in human evolutionary history started while our ancestors were still arboreal (tree dwellers).**

Now is the time to discuss the puzzling questions: if our primate ancestors were singing while living on the trees, then

Why do chimpanzees not sing?

According to Tecumseh Fitch, who studies their vocalizations, Chimpanzees in everyday life “are surprisingly silent most of the time” (from his letter of June 10th, 2008). Despite the big repertoire of their communicative calls (see Goodal, 1986), in everyday life chimps are mostly silent. If you spend a couple of hours at a Chimpanzee enclosure, and then go to see the other, tree-dwelling monkeys, you will notice the difference in their vocal activities quite easily.

If we look at the silence behavior of chimpanzees in the light of our previous discussion, there is hardly anything surprising: **chimpanzees live on the ground, and as all other ground living animals, they prefer to be silent.** Let us remember: the ground is not for singing lovers. Therefore, in the light of the abovementioned facts, the option that chimpanzees stopped

singing after they descended from the trees seems to me quite plausible. There is no need to believe that if an ape does not sing today, this was always the case in their evolutionary history. Let us remember that great African apes (like humans) also changed their habitat from the trees (a safe haven for singing lovers) to the ground (the kingdom of silence). Therefore, I suggest that **it is the noisy behavior of our ancestors that requires explanation, not the “wise silence” of Chimpanzees.**

So, we are the descendants of the apes who refused to stop singing. I suggest that the split between the lines leading to humans on one side and to the apes on another side, occurred after they all descended from the trees, and choose different life strategies: **protohumans refused to stop singing (actually, they made singing the centre of their physical survival strategy – see the following pages), and apes, on the contrary, stopped singing like all other ground-dwelling species.** No wonder apes find it much easier to communicate with us using gestures.

Singing as intimidation

Let us now follow our ancestors as they descended to the ground, and try to understand why they did not stop singing (like other apes) after they descended to the hazardous and predator-infested new environment. Colonizing the ground, our ancestors were not big and strong enough to stand against the big predators like lions, and when they started moving into the open grasslands, the situation worsened as good climbing trees were not always nearby. So, why on earth would they sing?

Steven Mithen criticized Bjorn Merker's idea, who suggested that the foundations of human musical talents were laid when our hominid ancestors started group singing to attract wandering females (Merker, 2000). Mithen argued: “The problem with Merker's ideas is that synchronous calling by hominids in order to attract mates would also attract predators, as would long-distance calls by lone hominids. We know that hominids on the African savanna were competing for carcasses with carnivores, and that they often became the prey themselves. The idea that they would have synchronized their calls to attract wandering females and to deter groups of other hominid males seems most unlikely, especially when the relatively open landscape constrained their ability to escape from predators by climbing trees. A far more likely strategy for such hominids would have been to keep quiet and hope that the prowling carnivores would pass them by (Mithen, 1005:207).

Merker's idea of hominid males calling for females is controversial for another reason as well. Although singing to attract females is quite widespread in the animal world, it does not seem to be the main purpose of hominids prehistoric group singing. In such species, where males try to attract females by their vocal talents (as Merker suggests), singing is mostly used in a **competitive context** between the males (or male groups), and understandably only **males usually sing** elaborate songs (which is the case in most of the avian birds). Among humans both men and women are ardent singers, and in fact in many regions of the world group singing and vocal polyphony has survived primarily in the women's repertoire. This fact strongly suggests that singing must have had a **cooperative** (and not competitive) character in our hominid prehistory. Of course, competition is one of the main driving forces in everything humans do, and singers and choirs in every society do compete with each other in different settings: at village weddings, on pop-charts and during big festivals. But as a phenomenon choral singing must have been born in human prehistory out of cooperation of the whole group, not competition between the males or male groups.

Let us go back to our distant ancestors. We have just read Mithen's words about the dangers of loud group singing in the African savannah. And still, most likely, hominids continued to sing. Were they trying to attract predators? No. I suggest **they were singing to avoid predators**.

The big difference was that our ancestors were **singing in groups**. First of all, even just being in groups gives the group members a safety-in-numbers benefit (Hamilton, 1971; Rendall et al., 2000). Besides, if the group members shout together at the attacker, this can have quite a helpful effect for the intended prey (shouting at predators and throwing objects at them is a popular explanation for early hominid defense. See for example, Berger, 2000). You do not need to see too many horror movies to realize that, confronted by sudden mortal danger, humans usually scream. If you think that this is a fruitless wasting of energy in the face of danger, think again. Loud screaming and shouting in a situation of sudden mortal danger has a double effect: (1) an audio-attack on an aggressor and (2) a call for help. Many lives were saved by screaming both in the jungles and in the night streets of cities. Interestingly, loud screaming is not an evolutionary strategy for all species – some do not make any noise even when terribly wounded in a violent attack (like wolves), and some pretend they are already dead (capybara).

We can all agree that screaming by a big group is more effective for the predator than individual screaming. We all know about the “beat” method of hunting when the loud shouting and noise of an unarmed human group can scare and direct large and strong animals towards the intended spot, push them over a cliff, or just drive them out of the proximity of human territory. Even today, if a stray lion comes close to an African village, group shouting is the first means of shooing it away.

Despite the immense importance of safety issues in our contemporary western society (where safety standards are the highest in human history), this issue has not been adequately investigated in relation to our distant ancestors (where safety was at the lowest possible level). “Although predation has long been thought to explain the evolution of alarm calls (e.g. Maynard-Smith, 1965) the effect of predation on the evolution of other call types has not been well investigated” (Uster & Zuberbuhler, 2001:742). What I am going to do next is to talk in more detail about the evolution of the “other call type”, connected to strategies for safety from predation.

When our ancestors were colonizing the ground, searching for food, or mastering their first stone tools, they could not do this in the safety of well-protected houses, shops and workshops. Any moment of the day they were vulnerable to fatal attacks by big predators. These times are now gone for good, and are apparently forgotten. This must be the reason why, although food-searching, hunting and sexual behavior and strategies of hominids and early humans had been among the favorite topics of countless publications, the survival strategies of our ancestors have not received sufficient attention. At the same time studies of primates show that they spend more time in scanning for predators than in searching for food.

Any tree-dwelling primate is in mortal danger while staying on a ground for some time. They can more easily become prey on the ground. So, as soon as primates notice predators, they rush back into the trees. Our ancestors were in a highly vulnerable situation on the African ground after they moved there for permanent residence. Trees were not around in a moment of danger, and they were not good runners like antelopes, able to outrun predators. Group defense seems to be the only viable option our grandmothers and grandfathers had about some 200 000 generations ago.

Now, let us remember what I said a couple of pages ago: although creating elaborate melodies and singing long songs is not only a human prerogative (as I have already mentioned, whales and avian birds can beat us at melodic inventiveness), **group singing with a precise rhythmic pattern, uniting all participants, is a characteristic of human behavior.** [See, for

example, “While there are a few examples of animals maintaining a musical rhythm after having been trained to do so (e.g., Thai elephant orchestra), we know of no demonstrations of animals spontaneously becoming entrained to rhythms as people do” (McDermott & Hauser, 2005:53. See also Patel, 2006).]

I am suggesting that **“rhythmically well-organized loud noise”, or the predecessor of human choral singing, was initially established as a safety measure against the big ground predators of the African savannah.**

Contemporary studies of monkeys and primates, not conducted in the natural environment, cannot inform us about the crucial importance of safety measures, but studies conducted in the wild are clear about the paramount importance of strict safety measures. According to Bshary & Noe, Diana monkeys spend a large proportion of their time scanning for predators (Bshary & Noe, 1997; cited from Uster & Zuberbuhler, 2001:754). Vigilance can be shared across the species as well. According to Wickler, “in some species of babblers, one member of the group remains perched above the ground with the rest of the group feeding below. After some time, the individual is replaced by another group member who will take over the role as the sentinel. Coordination of vigilance is regulated acoustically: about every five seconds the sentinel produces a low-pitched, short range, and difficult to locate call, the watchman’s song, which informs others that the individual is watchful and that nothing has happened” (Wickler, 1985; cited from Uster and Zuberbuhler, 2001:754).

It is not difficult to appreciate the rigorous safety measures that most animals use to avoid predators. We all can agree, I hope, that it is much more important not to make mistakes in searching for predators than in searching for food. Of course, it might be frustrating if you have not noticed a good stack of bananas, but if you have not noticed a crouching lion, well, you may never need a banana any more. Besides, most of the animals (including our ancestors) needed food only when they wanted to eat, but they were under the threat of being eaten any moment of the day and night. That’s why most animals look for food for some time of the day, but vigilance against predators is needed all day round.

It has been already mentioned above that scholars have not paid sufficient attention to the effects of predation on the evolution of other than alarm calls, although the crucial importance of safety issues for humans is very well known to all of us. Even today, when we can enjoy unimaginably high standards of safety and longevity (at least in the western world), safety is still the number one priority. We all know that safety concerns are possibly the

only real reasons that could make us deliberately give up part of our personal liberties.

Let's go back to our ancestors trying to secure themselves from the lion's claws. As I have already mentioned, I believe that the rhythmic component of human group singing was achieved after our human ancestors descended from the trees. I have a few points to back up this idea:

- Kortlandt wrote about the loud display of vocalizations, accompanied by foot-stamping and drumming on tree trunks made by chimpanzee bands as a possible means to scare away predators and competitors, and also suggested that Australopithecines “probably sang and drummed” (Kortlandt, 1973:14). The noise of chimpanzee bands is not organized in a strict rhythmic unity for every member of the band.

- Descended from the trees to the ground, our ancestors found a very effective new component for their “audio defense” – **stomping on the firm ground**. Even today, when we want to scare away something or someone, we instinctively stomp on the ground, together with a loud shout and hand gesture (as if throwing something). I suggest that this widely spread (and possibly universal for all human societies) behavior is connected to the ancient safety strategy against the major predators of Africa.

- There must be something impressive and imposing in the stomping sound itself. Possibly because we all instinctively know that only very large animals can create stomping sounds (the classic scene from “Jurassic Park” of T-Rex's distant stomping making water fizzle comes to mind).

- If someone thinks that there is hardly any difference for a marauding predator between the loud and unorganized noise, made by a large group of intended prey, and the loud and rhythmically well-organized sound, think again. The difference is absolutely huge. The loud but unorganized sound, although it can still make a predator hesitate, sounds more like an audio nuisance from panic-stricken prey, but the organized rhythmic sound gives a strong message of well-organized and united resistance.

- Another crucially important role of rhythmic singing/stomping is that it unites separate individuals into a tight and dedicated unit. So, there are two features of the rhythmically united movement and singing: (1) external – intimidating the enemies, and (2) internal – psychologically uniting individuals into a tight unit. These two factors make rhythm a **superb military aid-factor**.

- Precisely rhythmically organized group movement has been used by human military forces for ages. William McNeill, American historian from the University of Chicago, the author of the bestseller “The Rise of the West:

A History of the Human Community”, published an insightful book “Keeping Together in Time: Dance and Drill in Human History”, where he discusses in detail the powerful influence of long army drill in achieving psychological unity and obedience of the new recruits. Apparently, this “magic” power of long army drill has been well known to army generals at least from the 16th century (McNeill, 1995). Therefore we can say that the ancient uniting and empowering nature of rhythmic sounds and movements, used by our ancestors millions of years ago in their battle against powerful African predators, is still actively employed by contemporary military forces.

- Prolific use of war cries (and loud music) in human history and prehistory is another proof of the tremendous military capability of audio intimidating display. Instances of the use of loud music and war cries to intimidate a foe are documented from biblical texts (Isaiah, 8:9) and ethnographic accounts from different parts of the world to the history of contemporary military activities (Levitin, 2008: 47-48).

- Attacks by lions, tigers and other big cats usually take a split second. The prey usually does not even see the attacker, as big cats prefer to attack when the prey is not looking in their direction (that’s why cheap plastic masks with human faces, fixed from behind on the head, saved many lives from man-eating tigers in the Sundarbans national park in India and the Bangladesh swamps. See Jackson, 2003:78-80). Of course, during the split second of the attack there is no time to organize a loud and stomping choir to scare the attacker. I suggest that the loud stomping singing-shouting choir would be employed only when the predator was spotted before the attack (and with many eyes this was easier to do).

- Of course, if the loud sound was only a sound, without any other “materialistic additions”, lions would have soon realized that there was not much to be afraid of, but most likely, this loud and well-organized sound was accompanied by the throwing of more materialistic objects (stones, rocks, branches). The suggestion of the evolutionary importance of precise throwing proves very useful in this situation (See Calvin, 1982, 1983, 1993). Therefore, I suggest that it must have been a combination of both factors ([1]audio-visual display and [2] object-throwing) that would turn away hungry lions from stomping and throwing hominids, and to go after more “prey-like” behaving, although faster running, four-legged preys.

- Calvin’s suggestion of the evolutionary importance of object throwing as a means of **hunting** does not pay much attention to object throwing as a **defensive** function for our hominid ancestors. Throwing could serve the function not only of reaching a quicker running prey, but also of keeping a

predator far from undesirable physical contact with a hominid body. Defense throwing is well known among chimpanzees, trying to “intimidate leopards, snakes, and fellow chimpanzees” (Calvin, 1993:241). Although Calvin himself suggests that “music ought to have so little feedback on natural selection” (Calvin, 1993:240), I suggest that the rhythmically well organized loud stomping group defense, coupled with throwing objects at predators was the main surviving strategy for early hominids.

- Defense throwing has at least two important advantages in comparison to “hunting” throwing: **it is easier to aim, and it hits much harder.** (1) It is much easier to hit the object when it is running towards you, than when it is running away from you. (2) If you are throwing a piece of rock at a standing animal, the rock will hit the animal with the speed of the flying rock. If the animal is running away, the speed of the animal will have a negative effect on the hit force, as you need to subtract the speed of the running prey from the speed of the flying rock to calculate the impact of the hit. On the other hand, in the case of defense throwing, when you are throwing a rock at an attacking animal (say, an attacking lion), the speed of the attacking predator is actually augmenting the speed of the rock, making the effect of the hit much stronger.

- Some individual members of the group, as in every society, would be braver, and others could be more panic-stricken, particularly when facing a predator like a hungry lion (and as if a contemporary African lion itself is not menacing enough, paleontologists suggest that the ancestors of African lions were bigger and more massive by the time our ancestors were colonizing the ground. Brain, 1981:156). And here comes another crucial function of the “lion dance”: **relentless repetitive rhythm in a dramatic climax of standing your ground for your life against the lion must have had a powerful hypnotic and trance-inducing effect on the whole group of stomping primates**, uniting everyone against the common mortal enemy, and giving every member of the group the feeling of physical bonding and communal safety. The powerful trance-inducing and bonding effect of the repetitive rhythmic sounds on the human brain (see Rouget, 1985), universally known from across cultures from the shaman’s drumming to the soldier’s drill, must have its origins in the African savannah.

- If some members of the group were still overtaken by fear and tried to outrun the lion, well, most likely they would become the prey. (By the way, experts suggest, that if you are ever attacked by a lion or a tiger, do not run away! This is not the easiest advice to follow in a situation like this, I agree, but they say it helps). So, the lions were themselves eliminating faint-hearted

members of the pre-human groups who “did not want to join the choir”. Therefore predators were inadvertently helping human ancestors to be more united in a relentless rhythm of the trance-inducing “lion dance”.

- Human ancestors shared the ground and living space with the massive ancestors and relatives of African lions for a few million years. Imagine the choir where all the individual members are forced (literally under the fear of death!) to be in perfect melodic and rhythmic unity with the other members of the choir. And imagine if the “rehearsals” of this choir occurred almost every day, and continued without stopping for any holidays or school breaks from one generation to another. And another. And another. For more than a million years. And all these millions of years the rehearsals continue under the watchful eyes of hungry lions, and the prize for good synchronous singing is life. I do conduct a couple of choirs. We usually rehearse once a week, trying to get a harmonic and rhythmic unity, and sometimes it is not easy for me to gain everyone’s attention... Well, no more dreaming... I guess, if we could hear the “choir” of our hominid ancestors, the resulting rhythmic (and melodic) precision of our ancestors by the time they mastered stone tools and were ready to move out of Africa, must have been astounding.

- It is a great feeling when a group of relatively weak creatures can shoo away a big and strong predator like a lion, and it does not take much speculation to imagine that our ancestors would soon transform their effective “lion dance” into a ritual dance.

- Singing and group music-making leads to the increased release of oxytocin in human brains, leading in their feeling happy and well disposed towards each other (Levitin, 2008:98; Kosfeld et al., 2005). “Did you have fun?” was the question usually asked of participants in collective working on the maize fields in western Georgia, working that was always accompanied by the singing of special *Naduri* songs (Tsuladze, 1971:21). Carl Bucher gives plenty of examples of the magic power of united rhythmic singing for making the process of hard work easier (Bucher, 1923 [1919]) .

- Large groups of chimpanzees sometimes conduct an awe-inspiring performance including vocalizations and other stamping and drumming sounds (Kortlandt, 1973). What is also very interesting is that they often organize this kind of “concert” at dusk, before going to sleep. A precise rhythmically organized and intimidating “lion dance” could have been used routinely by our hominid ancestors in the evenings to scare away the night predators. It has been noticed, that “African natives who live in the bush do much the same at nightfall organizing a loud sound display” (Kortlandt,

1973:14). Scholars sometimes portray our ancestors singing at their night camp (Livingstone, 1973; Mithen, 2005). Singing and drumming for safety during the night gives another meaning to these idyllic evening “concerts”. Loud singing and rhythmic stomping could fulfill an evolutionarily very important safety function for night time (we will discuss the problem of night time security later).

- This is not the whole story. I suggest that defense was not the only function of the loud and intimidating “lion dance”. Would a group of hominids use the powerful audio display not only for defense, but for attack and intimidation as well? I mean would they, for example, try to chase away a lion (or even lions) from the lion’s kill? We should not be too skeptical about this “crazy bravery” of our ancestors. It is documented that an unarmed and shouting group of humans can chase away the hungry man-eating tiger from its kill. Hunter and conservationist, my childhood hero Jim Corbett gives a few such examples in his documentary books about man-eating tigers (Corbett, 1946). Therefore, the possibility of a big group of hominids intimidating lions with the rhythmic “lion dance” seems quite possible. At least, in the desperate situation of being without food for the group for several days hominids could have been pushed to organize such an attack. I can easily visualize how the starving hominids would watch lions hunting, then they would give the lions some time to feed (if they did not want to deal with *very hungry* lions) and then they could start their rhythmic attack for their share of the remaining carcass. “Tell me how hungry you are and I can tell you what you could do”. The near proximity of death from starvation can radically alter human behavior. Educated and civilized humans were pushed to massed cannibalism in Leningrad by total starvation during the World War 2, when Stalin categorically refused to give up the city of Lenin to the Nazis. I remember meeting a distant relative from Leningrad in the first half of the 1980s, and remember my shock when on my simple question “Do you have a grandmother?” she simply answered “No. She was eaten by her neighbors in Leningrad”.

- As a matter of fact, this kind of “aggressive scavenging” (or “confrontational scavenging”, according to Robert Blumenshine, 1986) behavior could be the main source of obtaining meat for our hominid ancestors. It would not be too far-fetched to hypothesize that even a very few successful attempts by starving hominids to drive away lions from the remainder of the kill would be enough for smart hominids to realize the “attacking power” of the “lion dance”, and to encourage them to use this

strategy to obtain meat in other cases as well, not only in cases of absolutely extreme starvation.

- Binford suggested that scavenging was the main strategy for our distant ancestors to obtain the much-needed meat (Binford, 1986). The “hunting versus scavenging” discussion already has a long tradition. The notion of “aggressive scavenging” changes the nature of scavenging, because killing a rabbit or antelope is not more difficult than chasing lions away from their kill. And by the way, lions themselves are well known to use intimidation to shoo away smaller predators (leopards, cheetahs, hyenas) and to scavenge their kill. I would like to suggest a special term **“Apex scavengers”** to describe the status of hominids and early humans in African savannah. Unlike the well-known term “Apex Predator”, which stands for the species placed on the top of the food chain, the term “Apex Scavenger” stands for the species who does not hunt most of their food, but who can intimidate predators and drive them off their kill. I suggest hominids and early humans were not big game hunters, but as a group they could intimidate all the predators of Africa, including lions.

- The killing of human ancestors by lions and other predators of Africa must have still not been very rare, no question about that. Caught off guard, or alone, our ancestors were not a match for the lion’s fangs and claws. But together these hominid groups were a force to be reckoned with even for a hungry lion. Hundreds of thousands and millions of years passed in this evolutionary struggle for survival in the African savannah, shaping our sense of unity and rhythm.

- Zygmunt Estreicher made a much-cited comparison about the “in-built metronome” in the heads of African musicians in his remarkable study of rhythms among the Bororo tribes (Estreicher, 1964). A sense of rhythm is one of the musical universals that unite the human race, and it is interesting that it seems to be particularly precise among sub-Saharan African populations. Pygmies are hailed as the best drummers and dancers by sub-Saharan Africans themselves (see the discussion of Pygmy polyphony in the first part of this book), so the undersized populations of Central African rainforests arguably have the strongest sense of rhythm among the human populations of our planet.

- Drumming and drums are usually (and most likely correctly) identified as the earliest type of musical instrument humans used in the course of their musical evolution. The question is how old is the tradition of drumming among our ancestors. If the extremely interesting suggestion by Tecumseh Fitch about the direct evolutionary links between the drumming behavior of

great African apes and humans is correct (Fitch, 2006:2, 9), then drumming must have preceded the appearance of the sense of rhythm, which seems to me quite plausible.

- We should not discount the possibility that the first human-made musical instruments (arguably drums) were initially made and used as a very effective means of making loud noises to increase the intimidating capability and the safety for the hominid group. A comparative study by T. Fitch (2006) also points to this possibility. Professional musicians and drummers might have objections to this suggestion, but let us all remember that the striving for safety and military capability has been the primary cause for many crucial inventions throughout human history.

- If we have a look at the characteristics of the musical culture of sub-Saharan Africans, arguably the best-preserved polyphonic tradition on our planet, and at our hypothetical reconstruction of “primordial polyphony” (see above), we can see that (1) they both have a 4/4 rhythmic basis (ideal for stomping), (2) they both are almost always connected to vigorous movements, (3) stomping is often one of the main elements of their dances (4) singing is often loud, and (5) the melodic phrases are often very short, consisting of precisely coordinated two-three-sound energetic phrases. All of the mentioned characteristics fit very well the trance-inducing requirements for the “lion dance” of our hominid ancestors.

- This long struggle for survival and safety measures on the ground must have been a powerful drive for our ancestors to live in **bigger groups**. Bigger groups meant not only more eyes to see the predators and more objects thrown, but more singers, louder stamping, and a generally louder and more intimidating sound for the “lion dance”. On the other hand, scholars suggest that the bigger size of hominid groups must have been one of the most important factors leading to the development of more complex social interactions and the increase of human mental capacities (Aiello & Dunbar 1993; Dunbar, 1996; Byrne & Whiten, 1988, 1992).

- And finally, I would like to propose that the origin of human rhythm might provide an evolutionarily background for future human language, as a pulsating and flowing rhythm must have prepared the appearance of both human music and language. Neurologically this suggestion makes good sense, as human rhythm is mostly located in our left hemisphere, and in the light of the very early origins of rhythm, it could have played an instrumental role in transforming the primate ancestor of the Broca structure into a human neurological basis for the human language.

So, according to the suggested model, after our ancestors descended from the trees, there were a few simple alternatives for them to follow:

- (1) First of all, to stop “irresponsible” singing, not to attract predators;
- (1) To grow bigger teeth, to better defend their lives on a hazardous ground;
- (2) To learn fast running for their lives;
- (3) To go back to the safe tree branches, and
- (4) To create bigger size groups and defend themselves as a group.

According to the evolutionary results, human ancestors did not stop singing (unlike chimpanzees), did not grow bigger teeth (unlike baboons), did not become great runners to outrun lions, and did not go back to the trees. We will never know the number of failed attempts in pursuing any of these options during the millions of years of evolution, but according to the final result, those who opted for closer contacts between group members, increasing the group size, cooperation and more effective means of group defense, were favored by evolution. The rest, as they say, is history.

In the Wake of a New Intimidating Strategy: The Origins of Bipedalism, the Stone Tool Industry, and a Few Morphological Changes in the Human Body

The model of Audio-Visual Intimidating Display (AVID), discussed in a previous section, gives us an opportunity to have a fresh look at several well-known elements of human behavior and morphology in a new evolutionary light. I suggest that rhythmic singing/shouting, stomping, drumming and stone-throwing for the defense were not the only elements of hominid defense and attacking strategy. Evolution provided our ancestors with a few additional behavioral and morphological elements to increase their intimidating capability. These new behavioral and morphological elements were used as a part of AVID, and on the next few pages we are going to discuss them. Some of these ideas have been around for some time, so I will only provide support for them, while other ideas seem to be formulated for the first time.

The problems discussed in the few following pages cover a wide range of issues, such as: the origins of bipedalism, the appearance of human head hair

and body painting, the difference between men's and women's voice ranges, losing primate fur and the appearance of an almost hair-free human body, the decreasing size and number of human teeth, the increase of human body size and the decrease of human body strength, and finally, the beginnings of Paleolithic industry. All these problems will be discussed in the light of the suggested model of AVID (Audio-Visual Intimidating Display). I understand that each of these suggestions could become an object of a separate study, and I am sorry to present them in such a condensed form, but I believe it will be thought-provoking for readers to have them formulated in the form of brief suggestions.

The origin of bipedalism

There are about a dozen distinct hypotheses as to how and why bipedalism started in human evolution. The different hypotheses are not necessarily mutually exclusive, and different selective forces could have acted together to lead to hominid bipedalism. It is universally agreed that bipedalism evolved well before the enlargement of brain and the development of stone tools in the evolutionary history of our species.

The idea that the origins of human bipedalism might be connected to the desire to *intimidate opponents* was proposed a few decades ago (see, for example, Livingstone, 1962; or Jablonski & Chaplin, 1993). Plenty of animal species use bipedal threat displays to look taller in order to avoid an undesirable fight or to intimidate antagonists during the confrontation.

The model of the Audio-Visual Intimidating Display gives full support to this suggestion, as singing and drumming in rhythmic unison in order to intimidate powerful predators would be naturally connected to other possible threat displays. But there is also an important difference between the idea of bipedal threat, noted above, and the model I am suggesting. I suggest that unlike other animal species that use bipedalism only when they are confronted by a predator or a competitor, our human ancestors used bipedalism most of the time, eventually shifting to habitual bipedal locomotion. The reason for this, as I have suggested, is that our ancestors did not try to become another silent dweller of the ground. On the contrary, they chose a policy to assert their presence wherever they went, and to intimidate all their possible predators with their confident appearance and noisy behavior. Therefore, for me the idea of bipedalism ("to be seen") is close to the idea of singing ("to be heard").

Habitual bipedalism must have been an important part of this general intimidating policy. I suggest that the final shift to habitual bipedalism came gradually after the accomplishment of a few other

important audio and visual elements of threat display (see the following sections).

The appearance of head hair

Human head hair is one of the unique elements of human morphology, although it has not been granted as much scholarly attention in the studies of human evolution as bipedalism. It has been suggested, that it was evolutionarily advantageous for hominids to retain the hair on their heads in order to protect the skin there as they walked upright under the intense African sun (see Jablonski, 2006).

Desmond Morris suggested that the overgrown head hair was used as a species-specific morphological sign for the hominids, visible from afar (Morris, 2008:21-22). In the light of the intimidating strategy in hominid evolution I suggest, that the unusually long Hominid hair could have had another practical function in everyday struggle against predators and competitors. This function was the same as the function of the bipedal posture discussed above: **to look taller**.

We know that untrimmed human hair grows to about one and a half meters, after this each individual hair falls out and a new hair starts to grow. Therefore a long and very likely bushy hair of our African ancestors (something like a huge “Afro”) must have been a considerable addition to the height of a short hominid body, making each hominid look much taller and more imposing in a bid to intimidate lions and other powerful predators.

We can recall tall military helmets of different shapes and sizes from different countries and different centuries, as well as other towering head covers often used by warriors of different peoples and tribes (or gladiators) for thousands of years: apart from the function of defense of the head from different weapons, they were serving the same prehistoric purpose – to make the wearer look taller and to intimidate the opponent. Sometimes even the hairstyle itself could be shaped to make a person look much taller: the well known “Mohawk” hair style (popular among some contemporary punk and Goth group members) that originated from the American Indian tribal (Mohawk or Wyandot) warriors “has the advantage of greatly increasing the height of the wearer” (Morris, 2008:38).

The so called “Afro” hairstyle, the hairstyle that naturally grows on the head of the people of African descent, most likely is the oldest hairstyle in the history of the human species. I suggest that Afro was the first, nature-made “military helmet”, the first human hairstyle that was designed by the

greatest “duo of designers” in the history of our planet – Genetic Drift and Natural Selection.

The size of the untrimmed “Afro” hairstyle is several times bigger than the diameter of a human head. Therefore, the huge ball of black hair must have been a significant addition to the hominid body height. Also, if we imagine a group of singing hominids, all with huge untrimmed bushy hair on top of their heads, standing together in a tight group in a quest to defend themselves¹, their hair would almost touch each other, forming a united common “cloud” of black hair. The sight of a group of hominids during the AVID must have been impressive even from the lion’s perspective...

In the light of the above mentioned fact, that human head hair naturally grows to about one and a half meters, the suggestion that human head hair was primarily designed by evolution to protect the human head skin from the intense UV light (Jablonski, 2006) seems a bit controversial. The necessity to cover a naked patch of skin on the hominid head would hardly require *such an amount* of hair. On the other hand, the huge “Afro” would have been very effective in making the hominid body look taller in order to intimidate opponents. Therefore, although I certainly agree, that hominid head hair could protect the skin on top of the human head against the intense UV light, I suggest that the primary function of the long tightly coiled head hair was to make the short hominid body look much taller.

The appearance of body painting as a survival mechanism

Hardly any known human tribe or society exists or existed without some form of body painting. There have been suggestions that body painting could be at the very beginnings of human art and that body painting already existed among humans at least 30.000 years ago (see Marcia-Lees & Sharpe, 1992).

The symbolic importance of body painting is very well known. I suggest that besides the symbolic importance, body painting could also have a practical function of intimidating predators and opponents. The available evidence from different tribes from different parts of the world is very clear about this: warriors and hunters were often painting themselves when they were going on military campaigns (or hunting). In the absence of hard evidence of the use of body painting among hominids one can speculate that body painting is a purely cultural late practice, but there is no reason or evidence to deny a possibility of intimidating use of body painting in human evolutionary prehistory. At least the universality of body painting already

¹ Standing close to each other while singing is one of the universal features for the carriers of polyphonic cultures.

points to its ancient roots. Let us recall that according to Emile Durkheim anything that is universal to human culture is likely to contribute to human survival (Durkheim, 1965:87; see also Levitin, 2008:192).

Why and how would body painting work as a part of the AVID system? I suggest it could have **two functions: external and internal**. As an “external” factor, the factor of “unknown appearance” would work as a confusing and threatening factor for lions and other predators (animals are usually careful with other animals and objects with unusual appearance). As an “internal” factor, I suggest that when preparing themselves for the life-and-death battle against deadly predators (or competitors), body and face painting has an important psychological factor of preparing participants for battle, helping them virtually to obtain a different personality, and helping them to go into the special mental state of the “battle trance”. The hero of Robert De Niro from the classic “Taxi Driver” totally changes his appearance in order to transform himself into a killer before he goes into a killing spree, and this desire to change your appearance when you want to change your psychological state (or even alter your personality) must have very deep evolutionary roots.

It would be natural to propose that body painting was mostly applied when hominids were preparing for aggressive scavenging, in order to obtain a kill from lions and other “professional killers”, rather than to protect themselves from predators.

Of course, it is difficult to speculate what kind of painting materials could be used by our hominid ancestors. It seems obvious that hominids would not be using the elaborate substances we find millions of years later on the earliest archaeological sites with the deposits of ochre and manganese dioxide. Most likely blood, different berries, or even a simple layer of clay could be used as the first body painting substances. The evidence of the use of the red ochre (possibly used for body painting) comes from Africa and is over 230 000 years old (McBrearty & Brooks, 2000). There is also some evidence of Neanderthals using body painting as well (see for examples: “Stone nodules containing mineral manganese dioxide, which has been scrapped with stone tools, have been found at several Neanderthal sites... As the Neanderthals have left no traces of pigment on cave walls or artifacts, the most likely explanation is body painting (Mithen, 2005:230).

We can conclude, that (1) the universality of the use of body painting during military (and hunting) campaigns in different peoples of the world, (2) the possible confusing and intimidating effect of the painted bodies on predators, and (3) the possible psychological effect of body painting to

achieve an important internal psychological change and to prepare group members for mortal battle suggests, that body painting could also be used among early hominids with the wide range of other audio and visual means to intimidate opponents and to prepare them for battle.

Painting the face and other exposed body parts by contemporary combatant forces has a totally different function, as their paintings mostly serve the function to *camouflage* the appearance of the combatant, whereas the practical function of traditional military body painting (particularly, combined with the use of high head-covers), on the contrary, is to make a warrior look bigger, more visible and more intimidating. I am not aware of any research in this direction, but painting might be helping members of contemporary combatant forces to achieve the special psychological state they need to be in, in order to conduct their extremely difficult and psychologically demanding tasks. If this is the case, body and face painting by contemporary combatant forces might have the ancient psychological (*internal*) function: to prepare combatants to achieve a special psychological state. At the same time, the *external* function of body painting might be the opposite in contemporary combatant forces (*camouflage* instead of *intimidation*). It would be also natural to suppose that body painting was changing its nature and function during the hominid and human evolution: in the epoch when our ancestors were obtaining food predominantly via scavenging, the function of body painting must have been intimidation, but when hunting became a leading source of food, the function of body painting would have naturally shifted from intimidation to camouflage (unless, of course, this was a hunting involving the beat method which is also based on the *intimidation* of the intended pray).

Apart from military groups, body painting is widely used among professional wrestlers, where the intimidating function of body painting is obvious.

Here is the concluding bottom line: I suggest that the **factor of survival** could have been the main force behind the very origins of body painting (and art) in human evolution.

Appearance of clothes as a part of AVID

I can not resist mentioning about another possible factor of the hominid AVID system. The traditional approach to the origins of clothes is that they give protection to the wearer from cold weather. I propose that the use of clothes (most likely animal hides covering parts of body) might initially serve the function of intimidation, based on the factor of unusual appearance.

I suggest, that groups of hominids, who were covering themselves with animal hides in order to intimidate predators and competitors (and possibly as a protection), would be more successful in intimidating predators and competitors with their unusual appearance, than other, naked groups. My suggestion does not conflict with the traditional idea, as clothes could easily serve both of these functions in human prehistory (weather conditions and safety concerns). As we know, evolution is extremely economic.

There is an important difference between these two suggestions though. Clothes as a defense from the cold weather would have become important only when our ancestors moved to other geographical areas with colder climate, either migrating many thousands of kilometers, or changing the altitude of their habitat. On the other hand, clothes as a part of the AVID system could have originated when our ancestors were still living under the hot African sun, as an aid to make human defense and attacking ability against predators and competitors more powerful. Therefore, our distant ancestors could have started using clothes primarily as a part of the AVID (still in hot conditions), and much later, when they moved from sunny Africa to other geographical conditions, clothes were found to be a life-saving protection against the cold weather. It would be natural to propose that as soon as humans moved to different geographic conditions, and as soon as the second function of clothes (defense from the cold weather) became important, our ancestors shifted from occasional to habitual use of clothes.

Therefore, I propose that the initial use of clothes during the human evolution came as a part of the AVID. It is also possible to speculate, that the cultural use of animal hides for covering the hominid body (as a part of AVID) might have been one of the key factors that allowed our ancestors to move out from the warm conditions of Africa and to adapt to living in much colder climates.

Here I must mention that the study of human body lice suggests surprisingly recent origins of clothes (Kittler et al., 2003). Body lice need clothing to survive, that's why it is believed that they must have developed only after humans started using clothing regularly. According to this study, humans obtained body lice only 107 thousand years ago, about the time when the anatomically modern humans evolved in Africa. This suggestion leaves all the previous populations of archaic *Homo sapiens* (known as *Homo erectus*) virtually naked, and it seems unbelievable to imagine, that groups of East Asian archaic *Homo sapiens*, who lived in China, and particularly Neanderthals, who lived in ice-bound Europe during the ice age for hundreds of thousands of years, could survive without the use of clothes.

Another study of human body lice, published a year later, in 2004, and based on similar genetic methods, suggested that the evolution of human body lice is more than five times older – 540 thousand years (Reed et al., 2004). I think even this older date will be re-examined in the future, as it seems to me difficult to believe that groups of our ancestors with their naked gentle skin did not use any kind of clothes by the time they came out from Africa and successfully colonized huge regions of the world with very different environmental conditions almost two million years ago. The most recent suggestion that human lice might have originated more than 3 million years ago (Wade, 2007) seems to be closer to historical reality, although further research is needed in this direction.

The difference between men's and women's voice ranges

The huge difference that exists between human male and female voices is very rare among primates. None of the other apes and most of the primates, despite a much bigger difference in their body sizes (for example, between male and female gorillas) have such a big difference in voice range. According to my own experience with mixed choirs, I can say that the difference of one octave between male and female voice ranges, often cited in literature, is quite consistent.

In explaining the evolutionary reasons for the emergence of the unusually deep male voice, I totally agree with the suggestion of Desmond Morris that a low male voice could have been very useful to “intimidate human rivals, to drive prey or to scare off predators” (Morris, 2008:92). Here we can recall that the “octave equivalence” principle is one of the widely accepted universals of human music, and that the octave difference between male and female voices gives important biological support to this idea. I am grateful to Tecumseh Fitch who brought to my attention the case of Chacma baboons, who have a similar difference between the male-female voice ranges (Rendall et al., 2004).

Singing in harmony as a part of AVID

On November 9th, 2008, I was teaching my choir a new arrangement of the Beatles song “Ticket to ride”. The arrangement was made by Nino Tsitsishvili who led my choir while I was away from Australia for the polyphonic conferences in Tbilisi and Vienna in September-October 2008. In this arrangement Nino masterly used the sudden shift from the choir unison to the rich four part harmony. At the end of the verse, when the lyrics go, “she's got a ticket to ride, and she does not care” the word “She's got a ticket

to” was in unison, and the word “ride” suddenly had a widely spread dissonant chord (from the bass: E, G-sharp, D, G). The contrast in sound was amazing, as if suddenly a big group of singers joined in. Although the whole choir was already singing loud in unison, the significant swelling in overall sound as the result of the sudden appearance of harmony after singing in unison was startling.

Choir directors would agree with me – the sound of a choir increases when they sing in harmony. When the overtones of different pitches clash with each other in one simultaneous harmonic sound, the result is a more robust sound with seemingly more participants.

Therefore, it seems natural for me to propose that the initial impetus to sing in different parts was the result of a long evolutionary process of seeking more impressive choral sounds for the sake of the survival and safety for our hominid ancestors. The same search for more impressive sound that brought rhythm into human singing, created another uniquely human musical element – singing in harmony. **Hominids were not only singing together, they were singing in harmony.**

Some readers might consider this suggestion of the direct links between choral singing, one of the highest expressions of human musical and spiritual culture and the singing of prehistoric hominids as a bit of an insult, but for me there is something very deep and very poetic in making evolutionary connections between Bach’s chorales and the final chorus of the Beethoven’s 9th symphony on one hand, and the trance-inducing loud singing in harmony of our distant ancestors in order to stand their ground against mighty lions a few million years ago on the other hand.

It is widely known, that many cultural inventions that make human life safer, more convenient, and more meaningful, were initially invented for the reasons of communal safety and military capability. I suggest that human choral polyphony is one of these elements, a phenomenon that belongs to human culture, but has its roots deep in safety concerns, seemingly out of the realms of human “culture”.

I believe we should not speak about the “invention” of polyphony among early hominids, the same way as we should not speak of the “invention” of rhythm. It was a case of the selection of an advantageous trait by the forces of evolution, very much like the adoption of bipedalism, or the growth of head hair.

And finally let me ask a question: would it be right to separate the forces that shaped human “culture” from human “survival”? Is not a culture itself primarily an adaptation, or even a tool, for human survival?

Singing in dissonances as a part of AVID

We have just discussed that singing in harmony makes the overall group sound more robust, creating an impression of a larger and more imposing group (see also Levitin, 2008:47-48). Another question is **what kind of harmony** could be employed by our hominid ancestors? Is it possible to answer this kind of specific question? I am sure this is possible.

Professional musicians know that there are several different possibilities to sing in harmony. You can sing in parallel thirds, or parallel fourths or other intervals, use a drone with other parts, sing in very wide intervals, or very close intervals, you can also sing in two, three, four, or more parts, and also, you can sing in consonant or dissonant intervals and chords. All these different types of singing in harmony create very different overall sound. At Melbourne University I teach students how to harmonise the same melody in different ways, so that a Beethoven melody can suddenly sound like a jazz piece, or, a Red Hot Chilli Peppers song might sound like a church song. Each melody can be harmonized in myriads of ways.

The most important question for us is whether there is a type of harmony that can create the most robust and the most impressive overall sound. The reply to this question is positive. Yes, there is such a type of harmony, and this little section will be dedicated to the discussion of the possibility of our hominid ancestors using this type of harmony in order to enhance their defence and attacking capability.

Singing in dissonant intervals and chords creates the most startling, the most robust, and the most impressive overall sound of choral singing. These characteristics make singing in dissonant harmonies the best possible nominee for the central audio element of the AVID system.

Dissonant harmonies are based on so called “dissonant” intervals (like major and minor seconds) which sound more harsh (piercing and loud) than the so called consonant intervals (like thirds). So, if you have, say, a group of three singers, you will get a different overall sound according to what and how are they singing: (1) in unison (singing in unison means that everyone is singing in the same pitch), (2) in three-part consonant harmony (the best known consonant harmony probably is a major triad chord, like C,E,G), or (3) in three-part dissonant harmony (a chord that contains “rough” intervals, something like a “Georgian triad”: C,F,G). Providing that the sound volume of each singer of a group is the same in all three cases, the most impressive sound out of these three versions will be the one from singing in dissonant harmonies.

The chord from the choral arrangement of the Beatles “Ticket to ride” that struck me is a good example of a power of singing in harmony (the chord E-Gsharp-D-G) with it’s clashing sounds between G-sharp and G is arguably the most famous dissonant chord known in rock music history, popularized by Jimmy Hendrix in a few of his compositions.

In the first part of this book, reviewing polyphonic styles from different parts of the world, we discussed a very specific type of polyphony. This type of polyphony widely uses singing in dissonances, particularly seconds, very often combining seconds with a drone. The interval that is used in these cultures, is often transcribed as a minor second, although it is not actually coinciding with “our” minor (or major) second. It is in between these two intervals, and this interval creates the maximum “roughness” of a sound. A special German term, *Schwebungsdiaphonie* is sometimes used for this singing style (Brandl, 2008; Messner, 1980, 2013). This German term literally means “roughness diaphony”, and the interval under discussion (with the distance of 14-16 hertz between sounds, somewhere in between the major and minor seconds) is known as a biologically very potent means for drawing attention (Brandl, 2008:289, 291). In cultures that use this type of polyphony, hearing and enjoying this dissonant interval seems to be the primary goal of the communal polyphonic singing.

Despite its specific sound, singing in secondal dissonances can have quite wide appeal. The great international success of the Bulgarian polyphonic singing style in the 1980s is a good example for this. Arguably the most important element of the brilliant arrangements of Bulgarian folk melodies was the clashing secondal harmonies, very common for Bulgarian polyphonic songs.

And now here it is, the most difficult but inevitable question of our discussion: could a specific singing style, known to us from several cultures, and based on the wide use of secondal dissonances (I call this D/D style of polyphony), be a survival of the ancient attention-drawing singing style of our hominid ancestors?

Of course, the first reaction of most readers to this suggestion will be of total disbelief, because this question suggests that the prospective age of this singing style could be estimated in millions of years. So far the most daring suggestion about the survival of polyphonic singing style came from Victor Grauer, who suggested that the Pygmy/Bushmen style polyphony was the singing style that the groups of anatomically modern *Homo sapiens* took from Africa about one hundred thousand years ago (Grauer, 2006).

Despite the understandable scepticism towards such deep historical roots

of any specific element of human culture (and singing in seconds is widely considered as a very specific element of human musical culture), let us put our emotions aside and try to assess the possibility of such an extraordinary survival according to all the currently available data.

If the polyphonic singing style, based on a wide use of secondal dissonances, is a survival from the deep evolutionary past of pre-human history, then (1) the remnants of this singing style must be found among spectacularly different human groups on different continents, representing diverse populations with totally different genetic features, and (2) this singing style should be represented in some of the most isolated geographic regions of the world.

In a “Case Study #2”, dedicated to the stratification of the drone-dissonant (D/D) polyphony in Europe in the light of the appearance of the Indo-Europeans in Europe we already discussed this singing style. We asked exactly the same questions, although the scale of the scope of our discussion was narrower: the European continent only. We found that the drone-dissonant polyphonic style is found in the most inaccessible regions of Europe (mostly mountains). So after analysing all the available information we came to the conclusion that this style must have been characteristic for the pre-Indo-European population of the so called “Old Europe”.

Now it is time to go wider and to check whether this singing style could be characteristic not only for Old Europe, but for the oldest layers of humankind.

Amazingly, the fact that this type of polyphony (I call it drone-dissonant polyphony, or D/D polyphony) is found outside Europe in many other regions of the world is quite well-known to ethnomusicologists (see Brandl, 2008; Messner, 1980, 2013). Brandl mentions many regions of the world where dissonances similar to Balkan polyphonic singing traditions are also distributed. Interestingly, Brandl uses the fact of the wide distribution of this type of singing to propose that this type of polyphony is not a “purely Balkan invention” and suggests that this type of polyphony could be a very recent invention (Brandl, 2008:283). Although I can not agree with his suggestion of the very recent origins of D/D polyphony, I believe Brandl is right when he writes: “since there is no ethnohistorical proof of migration among these cultures, other explanations for the musical phenomenon have to be found” (Brandl, 2008:283). So here it is, the “other explanation” that Brandl is mentioning: this type of singing was not taken from one culture to another (as Kunst proposed), and it is also very unlikely that it was developed by different cultures in total isolation from each other; instead, I suggest that this

type of singing is the common heritage of humanity, the oldest human singing style, a heritage that was taken to different parts of the world by the first humans when they left Africa.

Most importantly for our discussion, singing in seconds (often with the drone) is not only spread over different continents, but is found in spectacularly isolated geographical regions (predominantly mountains, islands, and continent fringes). Some of these places are: The Balkan and Caucasian Mountains, Hindukush Mountains, forests of swampy Polesie, Vietnam and South Chinese mountain minorities, Taiwan Aborigines (again in the mountains), Tibet from the Himalayas (I hope I do not need to mention whether there are mountains in Tibet), Melanesians from the Admiralty Islands near Papua New Guinea, Flores Island in Indonesia. Even some tribes in South America and Africa have the elements of this style (see also: Brandl, 2008:283).

Similarities between the actual sound of some of these cultures are so great, that, according to Messner, Melanesians from Manus Island (Admiralty Islands near Papua New Guinea), after hearing the recording of Bulgarian women, remarked that this must be a recording made in a neighbouring village. The same reaction was expressed by Bulgarian villagers when they heard recording from Manus Island (Messner, 1989). Jaap Kunst, dazzled by the extraordinary closeness of the polyphonic traditions of the Balkan mountains and Flores Island in Indonesia wrote a special work where he put forward an idea (despite all the obvious genetic differences between these populations) of the transcontinental migration from the Balkans to Flores Island in Indonesia (Kunst, 1954). I suggest that Kunst would have been even more dazzled by the amazing closeness of the singing styles if he could hear the drone-dissonant singing style from the North Vietnam mountains, or from Tibet, or from Nuristan, or from Manus Island in Melanesia, or from Latvia.

This is a fact ethnomusicologists and musicologists must face: **many isolated regions of the world have the same very specific style of polyphonic singing, based on the combination of sharp dissonant intervals (mostly seconds) and the drone.** It seems inevitable that someone will suggest that drone-dissonant polyphony (D/D polyphony) is the common singing style of humanity, the oldest singing style that was taken by our ancestors from Africa to different parts of the world.

So, despite all the potential criticism that this suggestion might attract from musicologists, I have to put this idea forward and hope that with time it will not sound as implausible as it might seem at the first reading. Let us

remember, that this idea has the potential to explain the reason for the amazing closeness of such a specific singing style in many isolated and remote regions of the world. The very loud delivery of this singing style in many regions of the world could be another survived element of the ancient AVID system.

The reader might object here that if the D/D polyphony and polyphonic singing generally was common for all humans when they came out from Africa, then why is the world divided into obviously “polyphonic” and “monophonic” continents? Let us be patient. We will discuss the reasons of the enigmatic distribution of polyphonic and monophonic singing styles in the last few chapters of this book, when we start discussing the origin of human *speech* (mind, that *speech* and *language* are different phenomena).

At the very end of this section let me also remind readers, that the well-known principle of the evaluation of different hypotheses, favouring the simplest possible solution of the problem, known as Occam’s razor, also provides a methodological support for my suggestion. The simplest solution to the mysteriously wide distribution of the drone-dissonant singing style is that this was the common singing style of humanity that was taken from Africa by different human populations, the style that survived among the peoples of totally different genetic constitution, in the extremely isolated geographical regions of our planet.

Losing bodily hair:

Non-contact forms of confrontation and hominid sexual life

In total contrast to the huge bush of hair on top of the human head, the human body is almost naked, and there must be a good evolutionary reason for this unusual feature of human morphology. Of course, I am not going to suggest that a hairless body could be used to intimidate the opponents. On the contrary, a naked body is much more vulnerable to injuries in violent physical combat. And still, I believe there is a very subtle causal connection between the hairless human body and the hominid strategy of AVID.

An authority no less than Charles Darwin suggested that human ancestors lost bodily hair because a hairless body was considered to be more attractive for a mate (Darwin, 1871). Taking into account humans’ unusually active sexuality, this idea seems highly plausible. At the same time we should remember that the human skin is not only hairless, but also much more fragile and sensitive than an animal’s hide (I first realized this when I watched in horror as a vet put a huge needle into my cat’s back, and to my surprise the cat did not even react!). Most of us would agree that a naked

hairless body with gentle smooth and sensitive skin is more attractive, but why do only humans make use of this extra possibility of sensual pleasure? Why did other animals not develop hairless and gentle skin through the mate preference?

The obvious reason for the unpopularity of gentle skin among animals must be the simple fact that hairless and gentle skin is unsuitable for the violent physical combats in everyday struggle against predators and competitors. Hominids were very different in this regard. Using an intimidating audio-visual display (based on loud and rhythmically united singing, stomping, rhythmical stone hitting, stone-throwing, coupled with bipedal posture, huge bushy hair, and body painting) allowed our ancestors to defend themselves against predators and to obtain food (via aggressive scavenging) virtually **without physical contact**.

As soon as the need for violent physical contact disappeared, the primate strong and hairy hide lost most of its survival function. The principle of evolution is simple and strict: “use it or lose it”. As soon as AVID provided a potent non-contact defense system against predators, a green light was given to the sexual preferences for mates with gentler sensual skin and a hairless body. I hope we can all agree that if the interests of physical survival and sexual pleasure are in conflict with each other, sexual pleasure takes a back seat. However, as soon as the issue of physical survival was solved in our prehistory without the need for violent physical contact, Darwin’s suggestion of sexual preference for the hairless bodies became a powerful driving force for the further evolution and refinement of the human body². There had been suggestions that the timeline for losing most of the human body hair happened millions of years ago. For example, according to the recent research on the evolution of lice, human ancestors lost their body hair approximately 3.3 million years ago (Wade, 2007).

Decreasing of the size and number of human teeth

One of the puzzling questions of human evolution is the gradual evolution of human teeth. Today, living in secure houses and making rare weekend visits to the zoo, where we can safely enjoy watching magnificent lions and tigers behind the bars, we need our teeth for digesting of food only (and of course, for good looks and confident smile), but we should remember, that our primate ancestors with chimpanzee-like canines were using their teeth for their everyday life-and-death struggle. “Because the

² Another very serious reason for the gradual disappearance of dense body hair in the course of human evolution could be to get rid of the parasites that were (and still are) dwelling in long primate fur.

small human canine has a disproportionately long root, it is clear that our ancestors had a larger tooth more typical of apes. Furthermore, the human canine bears a pointed tip when it erupts, although it quickly wears to a more spatulate shape” (Langdon, 2005:72).

After our ancestors descended to the predator-infested ground and followed the risky lifestyle of a meat-eater, it would be natural to expect that their only natural weapon – teeth would become bigger, sharper, and more effective for life-and-death struggles with much stronger opponents. As a matter of fact, primates that spend most of the time on ground, generally have much bigger teeth than their arboreal cousins. Baboons and mandrills, for example, which spend most of their time on the ground, have dog-like faces with powerful jaws. Chacma baboon canines are even longer than lion canines. All the ground-living primates are decent opponents to the big cats of Africa and have been known to kill leopards. Despite the clear link between life on hazardous ground and bigger teeth, the study of hominid dental remains tells us a very puzzling story. The existing evidence suggests that **hominid teeth started to decline in their size as soon as our ancestors descended to the ground.**

Although this issue has not been granted as much attention, as human bipedalism, there had been at least three different suggestions of why hominid teeth number and size started to decline:

(1) Darwin (1871) was probably the first to point out that the decrease of the canines in human evolution must have been connected to the adoption of tools as weapons, relieving teeth of the function of physical defense (Darwin, 1871. See also Brace & Montagu, 1965).

(2) Holloway suggested that the reduction of canines followed changes in the social organization of our ancestors and was a selection against aggressiveness (Holloway, 1967).

(3) According to a third suggestion, it was the invention of cooking, not tools, that played the key role in the decrease in the size and number of hominid teeth (Wrangham, 2006; Lucas, 2006). Boswell (1773) called humans the “cooking animal” (Wrangham, 2006:308). Darwin also noted the crucial importance of fire control and cooking in human evolution (1871: 132) although for him it was primarily the tool use that caused the decline of teeth size and number among hominids.

Proponents of cooking propose that hominids started using fire almost two million years ago (although at the moment the earliest confirmed use of fire by our ancestors is about 0.5 million years). Even at such an old age (1.9

million years) the introduction of cooking can not explain why, for example, the teeth of *Sahelanthropus tchadensis*, who lived some 6-7 million years ago, already shows some “human” features (reduced canines. Gibbons, 2006). So, although the use of fire and cooking must have had an important influence on hominid diet and teeth morphology, this factor can not help us to understand the decline of hominid teeth size in early hominid history.

I think that the answer to this “dental paradox” can be found in the intimidation strategy of our hominid ancestors. It seems natural to suppose that with the development of successful AVID techniques (based on **non-contact** means of confrontation), the need for sharp canines as the primary weapon for defense and attack was over. The principle of natural selection “use it or lose it” never stopped working, so as soon as the need for sharp canines was over, the teeth size of our ancestors started to decline (possibly to assist the reduction of aggressiveness and fatalities in inter-group conflicts, as Holloway suggested). Therefore, the AVID model supports the idea of the use of tools and generally cultural means of defense among hominids as the main reason behind the reduction of teeth size among hominids.

As teeth are best represented in paleoanthropological records among all hominid remains (because teeth are the strongest bones in our anatomy), we can actually use the rich records of the evolution of hominid teeth as the indicator of the emergence of an intimidating strategy among our ancestors. For example, the smaller size of the canines of *Sahelanthropus tchadensis* suggests, that at least some elements of the intimidation strategy must have been already used by our distant ancestors some 6-7 million years ago.

On the other end of this story, the decrease of the size of teeth had profound long-term consequences for the development of subtler forms of vocal communication, leading ultimately to the emergence of spoken language a few million years later.

Increasing body size and decreasing physical strength

The new strategy of intimidation used by our ancestors would provide an important incentive for the increase of hominid body size during evolution. Of course, a bigger and heavier body is a liability if you live on the tree branches and try to escape a leopard on the top of the tree. That’s why arboreal primates are generally smaller than terrestrial ones. On the other hand, if you live on the ground and use audio-visual intimidation against predators and competitors, then a bigger sized body would be a blessing for you. Therefore hominids with bigger body size would be naturally selected by evolution.

An interesting side effect of the use of intimidation strategy in human evolution is that although human body size increased, the actual strength did not increase. On the contrary, if we compare the strength of the human body with the strength of our closest living relative, we will find out that chimpanzees are a few times stronger than humans (despite the fact that chimpanzees are smaller. See, for example, Walker, 2009). It looks like that together with the increase of human body size, human body strength actually decreased, or at least, did not increase proportionally to the new body size. This might be indicating that for our ancestors the *size* was much more important (for more impressive intimidation) than the actual strength.

The decrease of hominid body physical strength could have been a selective trait towards the decrease of aggressiveness and fatalities during inter-group conflicts in a larger group of hominids. This suggestion fits very well with the idea expressed by Holloway that selection against aggressiveness was the chief reason for the decrease of the size of hominid teeth (Holloway, 1967).

The origins of Paleolithic industry

The development of stone tools for a long time was considered to be the earliest and the most important element of the evolution of *Homo sapiens*. Although it has long since been accepted that bipedalism preceded manufacturing stone tools by millions of years, the origin of the stone tool industry still counts as one of the crucial moments of human evolution. On the other hand, a few scholars who tried to accomplish a task of making a stone tool with their bare hands found that making even the most basic stone tool is an arduously difficult task. Even Kanzi, despite his impressive achievements in acquiring the basics of human language, failed to manufacture stone tools (Toth et al., 1993).

In this connection there is an often neglected question hovering over the origins of Paleolithic industry: why and how did our ancestors start making stone tools? What was the initial drive behind this difficult task? I propose that the answer can be found in the intimidation strategy used by our ancestors for millions of years.

I suggest that the appearance of the first stone tools was a by-product of the long use of AVID. Let us have a good look: one of the important elements of intimidation strategy, as we may remember, was the use of stones. Stones most likely were used for two important purposes: (1) to make as loud as possible rhythmic sounds (by hitting two stones against each other), and (2) to throw them at predators if the audio and visual factors were

not effective enough to scare them away, and if the attack was imminent. Here we have an excellent situation to have plenty of shattered stones: we have a group of hominids in the heat of a life-and-death confrontation, desperately trying to avoid being killed and eaten (or trying to drive away a big and strong predator and get some food). During the confrontation at least a few of the hominid group members are using two stones as the simplest rhythmic devices (and if needed, turning them into missiles). So they are hitting stones against each other with all the power they have, trying to make a sound as loud as possible. The force they were hitting the stones with would be also augmented by them being in a state of trance (the whole situation with the ultimate life-and-death confrontation and monotonous rhythm strongly suggests the possibility of hominids being in a state of “battle trance” during such confrontations, much like soldiers during a combat).

So potentially, every such confrontation with predators or competitors could provide our ancestors with a few shattered stones.

A few minutes after the battle (particularly after a successful scavenging confrontation), during their feasting on a carcass, the presence of a few pieces of shattered stone with sharp edges would provide smart hominids with an excellent possibility to get the idea of using the shattered stone pieces. In this scenario, **stone tools are a by-product of vigorous drumming sessions** of the dynamic audio-visual intimidating display of early hominids.

I guess drummers could compete for the privilege to be acknowledged as belonging to the oldest profession in human prehistory, and as the first tool-makers.

Conclusions: Emotions? What are they for?

While discussing the survival value of the musical faculty in human evolution, scholars often expressed their surprise about the extreme emotional power of music on one hand and the absence of any practical function of human musical faculty on the other hand. The possible adaptive function of musical behavior (or the absence of such a function) is still at the very heart of the discussions of the origins of music (see, for example, articles in Wallin et al., 2000). Our understanding of the evolutionary mechanisms that gave rise to human musical faculty did not progress much after Charles Darwin suggested that the role of music was to attract the opposite sex. Arguably the best known hypothesis of the adaptive function of music today is still connected to the idea of the attraction of the opposite sex,

although now in a form of “demonstrating ones fitness to mate” (Miller, 2000). Followers of this very promising suggestion should not forget the well-known fact, that in humans both sexes are singers, and also another fact that humans make music in big groups. These two facts contradict Miller’s (and Darwin’s) suggestion.

To demonstrate the viability of his suggestion, Miller rightfully remarked: “No one ever proposed a reasonable survival benefit to individuals taking the time and energy to produce music, which has no utility of finding food, avoiding predators, or overcoming parasites” (Miller, 2000:331). Well, I certainly do not claim that music has the power to overcome parasites, but I do claim that music could have played a crucial role in avoiding predators and finding food, two of the ultimate functions for any animal species. Even more, I tried to demonstrate that music (group singing) actively participated in the development of several important elements of human behavior (like the origins of bipedalism, or the origins of Paleolithic industry, or the origins of body painting) and could even participate in shaping a few features of the morphology of the human body (the development of head hair and a hairless body, increasing human body size and decreasing teeth size).

After the long period of neglect music, like in the African savannah a few million years ago, goes into a noisy attack to claim back the role she played in the evolutionary history of our species.

Times to Relax: Humming alone

Despite the ambitious claims on the previous pages that group singing was at the very heart of hominid survival strategy, providing defense from predators, protein rich food, and was instrumental in a number of important behavioral and morphological changes during human evolutionary history, I want to declare that this is not the full story of the adaptive role of music in human evolutionary history. There is still one more crucially important function of music that we have not discussed yet.

I suggest that apart from the adrenalin-fuelled loud, relentlessly rhythmic and trance-inducing singing-drumming-dancing and stone throwing intimidating display, there was another, completely different side of hominid musicality – soft and relaxing.

As we all know, humans can hum. This vocal behavior is so ubiquitous and so natural, that as is often the case, we mostly fail to notice it. At least,

according to the results of my preliminary search, there are no scholarly publications discussing this universal element of human musicality.

So, let me ask a few “humming” questions – Why do humans hum? When do humans hum? And most importantly for us: could humming have (or had) any adaptive value in human or hominid life?

Of course, there always is at least a theoretical possibility that there are a few humans who have never hummed in their lives, but it would be quite safe to say that most humans hum at least occasionally, and there are a few who hum almost constantly. As far as I remember, my late father was from this category. He was humming when reading a newspaper, walking, thinking, playing chess, even as I remember, while eating. As Bernadette S., a 14 year old student from Mercy College in Melbourne, told me, she hums almost at every activity. “But of course, I can not hum at school during my classes,” she told me with regret, “as it would be embarrassing... So when I am attending classes, I only hum in my head” (from a conversation on May 30th, 2008). I am sure Bernadette is not unique among humans in her love of humming and her frustration at not being able to hum as much as she would like to. Jeff Titon, a prominent American ethnomusicologist, answering my question if he ever hums, told me that he does, although he only hums in his head (personal communication from October 25th, 2007). I guess, the reason for this kind of “silent humming” is the same concern for the etiquette of behavior in human society. Another prominent American ethnomusicologist, Tim Rice, also belongs to the category of people who hum most of the time. “When he is at home, he is usually humming, whatever he is doing.” His wife Ann told me. “One day he came back from the University and I noticed right away he was not humming. I immediately guessed something was wrong. I asked him and he said they had had a very unpleasant meeting at the faculty. After about an hour I heard him humming again, and I guessed with relief that he was over it and was feeling fine again” (from a conversation on February 14th, 2008).

I do not need to discuss many cases of people humming, particularly when they’re feeling good. The readers of this book would know this very well for themselves. Some might even be humming reading these words (if they enjoy reading, of course). An informal survey, conducted by London Zoo (with 450 participants) in March 2008 found out that 67.7% of people hum when they feel very good. People hum along when listening to music, walking, even hum while eating (so my father is not alone), and one even when having sex (Humming makes you happy, 2008). Well, the uniting feature for all these activities is that all these are usually pleasant activities.

Actually, humming can also be used to induce negative feelings. As one of my students confessed “I sometimes hum to annoy my older brother...” The same London zoo survey found out that humming by others can also annoy listeners (important detail: particularly if humming is out of tune).

“Humming” or “humming alone” in colloquial English means “everything is going very well”, so the phrases like “keep your refrigerator humming” or “Keep your system humming” (from the ads of mechanical services on the Web), or “Apple keeps humming” (the title of an article about the successful year for the Apple Company) are understood by the readers without any trouble. Humming was routinely used instead of clapping as a sign of the public approval of a performance or statement in Britain until the 18th century. In contemporary British slang though, humming can have negative connotations (e.g., “That is humming” means “that smells bad”), but generally the positive meaning of “humming” cross-culturally is overwhelming.

By the way, there is another very interesting (and much neglected) universal human behavior that often is used instead of humming – *whistling*. But let us leave whistling for some other time and concentrate on humming.

OK, it seems to me that the positive communicative function of humming is quite well established, and I do not think I’ve told something unexpected to the readers of this book. What might be unexpected for them is that we are now going to search for the possible evolutionary roots and even the possible adaptive function of human humming behavior.

Humming as contact calls?

Some social animals are known to have an almost constant indistinct sound background (not necessarily produced by a vocal apparatus) when they are going about their everyday business. These sounds are known as “contact calls” (Macedonia, 1986; Oda, 1996) and include plenty of different sounds, like chicken clucks, baboon grunts, even the sounds of eating, etc.

These seemingly unimportant background sounds, a kind of an “audio byproduct” of everyday activity, have two important functions: (1) it lets every member of the group know that everything is all right, there is no sign of a predator, and they all can relax; and (2) it alerts group members if there are any signs of potential danger. In this latter case the first animal who notices the signs of danger (audio, visual), stops producing indistinct sounds and stands absolutely still, listening and scanning the environment. Soon other animals around also stop, and in a few seconds the whole group is silent and motionless, watching carefully the environment for the signs of

danger. If the alert was false, after some time everyone starts moving again and the indistinct background sound resumes. So the group members can relax again. So let us remember: for social species *silence is a sign of danger*.

Similarly, the presence of “watchmen’s song” among some bird species also demonstrates that it is *silence* that signals danger for social species. A bird-sentinel, who watches around while others are engrossed in feeding, produces a specific sound (“watchmen’s song”) once in about every five seconds only if there is no sign of danger, but it stops producing this sound if there **is** danger (Wickler, 1985). So, let us repeat again like a mantra: **for social species silence is a sign of danger!**

Taking into account the intensely social nature of a whole human life on one hand, and the fact that humans are arguably the noisiest animals on earth on the other hand, it seems natural to suppose that the universal human habit of humming was routinely accompanying most of the everyday group activities of our distant ancestors. I suggest that **humming is the ancient hominid “contact call”**. The fact that humming today is a universal expression for our positive feelings suggests that the positive message implicit in humming is not a late cultural development, but instead might have a very deep biological, innate basis. It just tells us that everything is fine and we can relax. This simple message is very important if you live under a constant threat to your life. Although the loud, intimidating audio-visual display has long since lost its primary function in everyday life (although it is still actively used in military forces), humming (and generally soft music) still plays an important role in everyday human life both in pre-literate and technologically advanced societies.

Take for example one of the universal elements of human musical culture, the lullaby, sung by parents (mostly mothers) to their babies from a very young age. Although a lullaby is only sometimes hummed (and sung softly at other times), it fits the same model of soft and soothing sounds designed to relax the young baby. The innate basis for the preferences for lullabies in infants has already been proposed (McDermott & Hauser, 2005:33-34). Soft soothing music also proved to be a helpful aid in the care and development of medically fragile hospitalized newborn infants (Shoemark, 2011). And of course, the use of music (again – mostly gentle music) as a therapy is widely known in very different cultures, from the tropical forest dwelling tribes to the most technologically advanced western societies.

The universality of humming as an expression of positive feelings on one hand, and the total silence as an expression of a potential danger on the other

hand, suggests that the human brain must be pre-programmed to perceive these emotions from hearing audio background. The fact that prolonged total silence is negatively affecting our emotion is quite well known. Silence can be perceived as an ancient sign of approaching danger, or as Tim Rice suggested (a personal communication on October 25, 2007), “one suddenly feels as if he is alone” (reminiscence of the ancient fear of hominids of being apart from the group, and therefore vulnerable to predation). These emotional responses might be wired in our physiology and psychology through the millions of years of our evolutionary prehistory.

This could be the reason why there is so much music everywhere we go – in shopping malls, elevators, cars, trains, sporting events, political rallies, parties, even funerals. That’s why so many of us are walking most of the day with earphones. Unlike few other pleasures in life (like eating, drinking, or sex) we can not harm ourselves with too much music (unless, of course, we are listening to music with a deafening loud sound). I suggest that this extremely high tolerance towards an excessive musical environment and our generally positive reaction towards musical sounds is the consequence of our evolutionary past, when musical sounds were accompanying virtually every moment of life of our direct ancestors, giving them a feeling of security and well-being.

The insightful and deservedly popular “vocal grooming hypotheses”, put forward by Leslie Aiello and Robin Dunbar (1993), as well as the idea of Ellen Dissanayake on the importance of the mother-infant interaction in human evolution (Dissanayake, 2000), despite the many differences, have quite a few common elements with the role and the importance of humming in human evolution discussed in this book.

Thank you for the music

It is time for a general conclusions. It is widely accepted that music, unlike language which can communicate precise arbitrary meanings, evokes emotions (see, for example, Meyer, 1956; Cooke, 1959). We will be shortly discussing the possibilities of transmitting quite precise messages by means of musical sounds, but even without that possibility, if we only acknowledge the emotional power of music (and I am not aware of any claims otherwise), there is no need to dismiss the practical importance of music in human life and evolutionary history as a pleasure-inducing audio technology only.

Virtually all the needs of early hominid evolution, from defending themselves from predators, obtaining food via aggressive scavenging, watching out for predators and enemies, or relaxing in the heat of the African

savannah, were governed by musical sounds. We survived the long and unorthodox evolutionary path of the primates who descended from the trees to the ground and refused to stop singing, with the help of music. Music has been our great practical aid both in “Times to fight and times to relax”. Truly we can say “thank you for the music”.

“Good Night, Sleep Tight”: The Problem of Night Time Security

One of the serious issues that our distant ancestors faced after becoming terrestrial was the problem of night time security. Even if hominids could stand their ground against the biggest predators during the day, sleeping in the open savannah for the badly armed hominids must have been a very serious challenge. Some insightful ideas were expressed. Adriaan Kortlandt made a brilliant suggestion that one of the ways to secure night time sleep was to conduct a loud evening “concert” to scare away potential predators. Kortlandt cites the behavior of groups of Chimpanzees, who sometimes organize loud “concerts” before their sleep, and cites also the behavior of African tribes living in the forests, who organize the same kind of loud evening displays (Kortlandt, 1973:14). In the light of the role of audio-visual display in predator control, discussed above, Kortlandt’s suggestion makes perfect sense.

At the same time I would like to suggest that there were at least three more factors to make the night time less dangerous for the hominids: (1) reclaiming the dead bodies from the predators, (2) cannibalism and burial of dead bodies, and (2) the use of mimicry (in the form of “eyespot”).

Reclaiming dead bodies as factor of predator control for early hominids

In the light of the suggested model of AVID it seems natural to suggest that one of the characteristics of early hominid behavior could have been reclaiming dead bodies of their group members from the predators. I want to emphasize that reclaiming dead bodies of your group members had not only a symbolic or spiritual, but a very practical function in the first place: the function was to *deter predators to attack your group*. This might sound silly

to some readers, as we are talking now about the bodies of our ancestors who were already killed by predators, but let us give it a second thought.

When a predator kills its prey, it intends to eat the kill. Prey animals, even after defending their family members with ferocity, usually stop fighting if the attacked member of their group is already dead. Therefore, as soon as the kill is made, there is no more confrontation – the predator got what it wanted, the fight is finished and now the predator can enjoy the meal. It was totally different with hominids and humans: being the superb masters of intimidation as a group, after being attacked at night (or during the day), they could follow the predator and reclaim the dead body from the predators.

But why? What is the aim of such crazy bravery? Of course, you can not bring to life the dead member of your group, but you can give a strong message to the predator that every time it attacks your group and kills someone, you are not going to give them a chance to eat the dead body in peace. This behavior, repeated generation after generation, would teach predators that even if they succeeded in killing a hominid, there was a big chance that soon the big determined group of shouting and stone-throwing hominids would be coming to reclaim the dead body. Although predators might not be as intelligent as humans are, but for sure they could get the message when the history was repeated generation after generation.

It is interesting to note, that most of the big predators kill humans very rarely and only in special circumstances, and man-eaters mostly are the injured or old animals who can not hunt their usual prey. So human prey for the predators is the “last resort” when they can not hunt other prey. Of course, individual humans are among the worst armed animals, so tracking and killing a human for a leopard, tiger or a lion is much easier than killing an antelope or zebra, but it is a totally different story when it comes to eating the kill. Antelope or zebra family members do not start a massive attack on the predator after the kill is made, unlike humans. So, from the predator’s point of view, *humans are easy to kill, but very hard to eat*.

So in the light of the ongoing argument it is clear that there was a very good evolutionary reason for hominids to attack the deadly predator and reclaim the body of their fellow hominid. Another question is what hominids would do with the dead body after they reclaimed it from the fangs of the predator. This is the topic of the next discussion.

Cannibalism as a part of predator control among early hominids

I suggest there were two very different alternatives to deal with the remains of the dead hominid bodies: (1) to bury the body, or (2) to eat the body. Of course, there is a huge cultural difference between these two options. Burying dead bodies of the human society is rightfully considered as one of the universal (and possibly one of the most ancient) elements of human culture. No human society leaves the dead bodies of their family or tribe members for the scavengers (unless there are some important religious or practical reasons, such as in the “sky-burial” practice in Tibet).

On the other hand, the instances of cannibalism (or *Antropophagy*) are widely viewed as the expression of utmost cruelty and uncivilized behavior. But do not be tied to your emotions through your cultural background: from the point of view of a survival strategy on the African savannah a few million years ago, both options were viable, and the second option had a few considerable advantages (much less work, and no food to waste). Therefore, we should not discard the possibility that cannibalism for our ancestors became a **part of the evolutionary strategy for predatory control and physical survival**.

There has been a wide ranging disputes over this emotionally charged behavior in human history and prehistory. According to Tim White, cannibalism was common in human societies prior to the beginning of the Upper Paleolithic period. This theory is based on the large amount of “butchered human” bones found in Neanderthal and other Lower/Middle Paleolithic sites (White, 2001). Food shortages is usually considered as the main reason for cannibalism. Taylor also suggested Cannibalism was a usual practice in all continents in different times in human history (Taylor, 2001).

William Arens denied the existing evidence that humans were practicing cannibalism in any of the human societies. (Arens, 1979). White refuted Arens' suggestion that cannibalism was not widespread: "I think that whereas his politically correct devil's advocate position might have been tenable when he published his book [in 1979], the burgeoning body of evidence for past cannibalism makes it untenable today," (cited from Roach, 2003).

Arens used the basic rules of evolution to strengthen his position: "You would think in terms of evolution that if people ate each other we wouldn't be around," argued Arens, "It's not a good survival strategy, not a way for a species to proceed" (cited from Roach, 2003). I certainly do not suggest hominids were killing and eating fellow hominids. Instead, I am suggesting

that hominid groups were co-operatively fighting against predators, but in case of a fatal attack from a predators they were collectively attacking predators, reclaiming the bodies of their killed group members, and cannibalising the bodies of already killed members of their group. As this kind of behavior could eventually lead to predators realizing the difficulties of “dieting on hominids”, I suggest, that **cannibalism should be viewed as a successful and important element of hominid survival strategy against the major predators in African Savanna.**

By the way, I would be hesitant to call this practice “endocannibalism” (eating humans from the same community). It is not hard to imagine that true endocannibalism could sometimes happen among hominids it times of extreme famine (as it still happens even in our times), but to cannibalise bodies of fellow humans, killed by predators definitely had different evolutionary and even moral overtones.

We may remember here, that cannibalism was often connected to the belief that the strength of the dead person would go into the body of the person who eats the flesh, so the origins of this belief may also have extremely deep roots.

The presence of special genes in humans, protecting against brain diseases (known as prion diseases) that can be contracted by eating contaminated flesh is also viewed as a support for the long practice of cannibalistic behavior in human prehistory. “The discovery of this genetic resistance, which shows signs of having spread as a result of natural selection, supports the physical evidence for cannibalism” (Roach, 2003).

As time went on, our ancestors obtained the tools that made ground digging possible, and as their food supply improved, burying the bodies became a better, and then the only accepted option to deal with the dead bodies.

Conclusions: there are three main reasons of cannibalism, generally accepted among scholars today: (1) cultural norm, (2) necessity in extreme situations of famine, and (3) insanity or social deviancy. None of them acknowledge the possible evolutionary significance of cannibalism. I suggest to add the fourth reason: (4) cannibalism as a mechanism of predator control among early hominids.

Use of “eyesspots” in hominids

Eye-spots (or ocellus) are possibly the best known case of mimicry in the animal kingdom (Stevens, 2005; Stevens et al., 1993). Eyespots are clearly visible marks on the body of an animal. These stops resemble an eye to

deceive a potential predator (or to attract the attention to not-vital parts of the body. Stevens et al., 1993). Plenty of butterflies, some reptiles, birds and most importantly for us - a few members of the cat family also have eyespots (big cats have them on the back of their ears). Eyespots on the back of the cats head are to fool a predator/competitor into believing that the cat is alert to their presence. Eyespots are effective because most of the potential predators seek a moment for the attack when the prey is not looking at them. That's why the eyespots on the back of the head are so widespread among cats – to deter an attack from behind. That's why the cheap plastic masks worn on the back of the head are so effective in deterring the man-eating tigers of Sundarbans national park from attacking humans.

With many eyes present during the daytime humans groups did not need such a defense, but at night, when everyone was sleeping, such a defense would have been very welcome. Hominids could not use plastic masks, of course, but I suggest that evolution provided our ancestors with such a defense for the night time in the form of eyespots.

I am not aware of any publication claiming that humans have eyespots. I suggest we have them, we just fail to notice them. We do not notice them for two reasons: (1) humans are generally not good at noticing eyespots, and (2) we only have them when... we are asleep (or at least when we close our eyes).

We do not see sleeping human faces very often, but if you ask your friends or family members to close their eyes and look at their faces, you may notice, that the eyebrows (arched upwards) and eyelashes (arched downwards) form quite good eyespots on a “sleeping” human face. Of course, it is not easy for humans to notice the resemblance of human eyebrows and eyelashes to the eye, but this is because we are not generally good at noticing eyespots. For example, we do not easily see the resemblance of the marks on the back of leopard or lion heads to the eyes, even after we are told about this. Let us remember, that these eyespots were not designed for humans to notice, they were designed by evolution for the big African predators, particularly predators from the cat family, and they seem to be particularly good in recognizing eyespots.

There is also another evolutionary tool to make our “night guardian angels” (eyebrows) more effective: we sometimes move our eyebrows during sleep when we hear sounds. If my few observations of sleeping members of my own family are correct, hearing light sounds during sleep sometimes causes humans to move a few muscles on their face, and as a result, the

movement of the eyebrows occurs, making our “eyespot” even more realistic for the crawling predators (“the eyes are moving and watching”).

According to the generally accepted view, the main function of the human eyebrow is to prevent moisture, mostly salty sweat and rain, from flowing into the eye. Desmond Morris, discussing the possible function of the eyebrow in human evolution, criticized this suggestion as non-effective (Morris, 2008:42) and suggested that “there is little doubt that the primary function of these conspicuous superciliary patches, as the eyebrows are known technically, is in reality to signal the changing moods of their owners” (Morris, 2008:42). There is no doubt, that eyebrows are excellent communicators of our moods, but I suggest that their **primary function** in human evolution was an anti-predatory defense, to ensure the safety of the night sleep of our ancestors during the thousands of generations of their life in the open savannah.

Let us conclude this small “night” section: I suggest that our distant ancestors had at least three defense mechanisms against night time attacks in the open savannah. (1) to use before sleep, (2) another to use during sleep, and (3) the last one to use in case of attack:

(1) **Before sleep** safety preparations were based on the evening loud audio-visual display, warning potential predators in the vicinity to stay away from the large and well organized hominid group;

(2) **During sleep** hominids were protected by the eyespots on the sleeping hominid face (formed by the arched eyebrows and the eyelashes), designed by evolution. And in the worst case scenario, if none of these defense mechanisms work,

(3) **After a fatal attack**, hominids would usually follow the predator and reclaim the body of their killed group member, not allowing a predator to eat the kill (therefore not allowing them to get used to feeding on hominids).

It is not difficult to notice that the first and the third of the three night-time security mechanisms of our hominid ancestors were directly connected to the audio-visual intimidating display (AVID) which involved loud singing and rhythmic display. The only time when our ancestors were not singing was when they were sleeping.

Towards the Origins of Human Language

Music as communication is as old a topic of scholarly discussions as the origin of music or language. Despite the assertion of one of the most recent publications on the origins of music (Mithen, 2005:2), that works about the origins of music are non-existent with the exception of a few pages in Darwin's 1871 book, a 1973 book by John Blacking and a few contributions in recent years (including a recent collection of articles "The Origins of Music", Wallin et al., 2000), plenty of scholars approached the problem of the origins of music in different times and in different languages. Here are some of the authors and their ideas on this topic in rough chronological order:

- Jean-Jacques Rousseau was possibly the first scholar after the 1700s who wrote about the origins of music. According to his views, both music and speech had a common ancestor. This initial human communication was based mostly on singing, and it was more passionate and emotion-driven than contemporary human language (Rousseau, 1761).

- Herbert Spencer suggested in the middle of the 19th century that music evolved from the exaggerated emotional speech of our ancestors, or, in other words, from the prosodic elements of human speech (Spencer, 1857).

- Charles Darwin, in "Descent of Man", criticized Spencer's idea of the music being an outgrowth of human speech, and suggested that music predated the origin of language, serving the needs of sexual selection and charming the opposite sex. Maybe even more importantly, Darwin declared "as neither the enjoyment nor the capacity of producing musical notes are faculties of the least use to men in reference to his daily habits of life, they must be ranked amongst the most mysterious [phenomenon] he is endowed." (Darwin, 1871).

- Richard Wallaschek suggested that both music and speech originated from the shared primitive stage of communication, and music came from primordial "dance-play" (Wallaschek, 1891).

- Otto Jespersen hypothesized in 1895 that language must have begun with "half-musical unanalyzed expressions for individual beings and events" (Jespersen, 1983:365).

- Ernst Newman proposed that the origin of music was independent of speech, and that humans had the ability to express their emotions through music much earlier than they developed speech (Newman, 1905).

- Carl Stumpf suggested that music came into existence as a means of long-distance communication between early humans (Stumpf, 1911).
- Karl Bucher stressed the important links between human music and rhythmic movements and suggested that music developed out of work-related rhythmic movements and sounds (Bucher, 1919).
- Boris Yavorsky introduced the idea of “intonatsia” [intonation] as the smallest and oldest element of musical language, dominating Russian musicology throughout the 20th century and fundamentally influencing Boris Asafiev’s view on the essence and development of musical culture. Yavorsky suggested that intonation was the earliest form of human language (Yavorsky, 1923).
- Siegfried Nadel proposed that music originated as a supernatural language, used in religion and ritual, and that musical language was added to everyday speech through artistic expression (Nadel, 1930).
- Curt Sachs rejected all theories of the origins of music as improvable or wrong (Sachs, 1962), although in his own earlier writings he suggested that music could have originated from two sources: (1) speech and (2) emotions (Sachs, 1943).
- Boris Asafiev also suggested that music and language had a common ancestor that was later separated during the course of human evolution into two related but sometimes conflicting phenomena (Asafiev, 1971).
- Bruno Nettl wrote in one of his early works that both music and language were born out of a common ancestor, a specific system of communication that shared elements of both music and language (Nettl, 1956). In his later article, written for the volume “The Origins of Music” Nettl discussed musical universals (Nettl, 2000). Most importantly, in the second edition of “The study of ethnomusicology” Nettl suggested that music could have originate from the need “to scare neighbouring bands or enemy hordes” (Nettl, 2005:265). Although in his later works Nettl suggested that music was “invented” at some point of human history, and though he does not associate the intimidating power of music in the early struggle for survival of early hominids, his suggestion is pretty close to the model of the choral singing and music origins suggested in this book
- John Blacking considered music as a purely human creation, inseparable from social context and primarily serving the needs of social cohesion in human groups (Blacking, 1973. See also Storr, 1992). His definition of music as “humanly organized sound” is contradictory, as it excludes the possibility of the presence of elements of music in the animal

kingdom (for example, the singing of birds or humpback whales), and awkwardly implies that human speech is part of music as well.

- Frank Livingstone suggested that our human ancestors as far back as the Australopithecines were communicating by singing (Livingstone, 1973), although later he changed his view and linked the origins of singing to the period of tool-making technologies (Livingstone, 1983).

- Roger Wescott suggested that the earliest predecessor of human language among Australopithecines was pitch-based, but non-vocal whistling, combined with some other non-vocal sounds like “hand clapping, foot stamping, and drumming on their chests or on external objects” (Wescott, 1973:27, also 1971).

- Miron Kharlap considered the origins of music within a ‘Spencerian’ model, with singing growing out of the prosodic elements of human speech. Most importantly for the topic of this book, Kharlap suggested that the historical development of human musical culture went not from monophony to polyphony, as it was universally believed by music historians, but from polyphony to monophony, from group to individual musical activity and talked in this context about the origins of monophony from polyphony (Kharlap, 1973). We will specifically discuss the importance of this idea later in the book.

- Ivan Fonagy suggested that our ancestors’ language was musical and the pitch modulations carried the meaning of communication directly. Speech evolved later as a more complex system to express more complex ideas more efficiently (Fonagy, 1981).

- Juan Roederer specially looked for the survival value of music and suggested that music was developed to play the role of a device to assist the human brain in acquiring language (Roederer, 1984).

- Izaly Zemtsovsky in his publications stressed the importance of intonation in the development of initial forms of human musical activity (Zemtsovsky, 1986) and the crucial importance of dialogical forms of communication for the origins and the initial forms of group singing (Zemtsovsky, 1986, 1986a). Zemtsovsky and the three following authors were participants in the special conference dedicated to the genesis and specificity of early forms of musical culture held in Dilijan, Armenia in 1986.

- Viacheslav Ivanov suggested that the presence of “personal songs” for each member of society in different cultures might indicate this was the oldest form of personal “naming”. He also stressed the importance of the neurological aspect of musical activity, suggesting that music could play a

crucial role in memorizing important texts in early human history (before the advent of a system of writing. Ivanov, 1986).

- Boris Frolov and A. Demirkhanian stressed the crucial importance of rhythm in the initial stages of the development of human musical and social activities (Demirkhanian, Frolov, 1986. See also Frolov, 1986).

- Joseph Jordania, the author of this book, in his first publications on this topic suggested distinguishing musical *language* and musical *culture* and argued that the division of human cultures into polyphonic and monophonic groups must have started during the early stages of human evolution (Jordania, 1986a, 1989, 2006, see also his other works, including this book).

- James Brown and William Greenhood noted the evolutionary primacy of musical communication and suggested that the melodic utterances of *Homo erectus* changed into staccato-like speech with long utterances at the *Homo sapiens* stage (Brown & Greenhood, 1991).

- Nils Wallin researched the biological foundations of human musical abilities, based on a multidisciplinary approach to the human brain, physiology, auditory and vocal systems (Wallin, 1991). Together with Bjorn Merker and Steven Brown Wallin organized a cross-cultural conference on the origins of music in 1997 (see Wallin et al., 2000).

- Bryan Levman provided a good review of the existing theories of music origins. He suggested that both speech and music must have had a common ancestor, and argued that pitch modulations played a crucial role in the human protolanguage (Levman, 1992).

- Bruce Richman suggested that initial choral singing could have been a crucial element in the development of a more complex communication system – human language (Richman, 1993).

- John Barrow declared that music had no survival value for humans, and it derived from the instinctive sensitivity for certain sound patterns that itself was a result of adaptation (Barrow, 1996).

- Dan Sperber declared that music arose to exploit parasitically the cognitive capacity to process complex sound patterns used for early stages of human communication (Sperber, 1996).

- Steven Pinker dismissed the role of music in the evolution of human communication as a late phenomenon, mostly a by-product of language development, and as a result of several evolutionary factors: development of language, auditory scene analyses, emotional calls, habitat selection and motor control (Pinker, 1997).

- Nathan Kogan discussed the possible adaptive function of music and suggested that music could enhance the group movement synchronization and cooperation necessary for hunting (Kogan, 1997:37).

- Geoffrey Miller revived and refined the initial idea of Charles Darwin about the role of music in attracting the opposite sex, suggesting that the function of music and dance was to demonstrate the dancer's fitness to mate with the opposite sex (Miller, 2000).

- Francois-Bernard Mache demonstrated plenty of existing parallels between human music and animal vocalizations and suggested that human musical faculty has strong links with animal singing behavior (Mache, 2000).

- Ellen Dissanayake suggested that the origins of music are intimately connected to the mother-infant interaction, particularly during the early period of infant development (Dissanayake, 2000).

- Bjorn Merker suggested that music could have originated among hominids as a group activity and initially had the function of a mating call for groups of competing males, inviting wandering females (Merker, 2000).

- Steven Brown suggested the model of “contagious heterophony” for the origins of music. According to this model, group-singing behavior was at the very beginnings of music, and the mirror neurons played a key role in this process (Brown, 2003). In his earlier work Brown suggested the idea of “musilanguage”, a common sung predecessor of music and language (Brown, 2000).

- Thomas Geissmann presented a comparative study of gibbon singing and human singing behavior and suggested that early function of music could be to scare away aggressors and competitors (Geissmann, 2000). Together with the idea of Bruno Nettl, mentioned above, Geissmann's suggestion is very close to the model of the music origins suggested in this book.

- Ian Cross discussed the possible biological and cultural foundation of human musical faculty, and criticized dismissive attitudes towards music that were often made in the mid 1990s, and suggested the term of floating intentionality (Cross, 2001. See also Cross, 2006).

- William Benzon wrote about the particular importance of shared music creativity from the perspective of a jazz musician, and argued “music is a medium through which individual brains are coupled together in shared activity” (Benzon, 2001:23).

- Edward Hagen and Gregory Bryant suggested that music and dance were primarily used to honestly signal the quality of the group cohesion to other human groups (Hagen & Bryant, 2003).

- Robin Dunbar also suggested that the evolution of human language went through a musical phase (Dunbar, 2004).
- Steven Mithen suggested that music and language co-evolved during human evolution as non-referential (music) and referential (language) systems of communication. He suggested a model of the origin of music from the “Hmmm communication” (combination of “Holistic, multi-modal, manipulative, and musical” features), and noted that prelinguistic hominids may have had better musical abilities than modern humans (Mithen, 2005).
- Timothy Justus and Jeffrey Hutsler investigated the possibility of innate constraints of human musical faculty, and suggested that despite the strong possibility of such an innate element, these elements could have emerged from selection pressures in other domains (Justus & Hutsler, 2005).
- Josh McDermott and Marc Hauser had a comprehensive review of the existing publications on the innateness of several musical faculties. This review was “motivated by the desire to understand its [music’s] evolutionary origins and adaptive significance” (McDermott & Hauser, 2005, see also Hauser & McDermott, 2003).
- Victor Grauer suggested that the contrapuntal polyphony of Central African pygmies is the survival of the primordial human music, which was taken by anatomically modern human groups when they left Africa some 100 000 years ago. (Grauer, 2006, 2007).
- Tecumseh Fitch investigated the possibility of continuity between animal and human musical faculties, and suggested that the drumming behavior of African apes (chimpanzees, bonobos, gorillas) could be viewed as a potential precursor of human instrumental music (Fitch, 2006:5). Fitch also suggested a term “prosodic protolanguage” for the pre-linguistic system of communication.
- David Huron studied the mechanisms of emotional gratification through the process of anticipation, and presented an interdisciplinary theory of the human emotional response to different elements and styles of music (Huron, 2006).
- Daniel Levitin suggested that six main types of songs constituted the basis of human musical culture, and proposed that the most ancient type of songs, so called “songs of knowledge” provided “powerful mnemonic force for the encoded knowledge” (Levitin, 2006:141. This idea is very close to the idea, expressed by Viacheslav Ivanov, discussed above. Ivanov, 1986). Levitin also mentioned the possibility of the use of group singing by humans to intimidate opponents before battle (Levitin, 2008:47-48).

This list is by no means complete, but I hope it gives the reader a general idea of the range of scholars and their ideas about the importance of a musical component (particularly vocalization and singing) in the development of human language. Of course, there are plenty of differences between the suggestions of different scholars. Some scholars write about “singing”, others about “vocalizations”, and some about “vocal calls”, but the general idea that vocal communication was crucial for language development is clear in most of these suggestions.

The Gestural Theory of Language Origins

The only serious alternative that has been suggested for the development of human language is the so-called “gestural” theory of language origin (see Hewes, 1973, 1977; Armstrong et al, 1995; Corballis, 2002). According to the proponents of this theory, the evolution of human language went through a gestural phase. Suggested first by Condillac in 1746, this theory was particularly influential in the 1970s and the 1980s with the remarkable success achieved in teaching apes sign language.

Gestural theory had several attractive sides:

(1) First of all, it was believed that apes (our closest relatives) do not have voluntary control over their own vocalizations; therefore it was assumed that when our hominid ancestors wanted to communicate more complex ideas, they would not be able to use their vocal tract and had to turn to other means of communication.

(1) Another important point for the support of gestural theory was the lateralization of musical abilities and human language in different hemispheres. The idea that language (lateralized in the left hemisphere) could not be related to our vocal abilities (lateralized in our right hemisphere) was perceived as hard neurological evidence against the vocal theory.

(2) Most importantly, the boost for the gestural theory came from the groundbreaking experiments in teaching our closest living relatives the American Sign Language. Apes, constrained from talking due to their physical inability to produce a wide range of articulated sounds, suddenly started communicating with the experimenters

(Gardner & Gardner, 1969; Premack, 1970), answering their questions, following the directives of their trainers, and even constructing rudimentary sentences with sign language and other non-articulatory means of communication. This fact was a living proof of the ability of our very distant ancestors to start more advanced communication via gestural and other non-vocal channels.

The subtle decline in the influence of the gestural theory in recent years was mostly connected to advances in our understanding of the character of animal vocalizations and the details of lateralization of language and musical faculties in our brains.

Belief in the involuntary nature of ape vocal communications is not so strong any more among scholars, as information about voluntary control over vocalizations among apes is growing. The suggestion that our living relatives could have had at least partial control over their vocalizations arguably started with Steklis' 1985 publication, and many followed. Barbara King wrote in 1994: "...the ability of some monkeys to produce voluntary vocalizations is ignored when hominid vocal communication is discussed. Although no evidence exists either for or against voluntary vocal production in chimpanzees, it is known that some monkeys do produce calls voluntarily. Why, then, should the monkey evidence not be used to consider the possibility that early hominids were capable of referential vocal production?" (King, 1994:109).

In the last few years Kanzi, a bonobo that provided some of the most remarkable examples of the ape's ability to comprehend human language, also provided evidence that apes can control their vocal chords as well as their hands. It was noticed that every time Kanzi communicated with humans with specially designed graphic symbols, he also produced (obviously voluntarily) some vocalization. It was later found out that Kanzi was actually producing the **articulate equivalent of the symbols** he was indicating, or, in other words, he was saying (articulating) these words, although in a very high pitch and with distortions (Greenspan & Shanker, 2004:163).

The localization of musical abilities in the right hemisphere and of language (and speech) in the left hemisphere was another major obstacle for acceptance of the vocal theory. A closer look revealed that the seemingly simple dichotomy "music is in right hemisphere, and language is in left hemisphere" is not so simple. When music signals are **learned** from early childhood, they are localized in the left hemisphere:

- Avian birds acquire their species-specific songs during the earliest period of their development. As a result, their songs are controlled by the left

hemisphere of their brains (Nottebohm, 1971, 1972; Bright, 1984; Bradshaw & Rogers, 1993; Catchpole & Slater, 1995, 2008).

- Most professional musicians learn music consciously from quite early childhood. This must be the reason why there is lateralization of part of their musical knowledge in the left hemisphere (Henson, 1985).

- The pitch-based element (intonation) of tone languages is acquired (learned) in early childhood, long before the acquisition of articulated sounds of speech (Kessen et al. 1979:98-99; Clumeck, 1980:259-265; Moskowitz, 1991:148). As a result the system of tones of tone languages is also localized in the left hemisphere (Gandour et al. 1988). Thus, musical activities, which are transmitted culturally (learned) during the individual's early development, are localized in the left hemisphere in both animals and humans.

- Despite the fact that study of lesions (brain damage cases) are pointing to the localization of music and language in different parts of the brain, studies based on brain-imaging methods (or a study of normally functioning brains, when the areas involved in different activities are identified) provide important proof of close links between music and language processing in our brains. One of the biggest authorities in this sphere, Isabelle Peretz, wrote "In my view, the only consensus that has been reached today about the cerebral organization underlying music concerns pitch contour processing. The vast majority of studies point to the superior temporal gyrus and frontal regions of the right side of the brain as the responsible areas for processing pitch contour information. However, it remains to be determined if this mechanism is music-specific, since the intonation patterns for speech seem to recruit similarly located, if not identical, brain circuitries" (Peretz, 2003. See also Mithen, 2005:65).

As to the brilliant works concerned with teaching ASL (American Sign Language) and other non-vocal forms of communication to the apes, they provide us with a unique possibility to understand the cognitive capacities of our closest living relatives, but they can hardly tell us much about the early history of the development of language among hominids. The situation of one species teaching a higher language to another species is evolutionally artificial. Our ancestors had not been taught a higher language by someone else. They developed a higher language themselves simultaneously with the development of their cognitive abilities and gaining cortical control over their vocalizations.

The advantages of the vocal medium over gestures are well known and widely accepted by proponents of both vocal and gestural theories, although

the proponents of gestural theory prefer to talk about **speech** in this context. Let us listen to one of the main proponents of gestural theory, Gordon Hewes: “There are several obvious advantages of speech over manual gestures, including the fact that the vocal auditory channel is practically a clear channel for communication, whereas the visual channel, as the prime modality for human and all higher primate perception of the external world, is subject to continual interference from non-language sources. Unambiguous decoding of gestural messages requires a fairly neutral background, good illumination, absence of intervening objects (including foliage), a relatively short distance between transmitter and receiver, and frontal orientation. Making manual gestures is slower than speaking, requires more energy, and prevents the use of the hands for any other activity while the message is being transmitted; decoding sign-language message is also slower, even among trained deaf persons” (Hewes, 1973:10).

All these facts were provided by Hewes to prove the necessity of the later change of gestural medium into speech, but it is logical to ask, why would our ancestors shift from a primary vocal channel to gestural communication in the first place, when it is clear that almost the same long list of advantages over the manual gestures are characteristic not only for contemporary speech, but for an archaic vocal communication as well? (The same question was asked by Carstairs-McCarthy, 199:103-4.)

Pitch-Based Language: Singing, Whistling, Drumming

Although human **language** and **speech** today seems inseparable, most of the scholars generally agree that they are essentially and chronologically very different phenomena. Language could have existed long before the emergence of speech, and speech is generally regarded as the latest acquisition in human evolutionary history. Despite this general agreement, not every scholar makes a clear distinction between language and speech, which is why experts often complain that it is not clear whether some authors make any distinction between these two phenomena.

I want to stress from the very beginning that **the difference between language and speech is absolutely crucial for the suggested model**. I fully agree with the large group of scholars who hold that language must have existed long before the emergence of articulated speech (for example, Krantz, 1980; Byrne, 1995:148-49; Armstrong et al. 1995). Therefore, we will **first**

discuss the origins of language from the musical point of view. We will discuss the **problem of the emergence of speech much later**, in the context of the uneven distribution of polyphonic singing traditions in different human populations all around the world.

The origin of language in human evolution was a crucial point in becoming *Homo sapiens*, or a thinking primate, or, if you prefer, a human. As Grover Krantz pointed out in his commentary on Livingstone's article about the singing Australopithecine, the crucial element of language is the "neurological capacity for symbolic thought, the ability to form mental images of things not being perceived. It is only of secondary importance just how these thoughts are communicated" (Krantz, 1973:26).

We all know instances where language functions without speech, although we may not always pay attention to this fact. For example, people, who communicate by means of sign language, use fully developed language, but not speech. Communication with the Morse coding system of the early telegraph, based on the use of dots and hyphens, or the system of marine signal flags between ships are different examples of the use of language without speech. Speech is just one of the **mediums** of language, although by far the most economical, fast and universally employed one in all human societies. Historically speech was almost exclusively the only medium for human language, as other mediums of language were mostly developed very late in human history. Sign language was officially developed after 1755 in France when Abbe de L'Epee founded a public school for deaf children. Initially it was based on the signs that were used by mute and deaf individuals in the streets of Paris. The Morse coding system was developed in the 1830s by Samuel Morse and Alfred Vail. The system of Marine Signal Flags was developed in 1855 in England by the British Board of Trade. Taking into account the overwhelmingly wider use of speech in human society and history, it is not accidental that sometimes scholars do not make any difference between "language" and "speech". For example, Dean Falk famously declared: "speech is language" (Falk, 1980a:780, commentary to Krantz, 1980), a declaration with which at least some scholars would find it hard to agree.

Pitch language, based on pitch modulations, or musilanguage (the term of Steven Brown, 2000), seems to be the only alternative medium of language that can compete with speech in universality and chronological depths in human history. According to the range of dates that different scholars suggest, speech developed only within the last 40 000 – 300 000 years, which leaves a few million years of language development mostly based on pitch

modulations among hominids and a series of archaic forms of *Homo sapiens*. But unlike sign language, Morse or Marine Signal Flags, pitch language used the same vocal channel that was later employed by speech, which is why, after the introduction of speech, a much more efficient medium for language, all known human societies shifted to speech, and today it is very difficult to find traces of the “past glory” of pitch language.

Fortunately, there are still some possible traces of pitch language left in contemporary human societies. Here is a brief account of three of such instances when very precise ideas were communicated by means of pitch only:

Whistle languages. “Eusebio Martinez was observed one day standing in front of his hut, whistling to a man a considerable distance away. The man was passing on the trail below, going to market to sell a load of corn which he was carrying. The man answered Eusebio’s whistle with a whistle. The interchange was repeated several times with different whistles. Finally the man turned around, retracted his steps a short way and came up the footpath to Eusebio’s hut. Without saying a word he dumped his load on the ground. Eusebio looked the load over, went into his hut, returned with some money, and paid the man his price. The man turned and left. Not a word had been spoken. They had talked, bargained over the price, and come to an agreement satisfactory to both parties – using only whistles as a medium of communication” (Cowan, 1948:280).

Here is the “transcript” of the conversation that took place in the abovementioned “whistle dialogue”:

“What did you bring there?”

“It is a load of corn.”

“Well, where are you going with it?”

“I am taking it to Tenango.”

“Are you going to sell it then?”

“I am going to sell it.”

“How much will you take then? Sell it to me here.”

“I will take 2.50 a box” [pesos]

“Won’t you take 2.25? I will give that to you”.

“Three pesos are given to me where I am going with it”

“But that is far you are going with it then.”

“I will just drop the matter now”.

“Well, you sure want a lot” (Cowan, 1948:286)

This is quite extraordinary for us, but quite mundane for the mountaineers of the Mexican village of Mazateco. The Indians' story is a case of using a **whistle language**, or a purely pitch language as part of normal everyday human communication. The same phenomenon can be encountered in plenty of other countries and regions of the world: in Brazil, Bolivia, Alaska, Nepal, Myanmar, New Guinea, France, Greece and most of all – in many West African peoples. This kind of communication generally occurs among the users of tone languages, and it is based on the use of a **tone element without the articulated component of speech**. Besides the use of whistled language among the carriers of tone languages, there are also very interesting cases where the whistle language is used in non-tone languages as well, as in some Spanish, Turkic, or Greek villages (Busnel & Classe, 1976). Interestingly, West Africans sometimes whistle other, non-tone languages as well (for example, French).

Of course, the “only pitch” communication severely constrains the content of messages that can be unambiguously transferred and received, but in evolutionary terms, even this relatively limited ability of precise information transfer via pitch-only medium could have crucial importance for the earlier stages of language development. Besides, it is important to remember that **speakers of tone languages never speak without the use of the tone element, whereas, as we can see, they can successfully communicate (and do this naturally in many parts of the world) with the use of the pitch element only, without the articulated component of language**.

As readers might remember, Roger Wescott even suggested that hominids initially communicated via whistling, instead of vocalizing (See Wescott, 1973). I do not think whistling would be so dominant over vocal language at any point of hominid communication, but the use of a purely pitch-based whistle language in a few contemporary human societies is an important fact that should not be overlooked.

“Language” of African drums (or “African Talking Drums”) is another instance of the use of a purely pitch component for communication. The existence of drum languages also proves that pitch-only based communication can function in human society. A very interesting detail of African Talking Drums” is that different African tribes, who speak different languages, often use a more universal Drum Language, which sometimes

employs the earlier, already extinct words and expressions of the local languages (Crystal, 1987:401).

Unlike the whistle language, which can be used for the regular dialogical communication between individuals (see the previous section), drum language is only a one-way signaling system and does not require reply to the message. It consists of the set of stereotypical sentences that are familiar to the members of the given society.

It is a pity that in many ways the innovative and insightful book of Steven Mithen “Singing Neanderthal” does not even mention either “whistle languages”, or “African Talking Drums” which could further promote his idea of the importance of music (pitch-based communication) in the evolution of human language. The reason for this silence could be the following: Mithen, despite his genuine efforts to promote the idea of the importance of music in the evolution of human language, sees music only as a “non-referential system of communication” (Mithen, 2005:22), without even discussing the referential potential of pitch-based communication.

Tone languages also demonstrate the importance of the tone (pitch-based) component in human languages. If whistle and drum languages are present only in a limited number of regions of the world, tone languages constitute in fact the majority of world languages (more than half of human languages are tone languages). We briefly discussed the nature of tone languages in the first part of this book in relation of sub-Saharan African parallel polyphony. The tone component is very important for both the morphology and the syntax. The lexical use of tone is widespread in all tone languages – in Southeast Asian and African tone languages – and the grammatical use of tones, such as singular and plural forms and present and past tenses is “typical of many languages of Africa” (Cruttenden, 1986:9).

Speaking about the use of tone in languages, there is hardly a language in the world that does not make any use of tone and intonation. Even the speakers of English, a non-tone language, use different intonations to form interrogatives in statements in everyday speech (like the difference between “Let’s go” and “Let’s go?”).

It is very important to note that in tone languages, as well as in other non-articulated means of pitch communication (whistle and drum languages) **pitch contour has nothing to do with the emotional content usually attributed to music and singing. Here the pitch element assists articulation in conveying arbitrarily designed precise meanings.** An emotional element of tone is also present in tone languages, but it is

independent of the lexical and grammatical meanings. So, regarding the use of tones in tone languages, we may say that pitch was employed as a **double-component system, overlaid on each other**: (1) the first component has a referential lexical (and sometimes grammatical) function, and (2) the second component has a general-emotional, non-referential function. In contemporary tone languages both functions of pitch modulation are clear, and they are overlaid on each other in a flow of speech.

It seems that during the last major evolutionary change of human communication, when so-called “fully articulated language” came into existence, articulated speech did not fully replace the older pitch language. In some regions speech replaced the pitch language’s lexical and grammatical functions. In other regions the lexical and even grammatical functions of pitch language were preserved. This is the case in contemporary tone languages. Therefore it would be more appropriate to talk about the “partial replacement” of the ancient pitch languages. There is no language in the world that does not make use of tone (prosodic elements), and in tone languages many more instances of the referential use of the ancient pitch element are preserved.

Here we should also mention that a number of linguists believe that the system of tones has a late origin, suggesting that tonogenesis went through replacing some lost elements of speech with tones (for example, voiced consonants were replaced by low tones). Imagine the earlier speech, devoid of tones and acquiring tones only later seems to be against the general historical dynamics of the evolution of vocal communication from the animal kingdom (based on pitch differences) towards human speech (based on articulation). We should mention though that linguists also note that tones might be lost during language development as well.

Pitch Language: The first dead language in human history

The statement of Steven Pinker, that “even a plot as simple as ‘Boy meets girl, boy loses girl’ cannot be narrated by a sequence of tones in any musical idiom” does not tell us the whole truth. In the example of whistle and drum languages we can see that pitch contour can convey meaning precise enough to enable quite complex commercial agreements to be made between two parties. Despite this possibility, today pitch-based language is used only as a marginal means of communication, mostly for communicating over large distances. Readers might remember Carl Stumpf’s interest in pitch-based communication over long distances from the brief survey of different ideas on the origins of music earlier in this part of the book. This need in

referential pitch communication was mostly lost after the much more efficient medium – speech - entered the scene, so unless we need to communicate over large distances in the mountains of Central America or the African savannah, we communicate with speech.

Our Australopithecine ancestors were roaming the African savanna during the longest period of our prehistory, when time was passing in millions of years. During this period our ancestors learned to survive without the safety of tree branches, sharing the ground with major African predators. We have already discussed the possible survival importance of loud singing and dancing displays, magnified by the precise rhythmic stomping of a whole collective of hominids. The impressive “lion dance”, very effective for defense (and even attack to obtain carcasses), was more an ancestor of future human music than a language. The language of more “peaceful” everyday communication (see the discussion of humming in the previous chapters) must have been quite different, although still mostly based on the pitch element (modulations of a fundamental frequency).

This early system of communication I will be mentioning with the term “pitch language”. **Pitch language is a referential system of communication, based predominantly on pitch modulations** (See also Fonagy, 1981). Freedom from limbic control and cultural learning during the early years were its other characteristics. Increasing data about the freedom from limbic control of primate vocalizations suggest that both these features could have been present among our ancestors before the emergence of bipedal Australopithecines. At least at the stage of Australopithecine these features must have been present, because, as I discussed above, it is very unlikely that hominids would **start** singing after they descended from the safe trees to the hazardous and predator-infested ground where no other animal sings.

As a system of communication, pitch language shared common features with both primate calls and human speech. The features which link pitch language with primate calls were the presence of melodic contour (modulation of a fundamental frequency) as the main medium of communication, and possibly the presence of only a few consonants. On the other hand, liberation from limbic control and lateralization in the left hemisphere links hominid pitch language with human speech (or spoken language). So, by its form, pitch language was still connected with primate calls, but by its content pitch language was closer to speech. Thus, I agree

with the idea of Bruce Richman, expressed in the title of his article “On the evolution of speech: singing in the middle term” (Richman, 1993).

Considering the importance of good musical abilities for our Australopithecine ancestors, I would suggest that their musical requirements must have been somehow close to those of contemporary professional musicians: (1) a good **musical ear** is essential for the physical survival of both of them; (2) intensive musical **learning from early childhood** is another important common feature, and (3) as the result of the previous point, in the brains of both the Australopithecine and the professional musician musical functions and extensive experiences are stored and processed by the **left hemisphere**.

The presence of a few consonant-like sounds in the primate call system was the important element for the future development of spoken language. You do not need to read Goodall or Stopa publications to notice that chimpanzees, Japanese macaques and some other primates do employ “kh” and “k” consonant-like sounds in their vocalizations. These consonant-like sounds have long since been recognized as a part of primate and ape vocalizations (Peterson, 1982; Snowdon, 1982; Stopa, 1979). Therefore, there are no grounds to deny the use of at least a few consonants in the mostly pitch-based communication of Australopithecines. It is interesting that contemporary speaking humanity is still using vocal communication based on these two elements: (1) consonants and (2) prosodic (pitch) elements, the same two elements that our not-so-close tree-living relatives still use in their communication.

An increase in the importance of consonants (as well as the appearance of more vowels) in the evolution of human communication resulted in the emergence of articulated speech. But before this revolutionary increase in the variety of vowels and consonants, our human ancestors must have communicated with the help of pitch contour predominantly.

There are a few other facts that point to the deep evolutionary roots of human musical abilities, and although I am not going to discuss them in detail, they deserve at least a passing mention:

- The **genetic basis of human musicality** is widely known (see McDermott & Houser, 2005; Justus & Hutsler, 2005). This includes pitch perception, sound production, and the feel of rhythm. All three faculties have a genetic component. Readers may remember the example of Richard Wagner, who was among the most musically creative individuals in history, but could not sing in tune. Such facts suggest that seemingly interconnected

different musical abilities are in fact independent from each other. So not only “musical ability” is a separate ability, different from other mental abilities, but even **musical ability is in fact a group of independent musical abilities.**

- Another interesting fact that also points to a genetic component in the vocalizations of very young humans was provided by a study, conducted in my native Georgia. According to this study, the very first human vocalizations (cries of newly born infants) **audibly differ from each other in some interesting ways according to their ethnic origins** (Japaridze & Strelnikov, 1982).

- Very young children were found to have much better general musical abilities than adults. Perfect (or absolute) pitch enables a person to hear the actual pitch without its relative position to other pitches. **Having perfect pitch is a norm among infants**, although among adults, even among professional musicians, it is very rare (Saffran, 2003; Saffran & Griepentrog, 2001).

Pitch language prepared the basis and participated in the creation of speech, or in other words, pitch language “evolved” into a new, much more efficient system of communication - speech. And in the same way, as we hear today plenty of elements of dead Sumerian and Latin in contemporary languages, the elements of the ancient “pitch language” are found widely in tone languages and prosodic elements of speech. The old suggestion that music grew out of the prosodic element of speech (suggested by several generations of scholars from Spencer to Pinker, and criticized by an even more impressive line of scholars starting from Charles Darwin) gets the evolutionary sequence of communication development the wrong way around. In terms of time span, pitch language was used by humans for hundred of thousands, if not millions of years. In comparison with the primordial pitch language, speech has a very short, although an impressive history. I suggest declaring pitch language (or musilanguage) a dead language, arguably the first dead language on our planet.

Pinker is correct, stating that every neurologically normal human can speak, but not everyone can sing and enjoy other musical activities (Pinker, 1997:529). But let us not forget that at least 40 000 (or maybe even 300 000, see later) years separate us from the moment when articulated speech revolutionized human language. After this moment the system of arbitrary pitch signals was mostly forgotten, and only emotional intonation remained in our speech, as articulated speech did not succeed in replacing the

emotional richness of primordial pitch language. And of course, in more than half of the contemporary languages, the old function of the referential and arbitrary use of pitch is a part of our everyday speech in tone languages.

If we imagine the countless centuries and millennia that went into “forgetting” the ancient pitch language, it is a wonder that the majority of humanity still has enough musical ability to sing in a choir or play musical instruments.

Most of us, unless good users of whistle or drum languages, cannot narrate even the simplest plot using music today, but in exactly the same way hardly anyone would understand if an expert in the ancient Sumerian language narrated a very simple plot in Sumerian. This is why these languages are “dead”. On the other hand, the existence of the whistle and drum languages prove that the sequence of tones (based purely on pitch modulations) has a tremendous potential in expressing and transferring quite elaborate ideas.

Is Music an Enigma? Answering Steven Pinker

At the very beginning of his discussion about human musicality Steven Pinker candidly declares, “Music is an enigma” (Pinker, 1997:528). These words openly tell us about the problem many linguists have in dealing with the phenomenon of music. Most linguists prefer not to mention music in their writings about language evolution at all. Noam Chomsky arguably is the best-known representative of this huge group of linguists. As Mithen pointed out (Mithen, 2005:280), one of the most important recent publications on the evolution of language, written by a large group of the most renowned experts (see Christiansen & Kirby, 2003), fails to make even a passing reference to music. This policy of most linguists of hiding their heads in the sand does not make the universal human phenomenon of music disappear from the history of human society and communication. Pinker even goes on to declare that “Compared with language, vision, social reasoning, and physical know-how, music could vanish from our species and the rest of our lifestyle would be virtually unchanged” (Pinker, 1997:528). I am not so sure that “our lifestyle would be virtually unchanged” if music vanished from the human species, but I guess the life of some linguists, who work on the origins of language, would be much easier.

The mid 1990s were possibly the “darkest period” for the acknowledgment of the role of human musical faculty in human life and evolution. During the couple of years before the publications of Pinker’s book Barrow also denied any survival value to human music (Barrow, 1995),

and Sperber described the nature of human musical faculty as “parasitic” (Sperber, 1996). Fortunately, the “darkest period” seems to be over, as the new millennium generated new deep interest and plenty of publications on the role of musical faculty in human life and evolution.

Some linguists do mention music in their writings, but mostly to dismiss its possible evolutionary role in the evolution of language. Steven Pinker is arguably the best known representative of this, much smaller group of linguists. Pinker devoted eleven pages of his 600-plus page book to music. On these pages he does not try to discuss the possible role of music in language evolution, but discusses music as one of the faculties that our brain deals with, and the discussion about music is sandwiched between discussions about brain reaction on watching paintings and going to movies. His dismissive comments about music as a “pure pleasure technology,” with no evolutionary importance whatsoever (“as far as biological cause and effect are concerned, music is useless”), do not do justice to the millions of years of evolution of our ancestors before the advent of articulated speech.

Otto Jespersen’s 1895 suggestion that musical pitch-based expressions played a major role in the initial stages of language development is a rare exception among linguists. Unfortunately, linguists of the following generations were too absorbed in the world of syntactic structures to notice the importance of non-articulated means of communication. Even the tone element of tone languages is mostly perceived by linguists as a late addition to spoken languages.

In this context Pinker’s declaration “Music is an enigma” is very eloquent. Music will remain an enigma for linguists until they accept the idea that musical (pitch) communication could have been a crucial part of early language evolution. After the acknowledgment of the evolutionary role of a non-articulated, pitch-based channel for the early development of human language, linguists will have a clearer picture of the reasons why there are so many common features between language and music, why music and language activity involve the same brain structures of our brain, why we all want to tap, move our body or to sing along with our favorite songs, why participation in common rhythmic activity is so emotionally involving, why soldiers marching in exhausting drill feel uplifted and win the wars, why the tone languages are such a mix of pitch and articulated elements, where the use of whistle and drum languages came from, and many other, often neglected but important topics.

Pinker is also correct in declaring that all neurologically normal humans have the ability to acquire complex language, but not every normal human

can carry a tune. I did mention earlier that not only some “non-musical humans”, but even great musicians (like Wagner) may have difficulty singing in tune. This fact of a relatively limited musicality in humans is not a confirmation of the later origin and the evolutionary uselessness of singing. It is much more likely that this fact is a result of the loss of the direct survival value of pitch control after the emergence of articulated speech for the last tens (or even hundreds) of thousands of years. Mithen’s suggestion that the Neanderthals had better musical abilities than contemporary humans (Mithen, 2005:245) is evolutionarily very sound and is supported by the plenty of documented cases of the loss of the traditions of vocal polyphony in different regions of our planet. As a matter of fact, many animals naturally have perfect pitch, rare even among professional musicians (Mithen, 2005:300). The fact of the much wider presence of perfect pitch among very young infants also points to a gradual degradation of musical hearing during human evolution (*ibid*, 78-79).

This may sound strange to some readers, but we, humans, are gradually losing our musical abilities. On the other hand, this process of decreasing musical abilities occurs in parallel with the increasing sophistication of professionalism in music during the whole course of the evolution of human civilization and culture. When any of the behavioral or cognitive features, common for the major part of the population becomes gradually lost, there is a good chance that some individual members of the society will become experts in this vanishing area and will gain their living and social status in serving other members of society. This is the beginning of professionalism. When we go to the supermarket to buy a piece of meat, or go to a restaurant for a dinner, or hire a builder to build a house for us, or buy a ticket to a musical performance, we often do not realize that our direct ancestors just a few generations ago were doing most of these things themselves: growing and making food, building shelters and houses, entertaining themselves. Pygmies, arguably the most musical population on our planet today, do not have professional musicians in their societies.

Before the advent of articulated speech, pitch control was evolutionarily a very important trait for survival, so evolution must have favored individuals with a good sense of rhythm and good pitch control. After the great pre-articulated epoch of hominid and human communication came to an end, pitch control lost its survival value and started gradually deteriorating and vanishing from human populations. 40 000 years (at least) is quite a big period of time for any genetic trait to disappear when it falls out of “favor” regarding direct survival benefits.

The fact that our musical abilities are still with us must be attributed to two main factors:

(1) First of all, the resilience of human musical abilities comes from the millions of years of active use and “genetic sharpening” through the selection of hominid and human musical abilities as the primary means of everyday communication and one of the central means of predatory control and food provision;

(1) Secondly, our musical abilities were survived by a few functions that could not be replaced by articulated speech. These functions include communal singing and dancing, emotional bonding through following the same rhythm, and enjoyment of the hearing of musical sounds. These functions remained valid for the rest of our history, albeit gradually declining and becoming a field for professional musicians.

Therefore, when we try to find a “survival value” of music today, tens of thousands of years after the pitch language lost its direct communicational function, we are left with only a few functions that were not replaced by articulated speech.

Let us imagine we lost all the historical records about the crucial importance of horses in human history as one of the central means of transportation and an element of military power, and we are only left with facts of the use of horses in contemporary western society. We could have come to the conclusion that horses were domesticated for the purposes of the enjoyment of outdoor life and weekend races. For sure, there would be suggestions that “horses could vanish from our history and the rest of our lifestyle would be virtually unchanged”. Luckily, there are plenty of records in human history about the revolutionary importance of the domestication of horses, such as mass migrations, the spread of Indo-European languages, human military history, etc. Anyway, horses were widely replaced by cars only about **one century** ago, and in some parts of our planet horses still play the leading role as a means of transportation (I remember this myself from fieldworks in Caucasian mountains). Unlike horses, pitch language lost its function at least **four hundred centuries** ago, and no direct records survive from this period. In this situation it is not wise to disregard such important facts of human communication as the existence of tone languages where pitch plays an important role in the lexical and grammatical categories, or the

existence of whistle and drum languages, where the complex messages are transmitted by means of pitch only.

If we disregard these important facts, we will be doomed to regard music as an enigma only.

A Small Question for Noam Chomsky

Considering the origins of the human language, Chomsky (1957, 1986) suggested that language appeared suddenly, as a result of a monstrous genetic mutation, and after it appeared, the very first true human with the human abilities of intelligence and reasoning had a tremendous advantage compared to his non-human family and friends. Chomsky has been criticized for his almost creationist views on the origins of language and intelligence by fellow linguists (Pinker, 1997). His idea of a monstrous random genetic mutation was compared to a storm assembling a Boeing in the backyard.

I suggest that even if we accept the idea of a monstrous genetic mutation, Chomsky's idea still cannot be evolutionarily viable. So here is a question to Dr Chomsky and the linguists who consider Chomsky's suggestion of a monstrous genetic mutation a plausible idea:

Would a neurologically human child, born in a family of non-language primates (or hominids), be able to develop language faculties just from her/his genetic abilities, without any language speakers around in the early years of infancy?

I am not a child developmental psychologist, or a linguist, but according to what I have learned from published discourses on this subject, it seems to me that child development experts would unanimously agree that even a person with such extraordinary mental abilities as Dr Chomsky himself, would not be able to develop a normal human language if he was not surrounded during his childhood by members of his own humanly speaking family.

Being born with all the necessary human genes, including human language and intelligence, does not guarantee anyone successfully using all these wired faculties. Every human child needs a human environment and humanly communicating adults to develop her or his genetically wired principles of "universal grammar" and human reasoning.

I fully agree with Steven Pinker's Darwinian approach towards the origins of language (although I strongly disagree with his dismissive attitude towards music). The emergence of language was a long and complex process, involving the gradual evolution of a whole set of elements of primate and then hominid communication.

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So far we have discussed the possibility of the use of pitch as the main medium of early hominid communication. We are now going to discuss one of the central questions of this book, mentioned in the title of the original 2006 edition of this book: origins of human language and intelligence. I believe Mithen is correct in suggesting, “Not only does the origin of music deserve as much attention as that of language, but we should not treat one without the other” (Mithen, 2005:2). My suggestion is that not only must the evolution of language and music be studied together, but that **the origins of human musical abilities, intelligence, language, and speech are inseparable in human evolutionary history.**

Has anybody asked a question?

Language and Intelligence

On 27th August 1977, ten days after Elvis Presley's unexpected death, I was sitting in a small cafe in Kechkemet, Hungary, where I was attending a music festival. Three very nice young Hungarians, two boys and a girl about my age (I was 23 at the time) were sitting at the same table, also having lunch. They were discussing something very lively. I do not speak Hungarian, so, on a few occasions, when one of them looked at me, I smiled in return. A typical use of a friendly facial gesture if you do not understand the speech, I guess.

After a few minutes of discussion the young Hungarians must have decided it was time to include me in their conversation, so one of them asked me a question. OK, it was now time for me to tell them that I did not speak Hungarian, revealing that I did not understand a word from all their long discussion. So I used the most useful words any traveler will need if s/he does not understand the language of the country s/he is visiting. "Nem Tudom Magiarul" ("I do not speak Hungarian"), I told them candidly in Hungarian, adding some more of my heartfelt smile. The guy who asked me a question looked at me puzzled and asked me another question. "Nem Tudom Magiarul, nem yertem Magiarul" ("I do not speak Hungarian, I do not understand Hungarian"), I told them both sentences that my host, the Hungarian composer and pianist, Kalman Dobosh, had taught me for such occasions. The young Hungarian looked at me even more surprised and asked me another question again in Hungarian. At this moment it seemed to me he could not understand my Hungarian. The two others were also looking at me in intense silence and with great curiosity in their eyes. I decided to try English. "Do you speak English?" I asked them in English and a few seconds later we were all talking to each other in English, discussing the music festival we were all attending. To my pride, they told me that my reply in Hungarian, designed to let them know that I could not understand their speech, apparently was pronounced in such a pure Hungarian accent, that they got an impression that I was Hungarian, but for some reason unknown to them I did not want to speak to them. I knew that Georgian speech was close to the strong Hungarian consonants, but I did not know that my host's fascination with my Hungarian pronunciation was so candid.

I remember wondering that evening how I could understand they were asking me something, as I did not understand a word they were saying. Or,

speaking more broadly, how can we distinguish whether a stranger is asking us something, or just saying something that does not need our reply. Of course, we may say that when we hear somebody telling us something, and then we notice that s/he is waiting for a reply, we can guess that this was a question. But this is often not the case with questions. I remember as soon as the question was pronounced, I *knew* this was a question without even understanding a word. I think we mostly feel when we are asked a question, even if we do not know the meaning of any of the words. Readers can guess that I am talking about the universal human use of **question intonation**. The importance of question intonation in human language is well researched. According to scholarly publications, question intonations are used in so-called sentences with “open meanings” (Cruttenden, 1986:171). These sentences are “open” because they require somebody to finish the communication with a reply. And this “openness” is expressed by the use of the pitch element (rising intonation).

I think my fascination with the universality of question intonation started on that distant day almost 40 years ago. At that time I was still a student of the Tbilisi State Conservatory, and my interest in traditional polyphony was just beginning. I would not have a clue that many years later I would be seriously interested in the origins of the mysterious phenomenon of question intonation and the human ability to ask questions, and would publish a book with a very non-musical title “Who Asked the First Question?” (Jordania, 2006).

Almost 20 years after that memorable meeting in the Hungarian café, in 1996, as soon as I arrived in Australia, I spent long hours for several consecutive months in the libraries of three Melbourne Universities – Melbourne, Monash and Latrobe, searching for publications about the evolutionary history of question intonation and the human ability to ask questions. I could not believe the results of my search: I failed to find **anything** about the origins and evolution of the question phenomenon either in the literature connected with the emergence of language and speech, or in any special (linguistic, psychological, behavioral, sociological, philosophical) encyclopedic editions. A CD-Rom and Internet search also failed to provide me with any publication on the origins of the question phenomenon. It seemed that I was the first person “asking questions about questions”. Of course, you can never be sure that despite all your efforts you have not missed an article or even a book on the subject you are interested in. But I can say that in all these more than ten years after 1996, if I see a new encyclopedia or a book on the origins of human language or intelligence, I

routinely check at least the index for “questions, “interrogatives”, and “asking questions”. Still with no results. Questions are so natural and so prevalent in every moment of our life and communication that we simply fail to notice them.

Let us make up for our neglect of the basics of human behavior and for the next sections of this book concentrate on different aspects of questioning behavior in human life and evolution.

Questions in Music: Musical Dialogue

On 10th of November 1986, at the opening of the Second International Conference on Traditional Polyphony, held in the beautiful mountainous resort of Borjomi in Georgia, Izaly Zemtsovsky delivered a paper “Problems of Musical Dialogue: Antiphony and Diaphony”. The paper was based on the fact of the extremely wide use of antiphonal singing in polyphonic cultures, and the idea was expressed that diaphony (this term is sometimes used for two-part singing), and hence the phenomenon of polyphony, had crucial connections to the phenomenon of dialogue in music. In my opinion this is one of the most productive ideas about the phenomenon of polyphony expressed in ethnomusicology. At that conference we published only the extended summaries of the papers (Zemtsovsky, 1986). In 1991 the extended paper was delivered at the conference of the ESEM (European Seminar in Ethnomusicology) in Geneva, and the short version of the paper was later published in French (Zemtsovsky, 1993). The full text of the paper was finally published in Russian in June 2006 (Zemtsovsky, 2006).

This is a fact that no musicologist would try to deny – antiphonal and responsorial singing is an integral part of the polyphonic tradition. Even in traditional monophonic cultures, when groups of people sing together in unison, alternation between a soloist and a group, or two groups is widespread. That’s why I included antiphonal and responsorial singing as one of the crucial elements of the hypothetic “primordial” or “proto-polyphony” of our hominid ancestors.

Let us now try to put together the human **questioning** behavior and the phenomenon of **dialogue**, two basic elements of human communication. I hope most of the readers would agree that we do not need much speculation to imagine the close evolutionary connections between these two phenomena. The connections are so obvious that I think it would be difficult to argue that questioning and dialogue could exist without each other.

They actually could. Humans can have a dialogue without asking questions to each other, just sharing ideas, opinions or stating facts, something like this:

“Last night I watched the Australia-Brazil game on TV”

“I did not. I had to get up early in the morning so I went to sleep early”.

“I think Australia was a bit unlucky to lose.”

“Maybe, but Brazil could have scored more goals as well”.

There are no questions and answers in this dialogue, although during the conversation they share ideas and opinions, agree and disagree with each other. In the same way we may ask questions of ourselves (“What should I do now?”) or to animals (“Pussycat, where did you get your stripes?”) or even others (“Why are you doing this to me?”) without a real dialogue, or when we do not expect to hear the answers. But of course, questions are predominantly asked of others in order to hear their replies.

A Few Basic Questions about Questions

As the years passed after 1996, I became more and more convinced that the human ability to ask questions was something crucially important and deep in the evolution of human language and intelligence. Starting from 1996, I delivered a few papers, talks and seminars on this subject at conferences and seminars, and also published a few articles on the subject (Jordania, 2000b, 2001, 2002, 2003, 2005). And of course, I was constantly looking for any existing publications on the origins and evolutionary importance of the human ability to ask questions.

Let me ask a few very simple and very straight questions about the ability of asking questions that I am going to discuss in the following few pages:

Why do we ask questions?

What evolutionary advantage could the ability of asking questions have given to human individuals?

What evolutionary advantage could the ability of asking questions have given to human groups?

Who asked the first question?

Is asking questions a uniquely human ability or do we share this ability with a few other species, at least with the African apes?

Where did the phenomenon of questioning come from – are there any evolutionary prerequisites for questioning behavior?

Who could answer the first question when it was asked?

Is the question one of the higher functions of syntactic structures?

Is there a genetic component for questioning behavior?

Do we learn to ask questions? And if “yes”, how do we learn to ask questions?

These and a few other topics are discussed on the following pages. So let us proceed:

Why do we ask questions?

This is one of the easy questions to answer, and I was wondering whether I need to discuss this question at all, but then decided that we need to recall to ourselves how important questioning behavior is in our lives. We ask questions for lots of different social and scholarly purposes, generally to find out something that we do not know and we think others might know. Of course, we may sometimes ask questions to check whether others know the answer (I loved making quizzes in my school years), but mostly we ask questions when we want to gain some knowledge about totally different things, such as the social plans of our teenage children for the coming weekend, the result of the soccer game that finished in the early morning hours, or the name of the first composer to use polytonality. According to the information requested in our questions, we may ask members of our family, call our friend, go to the Internet, or go to the library. Throughout our life we ask questions. We ask our first questions even before we can articulate what we want to ask, we start every scientific query formulating questions to which we want to find answers, we support everyday communications asking questions, we have huge libraries and a staggering amount of available information because people were constantly asking different questions and were looking for the answers. Sometimes a question raised in the 16th century was answered in the 20th century; and some of the oldest questions have not been answered yet; we even have a talent to answer questions with other questions (I remember a clever “Jewish” joke popular in Tbilisi: “Tell me, please, why you Jews always answer questions with questions?” – “So, do you think this is bad?”).

I hope everyone would agree that it is absolutely impossible to imagine human society, human intelligence and language without our ability to ask

questions. **Without our ability to ask questions our brain would be a closed system, limited by the knowledge of our immediate experience.**

What evolutionary advantage could the ability of asking questions have given to humans?

If the reader can imagine two individuals, one of whom is able to ask questions, and another one who for some reason does not have this ability, the intellectual and social advantages of the “questioning” individual will be quite obvious. A questioning individual can solve problems more easily, can easily access and use the knowledge of other members of society, and can better manipulate people and information to her/his own advantage. Even without asking questions of other members, just being able to formulate questions in her/his own mind would help tremendously in finding the right strategies to achieve different short-range and long-range goals. Human reasoning must have started with the emergence of the ability to ask questions.

Readers might object that this comparison is artificial, because there are no humans who cannot ask questions. First of all, there are some rare cases when for some reason humans are not able to ask questions (and we will discuss such cases soon), but most importantly, let us not forget that we are not discussing our contemporary society only. We are trying to discuss the evolution of language and the mental abilities of our distant ancestors. So the question about two individuals, one of whom is able to ask questions and the other who is unable to ask questions, must be understood in the context of hominid and human evolution: what advantage would the first “questioning hominid” have when the ability of asking questions emerged at some point in human or hominid prehistory? The advantages seem to me so obvious and so important that I think it would be fitting to declare that **with the emergence of questioning behavior the evolution of our mental abilities made a crucial turn towards human intelligence.**

Maybe the most important consequence for each “questioning” individual is that the emergence of the question phenomenon turned the hominid brain into an **open, self-developing system**. We self develop cognitively by asking questions and looking for the answers. A child develops by asking an array of questions, and the “runaway brain” evolution (Wills, 1993) begins with questions -- both in phylogeny and ontogeny.

What evolutionary advantage could the ability of asking questions have given to human groups?

Although we have just discussed the advantages that the new ability to ask questions would give to the first human, the true winner of the new ability of asking questions must have been the whole group, the first human society. This advantage must have been particularly obvious when the whole group had the mental ability to ask questions.

If you imagine two groups of humans or hominids, one asking questions of each other within the group, and the other group members unable to ask questions of each other, the difference will be so obvious and big that it would be correct to speak in the first case about group of humans, and in the second case about hominids, or pre-humans. The ability of asking questions drastically changes the intellectual capacity and behavior of the group.

The evolutionary significance of the ability to ask questions first of all was a revolutionary enhancement of the cognitive ability of a whole group of individuals, by **coordinating** their cognitive abilities. Suddenly the members of the first human society started asking each other questions, more actively sharing information and discussing problems. With the appearance of the ability to ask questions the **hominid communication** of exchanging information turned into a **human dialogical communication**. This new ability to formulate and ask questions created a totally new phenomenon -- **group cognition** and **mental cooperation**. The unique human ability of mental cooperation pushed our ancestors on to a completely new stage of cognitive development, previously unknown to the animal kingdom. Therefore, the importance of the new ability to ask questions was not only an increased cognitive ability of *each* hominid individual, but also a **revolutionary new level of group cognition and mental cooperation**. We can conclude that, with the emergence of the ability of asking questions, each member of our ancestors' society became smarter, but the combination of these smart individuals, put together as a discussing group, was much bigger than the simple sum of several smart individuals. I suggest that **our ancestors passed a cognitive threshold after they started asking questions**.

With the emergence of the ability to ask questions human language gained the last of three main language functions - declarations, commands and questions (about these three functions of language see de Laguna, 1963 [1927]). G. Revesz wrote about three functions of language as well: imperative, indicative and interrogative (Revesz, 1956).

We can look at the entire evolution of the human species and the development of human society and civilization from the point of view of an exchange of information and the means available in a society. We could distinguish several milestones in the evolution of the exchange of human information. The **ability to ask questions** was the first and truly revolutionary change in this chain of technologies to exchange information via direct communication. Human dialogical language, intelligence, mental cooperation and a self-developing brain emerged together with the ability to ask questions. We can even say that all the following revolutionary changes in information exchange were just the technical means of enhancing our ability and desire to exchange information. After this we never stopped inventing different ways of asking each other questions. So we started asking questions using **speech** (do not forget – we started asking questions before the advance of articulated speech!), later – **written language**, handwritten and published **books**, **telephone**, **radio**, **TV** and the **Internet**. Throughout our history as a species we have been asking questions of each other, of other generations, and even of people from different countries and continents we will never know, apart from a small moment of shared human behavior when we asked for the information that we needed and they knew the answer.

So, who asked The First Question? Or “Interrogo Ergo Cogito”

Here we are, answering the question of questions, posed in the title of the first edition of this book. It is a pity we will never know the name of the first individual who asked the First Question to mark the turning point in the long process of human evolution, but there is another quite precise way to answer this question:

The first question was asked by the first human being, the first Homo sapiens.

It does not matter whether it was a woman or man. What matters is the huge advantage and the instant gratification that the ability of asking questions would give to the first questioning human being. Most likely this was a result of genetic mutation, although the development of the ape and then hominid mental ability was heading towards this crucial point, so the appearance of the “questioning gene” must have been a relatively smooth transaction. Hominid group-based survival strategy on the ground, everyday noisy co-operational activity, an increased load of communication and more complex social politics within the larger groups was leading towards this

revolutionary change in communication and information-sharing. The advantage that the first questioning human gained from this new ability must have been so big that with every new generation the number of questioning humans (transmitted genetically from the first human individual) must have increased like a bushfire.

Was the ability to ask questions initially used in everyday referential communication (which grew from the “vocal grooming”, or the “contact calls”) or in ritual singing with possibly a referential text? I have already mentioned the fact well known to ethnomusicologists that responsorial singing is one of the strongest universals in human singing traditions. I propose that **hominid responsorial singing (through the question intonation) together with increasingly complex social interactions in hominid groups were the main factors that prepared the way for the emergence of the human ability to ask questions.** And as soon as the new ability of asking questions emerged with the first human being, it must have been used in both responsorial choral singing (a human soloist asking questions and the hominid choir responding together with the stereotypical answer), and everyday referential communications.

At the end of this small section let me employ good old Latin in a symbolic way.

“Cogito Ergo Sum” – “I am thinking, therefore I exist” – these famous words are attributed to Rene Descartes (they were actually initially written in French and only later were translated into Latin). In the light of the evolutionary importance of human questioning behavior I suggest another similar saying, with obvious evolutionarily implications: **“Interrogo Ergo Cogito” – “I ask questions, therefore I think”.**

Is asking questions a uniquely human ability or do we share this ability with a few other species?

This is the most difficult, controversial, interesting and possibly most important “question about questions”. If apes do not ask questions (or in other words: do not have the mental ability to ask questions), we may be able to claim that the ability to ask questions is a mental ability that only humans possess, an ability that gave humans the edge to be a distinguished member of the animal kingdom. I hope the few following pages might generate a discussion on this subject among experts of primate communication.

The idea of the uniqueness of human language has been seriously challenged during the last few decades. Fascinating results of studies,

teaching ASL and other non-vocal forms of languages to the apes (Gardner, Gardner, 1969, 1975; Premack, 1976; Premack, Premack, 1983; Terrace, 1980; Patterson, Linden, 1981; Savage-Rumbaugh, 1986; Rumbaugh et al. 1994), as well as the wonderful body of studies of vervet monkeys' alarm calls (Struhsaker, 1967; Cheney, Seyfarth, 1990) proved that we are much closer to our closest living relatives through our linguistic and cognitive capacities than we could have imagined earlier. Virtually all the design features of human language formulated by scholars half a century ago (Hockett, 1959, Hockett, Archer, 1964) – displacement, duality of patterning, traditional transmission, openness, arbitrariness, productivity, were found in the animal kingdom as well (and some of them not only among the apes). Discussions continue, and the opponents of the continuity theory (the foremost being linguists) often dismiss all the achievements of primates.

Whether apes could ask questions was an important problem in the 1970s and the 1980s. Unfortunately, the ability to ask questions was assessed **only in the context of the primates' ability to form a syntactic structure**. Maybe that's the reason why this discussion was never perceived as a potentially crucial point of difference between the apes' and humans' mental abilities. The 1970s and 1980s was a booming period for language experiments when our non-talking relatives suddenly started communicating with us using sign language and other non-vocal means of communication.

The experiments produced impressive results. Scholars discovered that apes could recognize themselves in the mirror as individuals, they could invent new symbols using the signals they already knew, and according to some authors they not only had some elements of syntax and metalanguage, but were able "to acquire concepts and generate hypotheses and strategies" (Rumbaugh et al. 1994:321). The achievements of the bonobos were particularly impressive. These achievements lead the head of the experiments, Sue Savage-Rumbaugh, to declare: "...apes posses the cognitive capacities for language but lack the proper organ of expression" (Savage-Rumbaugh et al., 1993:109), and "Kanzi's ability to understand human speech suggests that, if apes could produce human-like sounds, they might well invent and utilize a language that would be similar to our own, although probably considerably simpler" (Savage-Rumbaugh et al., 1993:107).

Regarding questions, it has been documented for a few decades already that the vocabulary of the acculturated apes contains question words as well, like "Who", "What", "Where" in Washoe's and Nim's vocabulary (Bronowski

& Bellugi, 1980:110; Terrace, 1980:11, 167). So it seems almost obvious that apes must be able to ask questions.

Nevertheless, according to the accounts of the experiment authors, apes do not ask questions. Wonderful examples of conversations with their human teachers have been recorded and published (Terrace, 1980; Gardner & Gardner, 1975, 1984; Premack, 1976; Rumbaugh, 1977; Rumbaugh & Gill, 1977; Patterson & Linden, 1981). Analysis of their conversations shows that in human-primate conversations **questions are asked by the humans only**. The same can be said about the question words: **apes understand them and give appropriate responses, but amazingly they themselves do not use question words in conversations with their human teachers**.

The apes' ability to comprehend questions is quite amazing. Describing Nim's ability to be engaged in conversations on many topics, Terrace notes: "...His teachers would ask him questions such as What color?, What name of?, Who?, ... Nim showed his comprehension by making an appropriate response... As his ability to sign improved, Nim began to reply to his teachers questions with more than one sign" (Terrace, 1980: 166-167). But the ability to ask questions proved to be much more difficult.

Ann and David Premacks designed a potentially promising methodology to teach apes to ask questions in the 1970s: "In principal interrogations can be taught either by removing an element from a familiar situation in the animal's world or by removing the element from a language that maps the animal's world. It is probable that one can induce questions by purposefully removing key elements from a familiar situation. Suppose a chimpanzee received its daily ration of food at a specific time and place, and then one day the food was not there. A chimpanzee trained in the interrogatives might inquire 'Where is my food?' or, in Sarah's case 'My food is ?' Sarah was never put in a situation that might induce such interrogation because for our purposes it was easier to teach Sarah to answer questions" (Premack & Premack, 1991 [1972]:20-21).

More than a decade later after writing these promising words of how to teach apes to ask questions, Premacks wrote: "Though she [Sarah] understood the question, she did not herself ask any questions -- unlike the child who asks interminable questions, such as What that? Who making noise? When Daddy come home? Me go Granny's house? Where puppy? Sarah never delayed the departure of her trainer after her lessons by asking where the trainer was going, when she was returning, or anything else" (Premack & Premack, 1983:29). Amazingly, Sarah would sometimes "steal"

the words from the trainers, and then she would happily **repeat the questions asked by trainers to her and then repeat her own answer**. And still, she never herself asked trainers any questions.

Earlier Washoe also failed to formulate and ask questions, though that was one of the aims of the Gardners' project (Gardner & Gardner, 1969, 1975; Bronowski & Bellugi, 1984:110; McNeill, 1980:152-153). Despite all their achievements, Kanzi and Panbanisha do not seem to possess the ability to ask questions as well. At least, Sue Savage-Rumbaugh and her co-authors never seem to have claimed this so far (Savage-Rumbaugh, 1986; Savage-Rumbaugh and Levin, 1994; Savage-Rumbaugh et al., 1993, 1998, 2001).

The only case when it was claimed that an ape asked a question that I am aware of was connected to the chimpanzee Lana. (Lana was a chimpanzee that participated in Duane Rumbaugh's experiments in the 1970s.) "When the machine [food-giving machine] was broken and food could not be loaded, Lana was able to ask: '?You move food into room?'" (Savage-Rumbaugh & Levin, 1994:143-144) Even if this is the case of an ape asking a question, it would be strange to consider the possibility that apes would ask a question of a machine (who can not give them an answer) and would never ask any questions of their human trainers, who can interact and give them answers. Given the natural curiosity of the apes, it would be natural to expect that if apes know how to ask questions, they would be asking plenty of questions.

So, according to our current knowledge, despite all their cognitive achievements, apes do not ask questions. They are apparently very good in replying to human questions, and they do understand quite complex requests and questions, but fail to ask questions. In cases when they begin a conversation, their utterances are either statements ("Bird there"), or orders/requests ("Play me", "Tickle me", "Me more eat", etc). There seems to be something very important in this fascinating fact, something connected with the evolutionary distinction between the cognitive capacities of apes and humans.

Accordingly I would suggest that it is not the recognition of ourselves as individuals that makes us humans (we know that apes, at least chimpanzees and orangutans, are as good as humans at recognizing themselves in the mirror). It is, rather, **recognition of other members of the society as individuals with equal cognitive abilities and the employment of their cognitive abilities as a source of information (asking questions), that makes us human, and our language -- human language**.

There is a subtle connection between the ability to ask questions and the "theory of mind". Reference to the cognition of another individual as a

source of information should be considered one of the highest forms of the “Theory of Mind (TOM)” (or TOM. Premack & Dasser, 1991; Cheney & Seyfarth, 1991; Povinelli, 1993; see also Mead, 1934). According to the available information, apes lack this ability: “The chimpanzee has passed tests suggesting that it attributes states of minds to the other one. These states, however, are either motivational..., or perceptual... Decisive evidence for the attribution of informational states is still lacking (Premack & Dasser, 1991:265).

The fascinating fact about the TOM and questioning behavior is that children learn the mystery of asking questions long before they show the development of TOM. This is fascinating, as apes are able to acquire at least some elements of TOM, which appears around the age of four in children’s development (Astington & Gopnik, 1991:12), but at the same time apes seem unable to learn how to ask questions, which appears in children’s development in the form of correctly pronounced question intonation before a child even turns one (Crystal, 1987:241, 143). Questioning behavior seems to be more species-specific to humans than the development of TOM.

Do apes ask questions in their natural environment?

Studies of monkeys and particularly apes in their natural environment give us important information. It is well known that apes (and monkeys) are skilful extractors of information from the adult members of the group who do not donate the information (King, 1994:143). Other animals (dogs, for example) can also easily elicit information by observing (or even sniffing) humans or animals. The question is whether animals possess **special communication signals to inquire about the informational state of another individual** (the essence of question phenomenon).

According to Fossey, gorillas have a special “question bark”, which indicates very mild alarm or curiosity (Fossey, 1972; Marler, 1976:241). Mostly devoid of communication context, the “question bark” cannot really be considered as questioning behavior. It is rather a sign of curiosity. Chimpanzee vocalizations are much more important for our discussion. J. Goodall describes special **inquiring pant-hoots**, which “...tends to rise in pitch toward the end of the series and is almost always followed by a pause during which the caller listens intently and (if at a lookout position) scans the surrounding countryside. A chimpanzee who hears another pant-hoot often responds by calling (usually with pant-hoots, sometimes also with *waa-barks* and even screams); thus the individual who initiates this question-and-answer

exchange will learn both the identity and the whereabouts of those who reply” (Goodall, 1986:134).

Could this be considered questioning? In a certain sense it may seem so, as the caller who initiates this “conversation” apparently needs to hear the voices of its own kind to identify them and learn their whereabouts. In this context the rising of the pitch toward the end of the series seems particularly important, as it obviously resembles human question intonation (also rising at the end and requiring an answer). But a closer look suggests that inquiring pant-hoots might be in fact **statements** (not questions), and their function is to maintain audio contact within the group:

(1) The reply to the inquiring pant-hoots usually is the same series of inquiring pant-hoots, with rising intonation at the end. This kind of response seems difficult to accept as an “answer to a question”. It seems more plausible to suggest that an inquiring pant-hoot is a kind of statement (“Here I am!”, or “Here we are!” or even “Hey!”), rather than inquiring or questioning (“Who is there?”, or “Is anybody there?”);

(2) The same type of rising-at-the-end pant-hoots are also used by chimpanzees spontaneously, without any need of information and without expecting a response (see Goodall, 1986:134-135, section *spontaneous pant-hoots*). This also suggests that inquiring pant-hoots are in fact statements, not questions;

(3) Most importantly, enculturated chimpanzees do not use interrogatives in laboratories where they are successfully taught complex forms of communication. Although in laboratories they demonstrate incredible cognitive abilities, much beyond the level of their free-ranging relatives, and although they are familiar with interrogative sentences, still they do seem not ask questions. It seems very unlikely that chimpanzees lose the ability to ask questions in captivity.

Questioning-like behavior has been suggested in other primates. David Symmes and Maxeen Biben suggest three criteria to establish the presence of a **conversation** among animals: (1) turn taking, (2) directionality of change in acoustic structure, and (3) bidirectionality of information transfer (Todt et al., 1988: vii; Symmes & Biben, 1988: 123-32). According to the research of

Symmes and Biben, squirrel monkeys' vocal exchange can be characterized as conversations. Regarding the ability of squirrel monkeys to ask questions, Symmes and Biben suggested, "animals are seeking information by questioning and receiving information from answers" (Symmes & Biben 1988:131). I understand it is not easy to be sure **what** the squirrel monkey are "talking" about, or whether they really ask each other questions, but it seems unlikely to me that squirrel monkeys can ask questions when more cognitively developed apes do not seem to possess this ability. Bateson and Trevarthan coined a special term "proto-conversation" for the early forms of communicative interaction (Bateson, 1975; Trevarthan, 1979)

Therefore, the foregoing evidence suggests that

- Our closest living relatives understand human questions and can respond accordingly on a level of a human child roughly about 2.5 years old (Savage-Rumbaugh, 1994);

- Chimpanzees in the wild have vocalization that has elements of questioning behavior (enquiry about the whereabouts of other members of the group, and most importantly – the human-like terminal rising question intonation);

- According to published results, apes were not able to learn how to ask questions in the experiments, despite their widely known curiosity.

- The **reason for this inability could be the genetic limitations of the apes' brain**. These limitations do not allow for the mental ability from which apes would learn questioning, or to inquire about the informational state of other individuals.

And finally, we should not forget that the experiments of teaching apes human language are still in progress.

Where did the phenomenon of questions came from?

Are there any evolutionary prerequisites for the questioning behavior?

Yes, there are at least two of them. First of all, an evolutionary prerequisite of the question phenomenon is **curiosity**. I think it is safe to declare that a question without curiosity cannot exist, although curiosity without a question is widespread among higher animals. Every one who has ever had pets would agree that curiosity is a natural part of animal behavior (about the role of play and curiosity among animals see Lorenz, 1971).

Although curiosity and the ability to ask questions are closely related, there is a big difference between these two phenomena as well.

If curiosity is a natural desire of higher animals to know more about the world around them, the ability to ask questions is the most powerful strategy of the mind to satisfy curiosity.

I would suggest that the **question is “materialized curiosity”**. Although a question is formulated by an individual, when it is formulated as a communication signal it makes possible an enormous innovation: involvement of all members of the group in settling the problem. So, when “materialized” in a question, curiosity becomes a powerful engine, pushing cognitive development far ahead.

Another crucial element of the future human questioning behavior among animals is **question intonation**. Question intonation is much more limited in the animal kingdom than curiosity, and chimpanzees might be the only species that possess it (outside of genus *Homo*). Although question intonation still does not seem to be used among chimpanzees for inquiries about the informational state of each other's minds, the use of question intonation among chimpanzees as an “open structure” that leads to vocal exchanges must be one of the most powerful evolutionary indications of the later human ability to ask questions. Following Derek Bickerton's popular term, protolanguage, we could call the “inquiring pant-hoots” used by chimpanzees, with the rising intonation, but still not used for inquiring into the information states of each other, **protoquestion**.

Who could answer the first question when it was formulated?

This is a methodologically very important question. We all know that any kind of evolutionary progress, whether that be a result of human invention or of gene mutation, will make an impact on the individual's survival chances and will be included in evolution, only if the environment provides a basis for the positive use of this new ability at the very moment of the appearance of the new ability.

By the time the genetic mutation brought to life the new revolutionary ability to ask questions, the situation could be volatile: there was possibly only one, the very first human being with the new human ability to ask questions. So what could she or he do? How to use the new ability? It might seem that without other humans around able to answer the first questions of the first human, this new ability would be to no avail and of no advantage.

The answer to this ostensibly difficult question is very clear and easy: **we can be sure that all members of the hominid groups of our ancestors were able to answer the question of the first human.** I am confident of this because experimental studies of ape mental abilities during the last few decades have provided ample proof that **apes are very good at understanding questions and answering them properly.** Knowing the ability of apes to answer questions, there can be no doubt that our hominid ancestors with bigger brains would be at least as good at answering questions as apes. Therefore, by the time the first human asked the first questions, the situation in hominid groups was very “fertile” for the use of this new ability. It might sound amazing, but for a few million years our ancestors (including apes) were cognitively ready to answer questions, although there was no one around to ask them any questions.

Another question would be the same as the one I asked the supporters of Noam Chomsky’s suggestion of the “monster genetic mutation”. We all know that for the normal development of infant mental abilities it is crucial that from a very early period the infant is surrounded by adults who can show examples of the use of the ability present in the infant’s genes. How would the first human infant develop her/his ability to ask questions without early examples and encouragement of this ability from adults?

The already existing “protoquestion” (“inquiring pant-hoots” containing the rising intonation) among wild chimpanzees can give us a clue to the answer to this difficult question. The first human child could well hear examples of vocalizations with the rising questioning intonation from the adult members of her/his social group from the first days of her/his life. We can be sure that the first “real human” questions, inquiring into the information state of other’s minds, were also asked with the help of the question intonation only. Even today all human infants of all races and language families start asking their first questions using the questions intonation only.

Is the question one of the higher functions of syntactic structures?

M. Tomasello mentions the ability to ask questions as among other more complicated grammatical structures acquired by children in the later stages of their language development: “...later... [after the age of two] children begin to use a variety of specialized discourse structures that differ in various ways from the prototypical events of interest to 2-year olds. Children learn to

produce the conventional form of such things as questions, passive sentences, and sentences with embedded clauses" (Tomasello, 1996:297). Later he repeats this idea "...the kind of discourse-communicative functions that arise in linguistic interactions with others are an integral part of the acquisition of the more complex sorts of grammatical competence: question asking, passive sentences, and the like (which may be the exclusive province of human beings)" (ibid, 300).

Putting the ability of asking questions together with other more complex grammatical structures does not seem right. Although children do start creating syntactic structures to ask their first "syntactic questions" after the age of two, they definitely do not start asking questions during the third year of their development. Here are a few facts and considerations about the question intonation and question as a grammatical/syntactic structure:

- Questioning is the grammatical category that can be formulated on the one-word stage of language development, **without the use of syntax**, just with the help of the ancient vocal medium – **pitch**.

- Question intonation can be the **biggest universal of human languages** and communication. All languages of the world without exception, tonal, non-tonal, intonational and accented – use the rising "question intonation" for the "yes-no" questions, very popular in human communication (Bolinger, 1972:314; Cruttenden, 1986:169-174). [The **only** dubious exception reported in 1946 was Chitimacha, but as "only **one** person was reported as speaking the language, we should not pin too much theoretical significance to this statement" (Swadesh, 1946:317, cited from Cruttenden, 1986:158)]

- According to Chomsky, the grammatical means of formulating questions are also among the strongest **syntactic universals** of the languages of the world (Chomsky, 1957), although the use of **question intonation** to formulate questions must be evolutionary earlier.

- According to child psychologists, question asking appears among children in the form of question intonation in the babbling stage of their language development **before they turn one, much earlier than the use of any grammatical structures**.

All these facts strongly suggest that the origins of question intonation and the general human ability to ask questions must be amongst the oldest, most basic and most important elements of human communication and human language. Most importantly, despite its crucial importance, the emergence of the question phenomenon was not connected with the late ("syntactic") stages of language development. Questions could have emerged at the earliest, pre-syntax, "one signal", pitch-bases "musilanguage" (Brown, 2000)

stage of language development. The syntactic forms of questions that Chomsky is talking about must be a much later phenomenon.

The foregoing strongly suggests that although the ability to ask questions was created for communication and expressed by communicative signals, its emergence was **primarily an event of cognitive significance. This was a cognitive revolution, leading later to language and social revolution.**

Is there a genetic component for questioning behavior?

The absence of the ability to ask questions among apes, who successfully communicate with their human trainers using elements of language and simple sentences, who can comprehend complex sentences with embedded meanings, can manipulate their trainers using elements of the TOM (theory of mind), understand the idea of question, know the question words and can answer complex questions, but at the same time still do not use them in communication and do not ask questions can give us a possible clue about the genetic character of questioning.

A couple of suggestions made by scholars as to why apes do not (or can not) ask questions also suggests there is something in the inner organization of their intellectual abilities:

- David McNeill, discussing Washoe's problems in forming interrogative and negative questions, wrote: "The reason she did not [produce the simplest negatives and questions] must have something to do with the degree of internal organization they require" (McNeill, 1980:152).

- Premacks suggested that Sarah's failure to ask questions was "due to its inability to recognize deficiencies in its own knowledge." (Premack & Premack, 1983:29).

Both of these suggestions point to the fact that the mental processing in our closest living relatives is different from human mental processing, and circumstantially **point to the possibility of a genetic difference** between the apes' and humans' mental abilities.

I can not help myself repeating that if the apes had the ability to ask questions, they would be asking innumerable questions of their trainers, very much like the 2-3 year old children whom they so much resemble in their curiosity and syntactic comprehension.

Questions and mental retardation

Interaction between the question phenomenon, intelligence and language seems particularly interesting in the light of different cases of mental retardation. Neurologically, language and intelligence seem to be independent (at least partially; see Aitchison, 1996:39-43; 2003), because: (1) individuals with immense problems of language and speech production can have intact intelligence (some forms of Broca's aphasia and cases of Specific Language Impairment. Review: Pinker, 1994:48-50); or vice versa, (2) severely intellectually impaired individuals might possess grammatically fluent language and perfect speech (hydrocephalic children, schizophrenics, Alzheimer's patients, some autistic children and William syndrome patients. Review: Pinker, 1994:50-53). As for the question phenomenon, it seems to be connected with intelligence rather than language and speech. I suggest that intact intelligence would **always** contain the ability to ask questions, while, in at least some forms of mental retardation, fluent speakers may lack this basic cognitive ability.

A study of the genetic components of some forms of **autism** could give interesting results, as autistic children find it notoriously difficult to learn questioning behavior. At the same time, it seems that autistic children lack not only the questioning behavior but they lack curiosity as well. It would be particularly interesting to check whether there are any cases where curiosity is present but the ability to ask questions is not.

Questions and Genie: Do we learn to ask questions?

Another very important question about human questioning behavior is whether we **learn to ask questions** at some early stage of development, and if we do, **how do** we learn this. Most of our mental abilities, including genetically predetermined language acquisition, depend on learning, or “triggering” the genetic mechanisms, and it would be natural to expect that our ability to ask questions is learned at some stage as well.

Over one hundred cases of “Feral children” from recorded human history would be particularly interesting to investigate in this context, but no data is available on this matter in most of the cases. One of the rare possibilities to discover whether questioning behavior depends on learning at an early age would be to check the case of language development of a girl known as “Genie”.

Genie was found wandering together with her almost blind mother on November 4th 1970 in the Californian streets. It was found later that her father imprisoned her from early infancy and kept her from any exposure to

human language. She was about thirteen years old and could not speak. Later Genie acquired limited speech and could communicate with others. Her speech never reached the normal human capacity of syntactic complexity, and her sentences were no longer than 2-4 words. Derek Bickerton put Genie's language in the category of "protolanguage" together with the language of children under two, ape language and pidgin languages.

Most importantly for our discussion, despite the intensive training received from her caregivers, and much to their frustration, Genie failed to learn to ask questions: "She had great difficulty in formulating questions – when she wanted to know the name of something, she gestured or pointed at it but did not learn to ask its name" (Wills, 1993:288). As tests made it clear that Genie had a normal intelligence, her failure to learn how to ask questions can only be explained by the fact that **she was not exposed to questions and human language behavior in the critical period.**

Answering questions, asking questions: Apes and children.

Another important sphere related to the question phenomenon is the comparative study of apes' and children's cognitive and linguistic abilities. There are principal differences on this matter among different scholars. One group of scholars (led by the experiments conducted by Sue Savage-Rumbaugh and associates) claims the mental abilities of apes are comparable to the mental abilities of a 2 – 2.5 years old human child. Another group of scholars dismisses such claims.

Comparing apes' and children's cognitive abilities, scholars mostly use tests based on **understanding** questions and orders and **replying** (and acting) on them appropriately. As Savage-Rumbaugh and her associates' experiments suggest, bonobo Kanzi can understand human questions and requests roughly as well as a human child aged two-and-a-half years old. Can we conclude that Kanzi's intellectual development is comparable to a child aged two-and-a-half years old? Despite the fact that the achievements of Kanzi and Panbanisha in the comprehension of human language are very impressive, I think it is a bit controversial to make a judgment about children's and apes' mental abilities on the basis of understanding and answering questions and requests **only**. Two- and three-year-old children could give the same kind of replies to questions and requests as enculturated apes, but we should not forget, that children ask an array of questions at that age, and even before that age, whereas even the smartest of the bonobos do not seem to be able to learn how to ask questions. I want to stress, that the strength of human intelligence seems to be in the uniting of individual brains

into the “mental web” of our shared knowledge, and the ability to ask questions seems to be the crucial element of this unique mental cooperation.

So, unlike the apes, children from an early age possess the human ability to formulate and ask questions to enlarge their knowledge by referring to the cognition of other members of society. This crucial distinction should not be forgotten when comparing ape and child mental abilities. According to the existing literature, children start using correctly pronounced question intonation and asking their first simple questions at the babbling period of their development (Ferguson, 1977; Crystal, 1987:235, 243, 248; Moskowitz, 1991:147). Despite my deep appreciation of the linguistic achievements of our closest relatives, unless it is demonstrated that apes can learn to ask questions, we should conclude that **even the mental abilities of a one-year-old child has a unique cognitive element that is beyond the mental ability of the most advanced of our closest relatives.**

I suggest designing a special set of experiments to encourage apes to ask questions, and I cordially wish them success in this endeavor. Kanzi and Panbanisha proved many times that their mental abilities are beyond our expectations, and it is possible that they have the ability to ask their human friends some simple questions (like “Where banana?”) as well. I want to repeat again that **asking questions is not a matter of constructing syntactic structures (questions do not need any syntactic structures), but it is a matter of fundamental cognitive abilities.**

Questions and protolanguage:

A comment to Bickerton

Before we discuss the means that help infants learn the art of asking questions, let us very briefly discuss the notion of “protolanguage”, suggested in the influential works of Derek Bickerton (Bickerton, 1981, 1990, 2000, 2003). The idea of protolanguage rightfully became very popular, although discussions about what is the nature of protolanguage still continue (see, for example, Mithen, 2005:3).

Bickerton suggested that for a long period of time during the hominid evolution our human ancestors were using a very simple surrogate of contemporary language, where the words were present, but very little grammar or none was involved. In appreciation of this simple and very useful suggestion I agree with the many scholars who view the notion of protolanguage, as one of the central elements of the evolutionary development of human language. Here I want to concentrate on one specific problem:

According to Bickerton, protolanguage is present among four different categories: (1) trained apes, (2) children under two, (3) Genie and other “feral children” (Bickerton uses the term “wolf children”), and (4) users of “pidgin” languages.

In my opinion these four categories of protolanguage users should be divided into two very different groups, (1) those who **do not use questions** in their speech and (2) those who **use questions**. Although syntactically their communicative abilities might look very much alike (simple two-word sentences with no or very little grammar), the difference between these two groups on a cognitive level is enormous. Those who cannot ask questions, are locked inside their own mental world and cannot develop further. On the other side, those who can ask questions have the ability to develop mentally and to become a part of the great information web of humanity. To say this more simply, the members of the second group (who can ask questions) are in the human cognitive family, whereas the members of the first group are not. So, according to this criterion, the four groups nominated by Bickerton as protolanguage users must be divided into two very different groups:

First group: Trained apes and “feral children”, who do not ask questions, and

Second group: Children under two and pidgin users – who can ask questions.

I suggest that the difference between these two groups is too important on a cognitive level to remain in the same category of language users. I suggest recognizing the second group only (those who **can** ask questions) as human protolanguage users. At least, I suggest distinguishing two very different stages of protolanguage development – the first (pre-human) stage, without the ability to ask questions, and the second (human) stage, coupled with the ability to ask questions.

It is very important to remember that the members of the former group (signing apes, and Genie and feral-children) have **different reasons** to be in the “non-questioning” category. Signing apes are in this category because, despite intensive training and learning, they do not seem to possess the necessary **innate** basis that would allow them to learn to ask questions (at least it seems so at this moment). Genie and feral-children, however, have all the necessary innate basis to learn interrogatives, but due to **environmental** factors they missed out on the sensitive period for learning questioning.

Therefore, **questioning appears to be innately guided behavior, in which inbuilt guidelines help the learner.**

How do we learn to ask questions?

Learning to ask questions, or “waking up” our genes that provide us with the cognitive ability to ask questions, must happen in early infancy, no question about that. Children use correctly pronounced question intonation before they can pronounce their first words. Another self-evident suggestion would be that questions are unintentionally “taught” by parents to their children. So, how do we teach our children to ask questions?

I hope most readers remember talking to their own (or even other’s) very young children. Somehow, instinctively, we all start **asking questions**. Of course, we do not ask them questions because we want to hear their responses – they are too young to respond, and the questions themselves, with often silly and self-evident answers and plenty of made-up cuddly-words, are not the ones that we would ask our colleagues or adult family members if we are interested in their opinion. **These questions are specially designed to get an emotional response from the infants.**

Most interestingly, **our infants with their responses actually teach us, parents, the correct and productive way of interaction** with them. If you speak to an infant in a “serious” tone for a few minutes, and then start speaking with an emotionally loaded tone with very significant pitch modulations and asking questions, the response of the infant will immediately change. It will become more active, and the infant will immediately look happier. I think this way, through this kind of feedback, infants “encourage” and “teach” their parents to speak to them with exaggerated pitch modulations and ask plenty of questions. Why do infants enjoy and better respond to an adult’s speech when it is full of pitch modulations? I guess the answer to this question is **in our pitch-based evolutionary past and the brilliant musical hearing of human infants** (as we may remember, most infants have perfect pitch, which is extremely rare among adults).

I have not mentioned yet, but most readers would guess that when I am talking about adult’s speech to infants, containing exaggerated pitch modulations, I am talking about the well-known phenomenon known sometimes as “baby talk”, or “infant-directed speech”, or “motherese”.

Richard Byrne proposed that baby talk is an “unintentional way for teaching grammar” (Byrne, 1995:122), and that it is “an ideal vehicle for helping the child... to learn phonology and grammar” (ibid, 37). I find this idea compelling, although it seems to me that the primary “teaching” task (apart from the crucial emotional interaction between the infant and parent, see Dissanayake, 2000) of baby talk is to teach infants two-way question-and-answer-based dialogical communication and, most importantly, to teach them to ask questions (or: to activate their genetic ability to ask questions). I do not need to argue that asking questions with exaggerated question intonation is arguably the biggest part of baby talk. Infants’ particular interest in pitch modulations has been tested and confirmed (Fernald et al., 1989).

Question of chronology: When was the ability to ask questions born?

If we try to link paleoanthropological data and this revolutionary change in hominid cognition and language, we must take into account that question intonation, the remnant of this cognitive and linguistic revolution, as well as the syntactic means of forming interrogatives, are one of the most widely distributed language universals all over the world. This universality strongly suggests that: (1) question phenomenon occurred at one place and time, and (2) this happened before the wide dispersal of human ancestors from Africa (about 2 million years ago). Taking into account these factors, any of the human (or hominid) ancestors, not younger than 2 million year old, could have made this critical step in our cognitive development. If not earlier, this must have happened at least at the stage of archaic *Homo sapiens* (often known as *Homo erectus*). Barbara King wrote: “At present, *Homo erectus* seems to represent a kind of turning point for information donation among hominids” (King, 1994:109)

Therefore, I suggest that the time range for the emergence of the question phenomenon must be at least 2 million years ago. Thus, the Australopithecines, with their asymmetric brains and voluntary vocalizations, did not ask questions yet.

Although archaic *Homo sapiens* (or *Homo erectus*) seems to be the best nominee for the first inventor of the question and for the role of the first human, we should also consider the candidature of *Homo habilis*, the first human stone toolmaker (about 2.5 mya). I think there is a good chance that *Homo habilis* had already possessed the ability to ask questions. As for

archaic *Homo sapiens* (*Homo erectus*), it must have definitely had this cognitive-linguistic ability.

According to this suggestion, archaic *Homo sapiens* (*Homo erectus*) were the first humans to cross the cognitive threshold, leaving behind the animal kingdom. Consequently, there is no "difference of kind" between the cognitive and linguistic abilities of archaic *Homo sapiens* (*Homo erectus*) and *Homo sapiens sapiens* (although there must have been a considerable difference in mastering *speech* – about speech see the next section of the book). This proposal complies with the idea about the equation of the taxons *Homo erectus* and *Homo sapiens* as expressed by a large group of scholars, who have mostly supported the multiregional evolutionary model (Weidenreich, 1943:246; Alexeev, 1974; Jelinek, 1978, 1981; Wolpoff et al. 1984:465-467; Wolpoff, 1989, 1999:395-97; Frayer et al. 1993).

Let's Talk: The Origin of Speech

The emergence of articulated speech is widely considered to be the latest major acquisition in human evolution. Articulated speech changed the form of communication and increased the speed and efficiency of communication (Lieberman, 1984, 1991). The appearance of articulated speech must have affected the structure of the supralaryngeal tract (Lieberman, 1984, 1991, 1992), the basicranium (Laitman, 1983, 1985), the oral cavity (Duchin, 1990) and facial details (Krantz, 1980, 1994). At the same time, despite all these important changes, human self-developing cognition, mental cooperation and dialogic language emerged **long before** the appearance of articulated speech.

Therefore, according to the suggested model, the importance of articulated speech in the history of our species seems a little exaggerated. I share the opinion that "The most basic aspect is the neurological capacity for symbolic thought, the ability to form mental images of things... It is only of secondary importance just how these thoughts are communicated" (Krantz, 1973:26).

Reviewing the vast literature about the origin of human language and speech, one may be puzzled by the diversity of points of view on this problem. All the fossil hominids, including *Homo habilis* and even Australopithecines (Holloway, 1983; Tobias, 1971, 1983; Falk, 1980), up to *Homo sapiens* in the Upper Paleolithic (Washburn & Lancaster, 1971; Swadesh, 1971; Klein, 1989a), are among the possible candidates for our "first talking" ancestors. The most accepted is the assumption that language and speech appeared in hominid history during the existence of *Homo erectus*.

Even a brief survey of works connected with the problem of the origin of language and speech shows a diversity of methods. Scholars use the fact of the growth of brain size as the main indicator of the emergence of language and speech among the early hominids (see: Falk, 1975; Jerison, 1973), the appearance of hemispheric asymmetry and the Broca and Wernicke areas in the brain (Falk, 1975; Holloway & De La Coste-Laneymodie, 1982; Tobias, 1983), comparative anatomy of the supralaryngeal tract (Lieberman, 1984, 1991), basicranium (Laitman, 1983, 1985), anatomy of the oral cavity (Duchin, 1990), preparation and standardisation of stone tools (Holloway, 1969), and even the development of art (Davidson & Noble, 1989; Noble & Davidson, 1996). Using the same data, other scholars reach different conclusions. Some of them do not consider brain size as important as the inner organization of the brain (as Holloway put it, the size of a purse can not

accurately inform you about the amount of money stored in the purse. Holloway, 1983), some write about the difficulties of identification of the specific Broca and Wernicke areas and their functions on the fossil endocasts, and some write about the presence of these brain areas in the monkeys' brains (Deacon, 1992:117). The methods and results of the reconstruction of the supralaryngeal tract have been challenged (Falk, 1975; Le May, 1975; Arensburg et al. 1989; Frayer, 1992); causal links between the preparation and standardization of stone tools and the development of language have also been criticized (Wynn, 1979, 1989; Graves, 1994).

The suggested scenario of the emergence of articulated speech is based on human musical activities. I suppose that a study of some basic elements of human musicality (particularly singing) could give us important insights into the process of the emergence of the later communication medium - speech.

What can vocal polyphony tell us about the origins of speech?

On the 16th of May 1986 I spent most of the day in an exciting multi-hour conversation with the physical anthropologist Valeri Alexeev. Despite my over-intensive reading sessions of physical anthropological publications of the last couple of years, I was a total amateur in physical anthropology and the opinion of a professional physical anthropologist was crucial for me. I was unbelievably lucky to be there. Valeri Pavlovich Alexeev was not only a professional physical anthropologist. His wide first-hand knowledge of different materials from different regions of the world, a staggering number of published works (over 600) in many languages, a deep knowledge of several European languages and personal and professional contacts with the leading Western anthropologists made him one of the world's leading scholars in his field. Although he was not yet elected as the Director of the Institute of Archaeology of the Academy of Sciences of the Soviet Union, he was head of the Department of Population Genetics and already unbelievably busy. I very much appreciated his time and his interest in the possible links between music and physical anthropology. [I am spelling his name as "Alexeev", as do Cavalli-Sforza and Alexeev himself, although Milford Wolpoff spells his name as "Alexeyev" and Wikipedia uses "Alekseyev"].

On that day we were discussing the obvious coincidence of the distribution of vocal polyphony with the data of physical anthropology among the different populations of the world. Valeri Alexeev was very excited, as the distribution of vocal polyphony among European and African singing traditions is a further proof of the closer links between the European

and African populations. It was during our long conversation, interspersed with minor breaks for food consumption, that a strange idea, that I guess was somewhere inside my brain for some time, found its way out.

“Valeri Pavlovich”, I said to him, “I think there is a historical reason why there is such a difference in the distribution of choral polyphony between the populations of East Asia on one hand and Europe and Africa on the other hand. I think the East Asian populations shifted to speech much earlier than the European and African populations.”

My words sounded quite silly to myself, I must confess. I have never heard of anyone suggesting that different human populations started talking at different times. Besides, I could instantly feel the controversial political implications of such a declaration. Valeri Alexeev’s reaction was quite extraordinary for me. He looked at me, then without saying a word to me got up and for a few minutes walked to and fro around the room, sometimes talking to himself. I still remember one of the half-phrases that caught my ear: “This can explain why the Chinese materials are so...” During these few minutes he stopped only once, to prepare his pipe, and continued walking smoking his pipe.

Later that year Valeri Alexeev suggested I should submit an article for the most prestigious anthropological refereed journal in the USSR *Soviet Ethnography*. The article “Folk polyphony, ethno-genesis and race-genesis” was published after the usual long process of peer review and making all the necessary changes in the beginning of 1988. The article contained plenty of parallels between the distribution of vocal polyphony and the distribution of different anthropological types in different parts of the world. The article concluded with the suggestion that different populations shifted to articulated speech at different times. Alexeev liked the manuscript, but when the article was being prepared for publication, he advised me not to include the idea of an earlier shift to articulated speech in East Asia in this article. “The idea is not yet ready for publication” was his comment. I agreed, and that’s how the article was published. But we both forgot about the brief English summary that was published together with the article. The summary was prepared and submitted together with the original text, and it had a few words about the shift to articulated speech among different populations in different epochs. So that’s how it was published – without a word on possible time differences in the origins of articulated speech in different populations in the Russian text, and with the idea of a shift to articulated speech in different epochs in different populations in the English summary. I noticed this only when the article was published.

The logic of my suggestion that East Asian and Australian aboriginal populations shifted to articulated speech earlier than European and African populations is not too complicated:

- According to the suggested model, initial forms of polyphonic singing (proto-polyphony) were distributed in **all** ancient populations of archaic *Homo sapiens* (*Homo erectus*). This ancient tradition of polyphony singing, with the new human cognition and the ability to ask questions, was taken along on the long journey to different regions of the world from Africa.

- Archaic *Homo sapiens* had all the necessary cognitive abilities that are present in *Homo sapiens*: dialogical communication, information-sharing based on the new revolutionary ability to ask questions, mental cooperation, and a self-developing brain. The only feature that differentiated archaic *Homo sapiens* from anatomically modern *Homo sapiens* was articulated speech. At the time of the dispersal of humans from Africa language was not based on an articulated medium.

- Most importantly for us, after the advent of articulated speech, musical (pitch) language lost its initial survival value, was marginalized and started disappearing. This was the beginning of the end of the Great Musical Epoch in human evolutionary history. Articulated speech became the main communication medium in human societies.

- Early human musical abilities started to decline. The ancient tradition of choral singing started disappearing century by century and millennia by millennia. Musical activity, formerly an important part of social activity, also started to decline and became a field for professional activity.

- As a result of this decline, in some regions of the world the tradition of vocal polyphony is almost completely lost. In others the traditions are full of life and social importance. Even in the recorded sources of the last few centuries it is obvious that the area of distribution of vocal polyphony is gradually shrinking on our planet. Regions without a tradition of polyphonic singing have ancient traditions of musical professionalism. Most of the regions with active polyphonic traditions have very little professional musical activity or none.

- The tradition of choral polyphonic singing has been lost among East Asian and Australian Aboriginal populations. Polyphony is still strongly present in European, Polynesian, Melanesian, and particularly – sub-Saharan African - populations.

- The explanation of this difference is the shift to articulated speech among different populations in different epochs. Regions where vocal polyphony is absent (lost) could have shifted to articulated speech earlier. Regions where the tradition of vocal polyphony is still alive and active could have shifted to articulated speech later. At least, there is a good theoretical background for this suggestion, as articulated speech is generally believed to be the latest big change of human evolution, and if human groups came to different regions of the world without fully developed speech, it would be natural for them to shift to articulation at different times.

- Therefore, I suggest that the ancestors of contemporary populations with monophonic singing traditions (East Asian, most of Native American and Australian Aboriginal) had shifted to articulated speech **earlier** than the ancestors of contemporary populations with polyphonic singing traditions (Europeans, and particularly, sub-Saharan African populations).

As I have mentioned earlier, the idea of the initial wider distribution of archaic forms of polyphony and their subsequent loss was suggested by the Russian musicologist Miron Kharlap (Kharlap, 1972), although Kharlap did not consider this process in the context of the evolution of articulated speech. According to Kharlap, most of the activities of prehistoric humans were based on a group activity, therefore group music-making (choral singing and dancing) must have been the earliest model of human musical activity. American primatologist Bruce Richman proposed that articulated speech could emerge among humans from choral singing (Richman, 1993:721-722; see also Staal, 1994). According to this approach human choral singing should be considered as the legacy of a pre-articulated communication epoch. I agree with these suggestions and propose that after the emergence of articulated speech choral singing lost its direct survival value and is in a constant state of decline. Documented evidence of the loss of traditions of part-singing from different regions of our planet supports this scenario.

If we combine this scenario with the fact of the uneven distribution of choral singing on different continents, we will inevitably end up with the conclusion of an asynchronous shift to articulated speech in different human populations. The absence of choral polyphonic singing in the musical cultures of East Asian, American and Australian indigenous populations could be explained by the earlier loss of the adaptive value by choral singing among the ancestors of these populations.

Later I found that the idea of the non-synchronous emergence of articulated speech in different ancestral human populations was not new.

Gordon Hewes had a special section “Polygenesis versus Monogenesis” in his 1977 review of different theories of language evolution where he discussed this idea as well. Here is most of this section:

“Linguists as divergent in their views as Alfredo Trombetti and Morris Swadesh have inclined toward a single ancestor for all spoken language systems, and some others are disposed to accept such a view . . . Few linguists are prepared to accept the evidence in favor of monogenesis; if language, on the other hand, had multiple origins, they would hardly have been simultaneous, and polygenic origin models therefore present the possibility that some human groups might have existed without language (or at least without spoken language) for a longer time than others. Such theories are hardly in keeping with egalitarian principles. South African click languages are a kind of test case for these conflicting views. Edmund Critchley (1967) suggested that language may have been invented and lost more than once in the long course of human evolution. Monogenism, in accordance with Occam’s razor, possesses the virtue of elegance. Current interest in language universals need not commit one to either side of this dispute, since the observable similarities could have arisen in a common, ancestral language which could have been generated independently on the basis of pan-human psycholinguistic unity of some sort” (Hewes, 1977:49).

Language, Speech and Homo Sapiens

According to my model, **language origins are monogenetic, and human language and cognition was already present in archaic *Homo sapiens* (*Homo erectus*) that left Africa about two million years ago.** In this regard there is no difference in basic cognitive abilities between the archaic *Homo sapiens* (*Homo erectus*) and anatomically modern *Homo sapiens*. The idea of the equation of archaic *Homo sapiens* (*Homo erectus*) and *Homo sapiens* is very well known in paleoanthropology. Authors from very different generations suggest that this division of our species into *erectus* and *sapiens* taxons does not reflect our historical reality (Weidenreich, 1943; Jelinek, 1978; Wolpoff, 1999:396-7). Wolpoff divides *Homo sapiens* by criteria of time and geography:

- “**Early *H. sapiens*:** the earliest specimens, from the later Pliocene and early Pleistocene (all of these were traditionally *H. erectus*)

- **Middle Pleistocene *H. sapiens*:** the middle Pleistocene specimens, only the earlier of which were traditionally *H. erectus* according to some authors although others would place virtually the entire sample in this taxon

- **Late Pleistocene *H. sapiens*:** the late Pleistocene specimens, including Neanderthals *although this term is not synonymous with Neanderthal*

- **Recent *H. sapiens*:** The post-Pleistocene remains

- **Living *H. sapiens*:** living and very recently (for instance historic) deceased humans” (Wolpoff, 1999:397).

The distribution of vocal monophony and polyphony all over the world suggests the following succession in the emergence of articulated speech:

Monophonic populations (earlier shift to articulated speech)

- (1) East Asian (and most of the Native American) populations;
- (2) Australian Aboriginal populations;

Polyphonic populations (later shift to articulated speech)

- (3) European populations;
- (4) Sub-Saharan African populations.

One more important detail that we have to mention is the **clear difference within the European population (according to the distribution of choral polyphonic singing)**. It is obvious from the first part of this book that polyphony is present **only in part** of the European populations. More specifically;

- (1) European (sometimes known as Caucasian, or Caucasoid) populations of the mountain regions of Central and South Europe, some isolated regions of East Europe, and the population of the northern fringes of Europe are among the cultures where the tradition of vocal polyphony is actively present (or was present according to historical sources);

- (2) European (Caucasoid) populations of North Africa, Middle East, Central Asia and North India constitute the group of Caucasoids where the tradition of polyphony is not present.

This division of the Caucasoid population is not new, and we will discuss this together with other related topics in the next section, dedicated to the correlation of the suggested model of the asynchronous shift to articulated speech in different human populations with the paleoanthropological data.

Correlation with the paleoanthropological data

The model of the asynchronous shift to articulated speech in different human populations raises a whole set of questions. In the following few sections we will discuss not only the correlation of paleoanthropological data with this model, but the correlation of the data of speech pathologies (stuttering), reading pathologies (dyslexia), and the acquisition of a phonological system in different human populations. In all these spheres the new model of the asynchronous shift to articulated speech in different human populations makes strong predictions. Later we will also discuss the moral and political implications of the suggested model.

Articulated speech is considered to be the last major acquisition in human history. Krantz suggested that the appearance of articulated speech affected the morphology of facial features (Krantz, 1980, 1994). So if without the spoken language our ancestors looked a bit different, with the appearance of spoken language their facial features were transformed according to the needs of articulated speech. Therefore, the emergence of **morphological continuity of facial features among fossil forms and the contemporary populations of different regions could be considered as evidence for the emergence of articulated speech among the ancestral fossil forms**. According to our model morphological continuity must be different in different regions of the world, and the continuity is expected to be deepest in the regions where the shift to articulated speech happened earlier. So, I would expect morphological continuity to be deepest in East Asia, followed by Australia, then Europe, and finally sub-Saharan Africa. Let us now very briefly discuss the paleoanthropological data from different regions from this point of view.

East Asia. According to the suggested model, the earliest shift to articulated speech occurred in East Asia, so the morphological continuity there is expected to be the earliest and strongest. In paleoanthropology East Asia is known to be the **best example of regional continuity** (Wolpoff et al. 1984; Wolpoff, 1989, 1999). Well-known Beijing hominids from the Zhoukoudian cave (time range 700-230 kya [kya means “thousand years

ago”]), Hexian cranium (250 kya) and Yunxian cranium (350 kya), are of particular interest. According to D. Etler, one of the latter specimens "...combines a surprising mix of features. The forehead and brow ridges recall archaic *Homo sapiens* and the areas around the nose and cheeks seem to suggest modern humans, especially those from China" (quoted in: Jurmain & Nelson, 1994:422). These progressive features and morphological continuity suggest that the carrier of those features was capable of articulated speech, similar to the Beijing specimen of the final stage of the Zhoukoudian cave (300-230 kya). According to the reconstructions of P. Lieberman (1984, 1991) and J. Laitman (1983, 1985) the time range - 350-230 kya - seems probable for the emergence of the first forms of articulated speech in East Asia.

Australia. Arguably the second best case of regional continuity is Australia. It is accepted by most scholars that the Australian Aboriginal population is connected with the Ngandong (Solo) specimen from Java (Macintosh & Larnach, 1976; Wolpoff, 1999:735). Morphological continuity from Java to Australia is generally widely accepted. This continuity correlates with our suggestion of the very early shift to articulated speech of the ancestors of Native Australians. Ngandong dates back to approximately 200 kya (Habgood, 1991).

Europe. Unlike monophonic East Asians and Australians, and polyphonic sub-Saharan Africans, Europeans (Caucasoids) are the only major population which has **both** monophonic and polyphonic singing traditions. (1) North African and south-west Asian Caucasoid populations are the carriers of monophonic singing traditions, while (2) the mountainous and north-west European Caucasoid populations are the carriers of polyphonic singing traditions. A major part of Central, South, and East European folk musical traditions represents the synthesis of monophonic and polyphonic traditions. Proceeding from this fact we suggest that a shift to articulated speech did not occur simultaneously in all Caucasoid populations. The fact of the absence of choral singing traditions among the ancestors of the first group (contemporary North African and West Asian Caucasoids) must have shifted to articulated speech earlier than the ancestors of the carriers of polyphonic singing traditions (the populations of the mountains and North Europe).

Wide genetic differences between the different Caucasoid populations are quite well known. According to genetic data, "all known genetic polymorphism have been detected in Europeans" (Cavalli-Sforza, 1994:155).

If we look at the paleoanthropological data, the existence of the two different types of Neanderthals – Middle Eastern “progressive” Neanderthal and Central European “classic” Neanderthal - supports this suggestion (Vandermeersch, 1989). The Middle Eastern Neanderthal has been even suggested (although controversially) as the earliest anatomically modern form of *Homo sapiens* (survey see in Alexeev, 1985; Cavalli-Sforza et al., 1994).

The European classic Neanderthal represents another, much more complicated, case. Isolated from the rest of the world in Western Europe behind extensive glaciers for about 200 000 years, they maintained archaic morphological traits for a much longer time - until 40-32 kya. Discussions on the classic Neanderthal's capacity for articulated speech is one of the best-known issues of paleoanthropology. The big brains and cultural achievements of the classic Neanderthals have persuaded some scholars to claim that they were capable of articulated speech (Holloway, 1983; Le May, 1975; Falk, 1975; Duchin, 1990; Arensburg et al. 1989; Hayden, 1993). On the other hand, some specialists who have analyzed the anatomical possibilities of articulation argue that the classic Neanderthals were still partly constrained in their speech (Lieberman & Crelin, 1971; Lieberman, 1984, 1991; Laitman, 1985). Lieberman suggested that a lack of full-range articulation was the reason for their removal in Europe by the anatomically modern *Homo sapiens* populations (Lieberman, 1992). The idea of the extinction of the classic Neanderthal is prevalent among paleoanthropologists (see Zubrov, 1989). On the other hand, another group of scholars suggests that classic Neanderthals did not become extinct but were (at least partially) transformed into the upper Paleolithic population of Europe (Hrdlicka, 1927; Weidenreich, 1943; Brace, 1964, 1991, 1995; Alexeev, 1974; Wolpoff, 1989, 1999; Frayer, 1992; Karavanic, 1995). According to these works, populations in the northwest fringe of Europe and some mountain regions (e.g. the Balkan or Caucasian mountains) show morphological links with the European classic Neanderthal (survey in: Brace, 1991).

If we bring the data of vocal polyphony among contemporary peoples into the discussion of the fate of the classic Neanderthals, we will notice that the supposed regions of distribution of descendants of the classic Neanderthal coincides with the regions of contemporary distribution of choral polyphonic singing in Europe. Thus, according to our model:

- Spoken language could have emerged among Middle Eastern so called “progressive Neanderthals” quite early (possibly about 120-95 kya, according to the paleoanthropological materials);

- According to the musical data, contemporary Afro-Asian Caucasoid populations, carriers of monophonic singing traditions, might be connected to the more morphologically progressive Middle Eastern Neanderthals;

- The West European classic Neanderthal had human cognitive and linguistic capacities, although they did not possess the full range of articulated sounds, as the musical (pitch) element was still a component of major importance in their language. Their shift to articulated speech (possibly in conjunction with their partial replacement) was not completed until 40-32 kya, soon after their long isolation was over. The shift to articulated speech (which was probably introduced by the newly arrived AMH populations) could have been the decisive factor behind the fast morphological and cultural change of classic Neanderthals.

- According to the musical data, contemporary North-West European and central European mountain Caucasoid populations, the carriers of polyphonic singing traditions, might be (at least partly) connected to the European Classic Neanderthals.

Sub-Saharan Africa. The widest distribution of the tradition of choral polyphony in sub-Saharan Africa strongly suggests that the shift to articulated speech must have occurred among the ancestors of sub-Saharan Africans the latest, possibly even later than among west European “Classic Neanderthals”. This suggestion also finds some paleoanthropological support. Despite the fact that Africa provides the richest paleoanthropological material for the human origins, the regional continuity of the local Negroid type in sub-Saharan Africa is not as clear as that of Europe, let alone China or Australia (see Wolpoff, 1999; Krantz, 1994:148). According to the review of Wolpoff, only West Africa is left to be considered “as a place for Negro origins. There, however, the only solid supporting evidence is the 11 kyr Iwo Eleru skullcap from Nigeria and the 6.4 kyr skeleton from Asselar, then the border of the Sahara in eastern Mali. It is little wonder that the Negro origin, or for that matter any other recent substantive evolutionary problem on the continent, could be regarded as a mystery” (Wolpoff, 1999:748). Valeri Alexeev, summarizing the available evidence of the formation of the features of the sub-Saharan African population, also wrote that paleoanthropological data does not go much further than the Mesolithic period (Alexeev, 1974:149).

Therefore, summarizing the correlation between the paleoanthropological materials on regional continuity in different regions of the world and our

suggestion of the asynchronous shift to articulated speech, we can state that paleoanthropological materials at least do not contradict our model.

Choral polyphony and the theories of human origins

I have not mentioned so far the two dominating conflicting theories of human origins: (1) the Recent African Origin Model, and (2) the Multiregional Evolution Model.

(1) According to the “recent African model” contemporary human populations are not connected to the archaic local forms of *Homo erectus* found in different regions of the world. Instead, this model suggests that our direct ancestors evolved in Africa about 100 000-200 000 years ago. From Africa they spread all over the world, replacing all the archaic *Homo erectus* populations. Despite a strong molecular argument for the “recent African origins” theory (Cann et al. 1987; Vigilant et al. 1991; Stoneking, 1993, 1993a) some scholars are still skeptical about the presence of modern behavior among the anatomically modern humans of South Africa (Wynn, 1993:592; Klein, 1989:543). Methods of molecular analyses of the proponents of the “recent African theory” were also criticized (Templeton, 1993, 1994).

(2) According to the “Multiregional Evolution Theory” most contemporary human populations are connected to the local populations of archaic *Homo sapiens* (often known as *Homo erectus*). According to the proponents of the “multiregional model” the common ancestor of all humans came out of Africa about two million years ago, and after reaching several regions of the world (East Asia, Southeast Asia, West Asia, Australia, and Europe) they continued their evolution in different ecological conditions (maintaining sporadic contact with each other).

Currently available data on choral polyphony in different human societies strongly support the “multiregional model”. That’s why all our above-mentioned discussions were based on the publications of the proponents of the “multiregional model”, and particularly the works of Milford Wolpoff.

Here I must note that the “recent African model” also leaves room for our model, because at least some of the supporters of this model claim that spoken language was not taken along by the first anatomically modern humans that left Africa about 100 kya. For example, D. Klark, favoring a late Middle Pleistocene African origin for modern humans, still supports the idea of the late (50-40 kya) development of syntactic language (see Stringer,

1992:602). But it is obvious that the “multiregional model” has many more points of contact with the data of distribution of vocal polyphony in human cultures³.

Tone languages and the asynchronous model of speech origin

We have already discussed the importance of tone languages in the evolution of human languages as the descendant of the primordial pitch language. In this section I am going to discuss tone languages from the standpoint of the suggested non-synchronous model of the origin of articulated speech.

Tone languages are mostly distributed in East Asia and sub-Saharan Africa. According to our model, these two regions are the two chronological poles of the transformation of primordial pitch language into articulated speech: East Asia - the earliest, and sub-Saharan Africa - the latest. This “polarity” provides a good chance that the tone languages of these two regions might have some important differences. As a consequence of the much longer use of pitch modulations as a leading medium of communication, the development of languages in Africa must have generated more tonal functions than in East Asia where the earlier shift to articulated communication must have resulted in a more limited functional use of tones. The new language categories and functions (mostly syntactic structures) must have been realized in East Asia by means of articulation (Jordania, 1994a).

The following is a brief outline of the tone languages of East Asia and Africa from the non-synchronous model standpoint.

One of the widely known distinctions between the languages of East Asia and sub-Saharan Africa is a function that tone plays in these languages. In

³ Despite the fact that the model suggested in this book fully supports “Multiregional Model”, I want to note that I find the term “Multiregional Evolution Hypotheses” confusing. At the very first sight it gives to an uninitiated reader an impression that the proponents of this theory suggest that different human populations evolved into *Homo sapiens* several times in different regions of the world. This is particularly obvious, when a multiregional hypothesis is confronted with the competitive hypothesis, titled as “Recent Single-Origin Hypothesis”. The reality is that proponents of the Multiregional hypotheses also believe that *Homo sapiens* had a single origin in Africa. The main difference between the “multiregional” and “recent single-origin” hypotheses is the huge time difference for the origin of *Homo sapiens*, and of course the suggestion of the recent hypothesis proponents of the total replacement of the earlier groups of humans. Interestingly, Milford Wolpoff agreed with my suggestion that the name “Multiregional Evolution hypotheses” may be giving a wrong impression, although he was reluctant to consider a name change of the hypotheses to avoid unnecessary confusion (Wolpoff’s personal letter from April 29th, 2007). Another term for the Multiregional Evolution hypothesis, “Network Theory”, used earlier by Weidenreich in his unpublished notes, is sometimes used by the proponents of Multiregional Evolution hypothesis, seems to be much more “politically neutral”.

East Asia tone plays a lexical function only, whereas in the sub-Saharan African languages tones have, apart from lexical functions, grammatical functions as well (Pike, 1948:5; Cruttenden, 1986:9; Crystal, 1987:172). "In Africa, there are over 2000 languages that use tone for marking grammatical relations usually achieved by word order or morphology in other languages, such as tense, aspect, relativization, and, in languages such as Maasai, agent-patient relations" (Maratsos, 1989:114).

Another characteristic difference between the tone languages of East Asia and sub-Saharan Africa is the type of tones. From this point we enter the world of musicology. According to the unanimous opinion of music theorists and historians, the succession of fixed pitches was evolutionary preceded by non-fixed or gliding pitches (See Alexeev, E., 1976). Consequently, gliding tones are supposed to be designated as an earlier stage in the development of musical thinking, followed by the system of fixed tones. According to this it is reasonable to propose that the East Asian tone languages must have a wider use of gliding tones than the African tone languages as the earlier shift to articulated speech in East Asia could have resulted in the preservation of an earlier type of pitch communication (based on gliding pitches) in East Asian tone languages.

Here we again find an interesting coincidence. The East Asian and sub-Saharan African tone languages are markedly distinguished by the types of tones used in their languages: East Asian tone languages employ mostly gliding tones (in linguistics they are labeled "contour" tones), while sub-Saharan African tone languages use mostly fixed (or "registered") tones (Pike, 1948:5-8; Crystal, 1987:172).

We can draw a conclusion for this small section. The differences between the East Asian and sub-Saharan African tone languages contain two important ingredients:

- (1) The distribution of lexical tones are found only in the East Asian tone languages, and lexical and grammatical tones are found in those of the sub-Saharan African, pointing to the possibility of the longer use of a pitch-based language medium in sub-Saharan Africa; and

The distribution of evolutionarily earlier gliding (contour) tones in East Asian tone languages, and later fixed (registered) tones in those of sub-Saharan Africa could also be a result of the longer use of the pitch element in the development of sub-Saharan African languages.

Music, Speech and Stuttering

On 16th October 1989 I was in a lobby of a Moscow hotel trying to book accommodation for a few days. I do not know how it was during the Stalin period and in the 1960s, but during the late 1970s and the 1980s, as I remember, it was always a huge problem finding a place in any of the Moscow hotels. “No Vacancies” was a universal reply at many Moscow hotels (even if the hotel was half empty). Overpaying and bribing personnel at the counter was the usual way to get accommodation, but this method could not always guarantee you a place. There were plenty of stories and jokes about how people were getting accommodation in Moscow hotels. This time my position was very strong, as I had an official invitation from the Federal Clinic of Speech Pathology to attend the symposium “Treatment and Rehabilitation of Patients with Speech Disorders” in Moscow, and my name was on the list of guests.

“Which hospital do you work at?” asked sternly a woman at the counter without looking at me, busily filling a form.

“I do not work at a hospital. I work at Tbilisi State University,” I answered.

“At the University? What is your profession?”

“I am a musicologist.”

She stopped writing and looked at me.

“You are in the wrong place. We are accepting only speech pathologists who have arrived in Moscow for the symposium. We do not have space for any other guests.”

“I also was invited to this symposium”.

“What does music have to do with speech pathology?”

So I gave a brief summary of my proposed conference speech at the hotel counter. I am not sure whether my explanation of the possible links between the distribution of polyphony and stuttering prevalence impressed her, but she nodded when I mentioned the well-known fact the stutterers do not stutter when they sing. So the link between music and stuttering was established. She checked my name one more time against the list she was given from the conference organizers and I was in.

I was actually prepared for the question I was asked in the lobby of the Moscow hotel by my mother a few months before. “What does music have to do with speech pathology?” she asked me, obviously puzzled, when I told her

I was interested in speech pathology. I believe there is a deep connection between the evolution of human musical abilities, the origins of articulated speech and the prevalence of stuttering, and in this section I'll try to establish this connection.

Theoretically speaking it is clear that studies of different forms of speech pathology could give us valuable information about the development of articulated speech in human prehistory. Let me briefly explain.

The genetic nature of stuttering is well established (see Bloodstein, 1993:2; 1995:122-123). Another well known, although generally forgotten, idea about the onset of stuttering links this form of speech pathology with our evolutionary past. According to Robert West, human speech is a function overlaid on ancient systems for eating and respiration [and I would add “and singing”], and because speech is one of the latest abilities we acquired, it is one of the most readily lost or impaired (see Bloodstein, 1993:179). This idea is widely accepted by speech pathologists. At least, I can say that I have never seen anyone criticizing this idea.

Therefore, from an evolutionary point of view stuttering could be considered as a “speech counterpart” of the “Wagner ear phenomenon.” In the “Wagner ear phenomenon” normal (or even outstanding) musical abilities coexist with inferior pitch production. In stuttering normal (or even outstanding) intellectual and language abilities coexist with an absence of fluent and smooth speech. So, both phenomena are connected with the problems of **correct sound production** (and not cognitive ability). At the same time there is an important evolutionary difference between these two phenomena:

The replacement of pitch language by articulated speech in human prehistory must have resulted in the loss of the survival value of precise pitch control (in a few simple words – singing in tune). In a certain sense, we may say that a good musical ear is a relict of our past (see also Mithen, 2005:245, 260). This change must have resulted in a gradual **increase** in individuals with problems of precise pitch control (or individuals with “Wagner ear phenomenon”) since the advance of fully articulated speech as a language medium.

On the other hand, as fine articulation obtained a high survival value in human society, gaining primary importance in social life since the replacement of pitch language by articulated speech, it would be logical to anticipate the eventual *decrease* of the number of stutterers throughout human history. In a certain way, as Livingstone suggested, we “could still be in the process of adapting to this change [speech]” (Livingstone, 1973:29). In

this context it is interesting that speech pathologists note the tendency towards reduced numbers of stutterers in contemporary society (See the section “Is the incidence of stuttering declining?” in: Van Riper, 1971:51-52; See also Bloodstein, 1995:140-141). Wendell Johnson attributed this change to the influence of his diagnosogenic theory (see later), Charles Van Riper – to the impact of new methods of speech pathology, and some to the influence of S. Freud theory (Bloodstein, 1993:133). According to the general consensus of contemporary speech pathologists, the genetic factor has a major role in the onset of stuttering, and speech pathologists and existing methods cannot actually “cure” stutterers. The main aim of contemporary speech pathology is to help a person to adapt to the speech problem and to lessen the social impact of stuttering.

Speech, choral singing and stuttering

On the evening of 13th of December of 1986 I was sitting in the Moscow apartment of Valeri Alexeev discussing the possibility of the asynchronous shift to articulated speech of different human populations.

It was only a couple of days later after I found out about the presence of vocal polyphony among the Ainus, and we were discussing the possibility of an asynchronous shift of different human populations to articulated speech from both a musical and a physical anthropological point of view for eight long hours. It was during our conversation on that exciting evening, that an idea came to my mind.

“Valeri Pavlovich”, I told Valeri Alexeev, “What about stuttering? If some human populations shifted to speech earlier than others, they might have less stuttering individuals in the population”.

It was about three years after that memorable evening discussion in Valeri Alexeev’s apartment that I was checking into the Moscow hotel as a participant in the International Conference on Speech Pathology. During these three years I was extremely lucky that the leading Russian expert on speech pathology, the head of the Moscow Federal Centre of Speech Pathology, Viktor Shklovsky, became very interested in the possible links between choral singing and stuttering. He invited me to his clinic on July 14th and 21st, 1989, checked their hospital records and was impressed to find out that they actually did not have any natives of the Central Asian republics, despite the fact that at the central Moscow clinic, they had a great number of patients from every corner of the Soviet Union, including international patients. Then he and one of his leading researchers, Tatiana Vizel, discussed

the information that was apparently brought to their attention by one of their employees, a Russian speech pathologist who visited China some time ago. According to her information, there were no stutterers and no speech pathologists in China. This was all interesting and exciting, but a long and serious research program was needed to check all these anecdotal bits of information. It was important to check (1) whether there was a difference between different populations in the prevalence of stuttering, and (2) whether this difference was statistically significant. Shklovsky invited me to the International Conference on Speech Pathology in October and asked me to deliver a talk during the last session of the conference on the 19th October.

It was after my talk that some of the international guests, mostly speech pathologists from England and the USA, spoke to me and gave me the exciting information I could not get anywhere in Moscow or the Soviet Union. Let us not forget that the Soviet Union was effectively cut off from the western world during the Communist period, and even the widely known books of Charles van Riper or Oliver Bloodstein were inaccessible to Russian speech pathologists. As I know, the conference I attended was one of the first major occasions when Western speech pathologists met their Russian colleagues.

Before we discuss the available information on the stuttering prevalence in different human populations, let me explain the nature of the possible link between the stuttering prevalence and our model of the asynchronous model of speech origins. The actual logic behind my suggestion that some populations must have a smaller number of stuttering individuals than others is quite simple:

- Stuttering is the legacy of our evolutionary past. Humans stutter because articulated speech was the last major acquisition in human evolution. We stutter because the time span after our ancestors started speaking is relatively small in evolutionary terms. As a species, we are still in the process of mastering speech.

- The evolutionary pressure for fluent articulated speech on individuals in human society is obvious. Stuttering can cause social withdrawal, loneliness, and causes a minor reduction of the reproductive success of the stuttering population in comparison to the non-stuttering population. Viewed in evolutionary terms, this could be one of the reasons why stuttering is reducing with every century and millennia. So the historical dynamic is the **reduction** of the number of stuttering individuals.

- According to my model, different populations shifted to articulated

speech in different times. The time when this shift occurred might be quite different: about 300.000 years for East Asian populations, and about 40.000-32.000 years for European populations, and even less for sub-Saharan populations (I want to remind a reader that these timelines come from the paleoanthropological materials that we have already discussed in the section “correlation with the paleoanthropological data”).

- Such a vast difference in the time span spent after acquiring articulated speech (possibly ten-fold or even larger between East Asian and sub-Saharan African populations) must have resulted in different numbers of stuttering individuals between East Asian and sub-Saharan African populations. To put it simply, the number of stuttering individuals must be relatively higher among sub-Saharan African populations (and Europeans) than East Asian populations.

In the next section we will briefly review the existing literature on the prevalence of stuttering in different regions of the world.

Stuttering in different cultures: A shadow of the “milk-drinking syndrome” again?

As you would expect, most of the studies in stuttering were done in European countries and North America. There are quite detailed accounts of the incidence and prevalence of stuttering in most European countries. By the way, “incidence” and “prevalence” are two different, although linked, factors. Prevalence is the number of stutterers found in a population at any given time and is easier to estimate. Incidence is the number of people from a population who have ever stuttered in their lives. Speech pathologists agree that about 0.8% of the adult population of most European countries have fluency problems. Stuttering among children is much higher (about 5%), and as a rule, most children stop stuttering without any help as they grow older.

Regarding the distribution of stuttering in different parts of the world, contemporary specialists tend to agree on the universality of stuttering (review in Bloodstein, 1995:136-142). Speech pathologists generally agree that the European figure (around 0.8-1%) is the universal for all regions of the world. However, there are a few important studies and recent publications pointing to **interesting differences in the distribution of stuttering among the different populations**. Let me briefly discuss two different (and possibly best studied) populations: Native American and sub-Saharan African populations. Stuttering among Native American and African populations was

a popular theme of discussion among speech pathologists and this is reflected in a number of studies and publications on this subject.

Stuttering among Native Americans. The problem of stuttering among North American Indians was one of the central and hottest problems of speech pathology for a few decades of the 20th century.

James Hunt was arguably the first scholar to note almost 150 years ago that American Indians did not stutter (Hunt, 1967/1861). This fact was re-discovered in the well-documented studies by Wendell Johnson and his students in the middle of the 20th century (Johnson, 1944, 1959; Snidecor, 1947; Stewart, 1959). Johnson claimed that American Indians did not have stuttering individuals and even had no word for “stuttering” (Johnson, 1944). One of his students, a professional speech pathologist, who spent a few years in an Indian community, confirmed he had never met a fool-blooded Indian who stuttered (Snidecor, 1947).

What was the theoretical background behind this bold assertion? Johnson was the author of a revolutionary approach towards stuttering, suggesting that the main cause of stuttering was a cultural factor, not a genetic factor.

According to Johnson’s theory:

- (1) All human children have a difficult and sensitive period when they are acquiring speech.

- (2) Different societies and even different parents have different attitudes towards this vulnerable period of childhood speech development.

- (3) In some cultures adults pay too much attention to this normal stage of childhood development and they put unnecessary pressure on a child. They punish a child (sometimes physically), pointing out that s/he is stuttering, and actively try to stop a child from stuttering.

- (4) This pressure, punishment and the label “stutterer” deeply enters the child’s mind and is the reason for the fear of speech and social withdrawal. So this is the main reason why stuttering does not go away and stays with a person for all his or her life.

- (5) “Stuttering starts in the ears of parents, not in the mouth of children” was Johnson’s famous slogan.

Johnson's theory was appropriately labeled as the "diagnosogenic theory of stuttering", and it dominated speech pathology for a few decades from the 1940s up to most of the 1970s. During this period Johnson conducted studies in different cultures and found impressive differences in the incidence of stuttering. He also claimed to have found a correlation between societies where the child-rearing practice was very relaxed and where the stuttering incidence was much reduced or even absent. His research was mostly based on the populations of the United States, and the main focus of his studies centered on two populations: European Americans and Native Americans. Johnson and his students claimed that they failed to find even one full-blooded Indian who had a fluency problem. Indians, according to Johnson, do not stutter, because Indian parents are very relaxed about the speech of their children, and even during adulthood Indian social culture and etiquette appreciates more silence than intense verbal communication. According to Johnson's theory, the decisive factor in the onset of stuttering was **cultural, not genetic**.

From the end of the 1970s the genetic approach towards the genesis of stuttering prevailed, and Johnson's theory of the importance of child-rearing practices in the onset of stuttering was mostly marginalized. Genetic theory favored the idea of the **genetic factor** as the decisive element in the onset of stuttering. According to the genetic theory, cultural practices are not so important, and it is up to the genes to decide the level of fluency of each individual. Any major differences in the incidence of stuttering between different populations were beyond the explanatory capabilities of the "genetic theory of stuttering", and unfortunately the cross-cultural studies of the incidence of stuttering in different populations were mostly marginalized.

Proponents of genetic theory had a major victory over the diagnosogenic theory when they found that Johnson's and his students' claim about the full absence of stutterers among Indians was an exaggeration (Lemert, 1953; Zimmermann et al. 1983). At least some stuttering individuals were found among the tribes that Johnson and Snidecor claimed had no stutterers. It was suggested that among Indians it was usual to hide individuals with health problems. Most importantly, it was also found, that Native Americans from the tribes Nootka, Kwakiutl and Salish had not only a couple of stutterers, but quite a high number of stuttering individuals (usual for European and American populations. See Lemert, 1952, 1953).

It is difficult to summarize the actual prevalence of stuttering among Native Americans. According to Stewart, although there are Native Americans who stutter, their actual number might be much lower than among

European Americans (1985:314). It is puzzling that despite the unparalleled interest of speech pathologists in stuttering Indians the rate of prevalence of stuttering among most Indian tribes is still not available (see Finn & Cordes, 1997:222). We can only assume that stuttering is present in all known tribes, but the actual prevalence (at least in some of the tribes) might be considerably lower.

Stuttering among sub-Saharan African populations. The first bit of informal information about stuttering among African populations I learned during the Moscow International Conference of Speech Pathologists, when one of the leading speech pathologists from the USA, Ehud Yairi, pointed out to me publications dealing with the prevalence of stuttering among West African populations. According to these publications, the stuttering prevalence was much higher in West Africa than in European populations. Later, when I was already in Australia, I found the published results of well-documented studies of the prevalence of stuttering among sub-Saharan African populations, both among African Americans and among African populations. According to some of these publications the number of stutterers is unusually high among African-American populations (see Bloodstein, 1993:65-66, 1995:136; Cooper & Cooper, 1993:194-196; Finn & Cordes, 1997:222). The same publications also noted the very high incidence of stuttering in the countries of the West Indies, consisting mostly of the populations of sub-Saharan African descent. According to some studies, the difference in the prevalence of stuttering between African-American and European Americans reaches the ratio of 3:1 and even 4:1 (See Cooper & Cooper, 1993:194-195).

Available data shows that the prevalence of stuttering among some sub-Saharan African populations is even higher than among African Americans, reaching in some populations 5.5% and even 9.2% (Cooper & Cooper, 1993:195-196; Nwokah, 1988; Finn & Cordes, 1997:222-223). Some authors conclude that the incidence of stuttering among Nigerians and West Africans may be the highest in the world (Cooper & Cooper, 1993:195; Nwokah, 1988). The only study known to me that claimed that stuttering among the African population is not higher than among Europeans, came from Aron (1962). Summarizing prevalence studies, E. Cooper and C. Cooper conclude: "On the basis of the data currently available, it appears the prevalence of fluency disorders varies among the cultures of the world, with some indications that the prevalence of fluency disorders labeled as stuttering is higher among black populations than white or Asian populations" (Cooper &

Cooper, 1993:197). [By the way, despite this very clear conclusion, the authors do not provide any data on the stuttering prevalence in Asian population of the USA. See later.]

Unfortunately, no data is available regarding stuttering in Pygmy populations. According to Simha Arom, an expert on Pygmy vocal polyphony, he has never met a stuttering pygmy during his long fieldworks among pygmy groups (a personal communication from 7th July 2006). Jacqueline M. C. Thomas, a linguist who had been studying different pygmy groups for three decades also does not remember seeing a stutterer pygmy, although she reported that Pygmies do have a word “stutterer” (personal communication from 7th July, 2006).

Stuttering among Native Americans and sub-Saharan African populations are relatively well researched. Unfortunately, other major regions of our planet have not been so extensively studied, so the data is very small, or sometimes completely absent. For example, according to the data collected by Morgenstern more than half a century ago, there is no (or a very low incidence) of stuttering among Australian Aborigines and Polar Eskimos (Morgenstern, 1953; Bloodstein, 1995:132). No later publications on this topic are available.

The existing information (as limited as it is) about the very low rates of stuttering among American Indians, Polar Eskimos and Australian Aborigines (carriers of monophonic singing traditions) on one hand, and about the very high rates of stuttering among the descendants of sub-Saharan African populations (carriers of polyphonic singing traditions) on the other hand agrees with the suggested model: cultures with polyphonic singing traditions seems to have much more stuttering individuals than the cultures with monophonic singing traditions. There is one particular population that is of particular importance for the suggested model, and we are going to discuss this population in the very next section.

What about stuttering among the Chinese? Data about the prevalence of stuttering among the Chinese is absolutely crucial for our discussion. According to my model, the ancestors of Chinese populations (the bearers of the most monophonic tradition on our planet) shifted to articulated speech the earliest, therefore the prevalence of stuttering among Chinese populations must be considerably lower that among European and particularly sub-Saharan African populations.

From the very first discussion with Valeri Alexeev in his Moscow apartment, when the idea of the possible differences of the prevalence of stuttering between different populations emerged, the question of stuttering among the Chinese tantalized me. As soon as the idea was born, the search for the information started. First Valeri Alexeev tried to recall whether he saw a stutterer while he was in China, later during my meeting and discussion with Viktor Shklovsky and Tatiana Vazel at the Moscow Clinic of Speech Pathology, we tried to get some information on stuttering among the Chinese (or some other East and Central Asian populations, genetically connected to the Chinese). I was constantly trying to get **any** information on this topic. I remember very well how thrilled I was when I discussed the problem of stuttering with my good friend, Kazakh ethnomusicologist Alma Kunanbaeva (Kunanbay), on November 16th, 1987, in Leningrad (currently St. Petersburg). She spent all her childhood and most of her adult life in Kazakhstan and was absolutely sure that she has never met a Kazakh person who had a fluency problem. “I can not even imagine a Kazakh person who would stutter”, Alma told me and when I reminded her of our conversation after fifteen years, in 2003 (she is currently lecturing at Stanford University), she repeated that she still has never seen a Kazakh stutterer. On that day back in 1987 Alma discussed this question with her school friend (who was visiting her in Leningrad), and they both remembered only two stutterers in their class, both of them being Russians.

When I arrived in Australia in 1995 “stuttering among the Chinese” was one of the central themes I researched at university libraries and then on the Internet. No publications were available on this subject. China did not exist in the world of speech pathology. Even the profession of speech pathologist seemed nonexistent in China (this was later confirmed to be true!). In this desperate search for information any ethnic Chinese, any person with any connections to China, was of interest to me. My search for Chinese stutterers became a popular theme of family jokes. I ended up going to Chinese restaurants and acupuncture centres and asking ethnic Chinese if they knew a Chinese stutterer. Their reaction was very interesting. They usually could not understand what I was asking them, although they sometimes spoke better English than I. When I tried to demonstrate what stuttering is, they usually got the impression that I was asking about retarded individuals. When I told them that I was not speaking about retarded individuals, and that some of the brightest people in human history (like Charles Darwin, or Winston Churchill) were stutterers, they were totally confused.

In my search for information I contacted leading Australian speech pathologists including Mark Onslow, Ashley Craig, Sue O'Brien, and Michelle Lincoln among them. I am very grateful for their time and interest, although their responses confirmed that there was no information on the prevalence of stuttering among Chinese.

A breakthrough came in 2000 when I contacted a "Multicultural Interest Group" with the help of Melbourne speech pathologist Annaliese Hastings, and later became a member of the "Speech Language and Hearing Association (Singapore)". The editor of the Speech Language and Hearing Association (Singapore) Newsletter, Selena Young was most helpful. She provided me with contact details of most of the speech pathologists, mostly ethnic Chinese, working in hospitals or private practice in Singapore. I had the contact details of 53 speech pathologists and associates, working in Singapore (mainly), and also in Taiwan, Hong Kong and Malaysia. I wrote to them asking if they were willing to provide information about their working experience as speech pathologists in the Chinese population. Responses were received from 33 individuals, working with predominantly Chinese populations. They all expressed readiness to provide information about Chinese stutterers from their clinical experience, and answered my questions.

Five speech pathologists responded that they have never seen any Chinese stutterer in their professional career. Out of 28 remaining respondents 23 were from Singapore, 2 from Taiwan, 2 from Hong Kong and 1 from Malaysia. Most of the speech pathologists were ethnic Chinese, native speakers of Mandarin or/and Cantonese, who received their education and credentials in the USA, Australia or Great Britain. Four of them were associates from related spheres as well. Respondents answered the questionnaire mostly designed to illuminate the number of Chinese stutterers seen and treated, languages spoken by stutterers; whether or not they stuttered in all of the languages they spoke, the age and the gender of stutterers; the degree of the severity of stuttering; secondary characteristics of stuttering (e.g. facial and shoulder movement); comparison between the stuttering populations of Chinese and Indian populations according to their caseloads (the two biggest populations in Singapore); the results of treatment; working credentials of respondents; time spent with the Chinese population as a working speech pathologist; and whether any stutterers were seen outside their professional practice (at school, university, among friends or relatives).

During the busy period of receiving the responses of 33 speech pathologists working with Chinese populations, I was very lucky to contact

an American speech pathologist, Sheree Reese, associate Professor and the Clinic Director in the Department of Communication Disorder and Deafness at Kean University (New Jersey). She spent four weeks in China in August 1998 and published an article (together with Stefan Hoffmann and Li Sheng Li) on the Internet on the state of stuttering in China (Reese et al., 1998). From this article I learned that the state of stuttering research in China was in an embryonic state. Soon after our email contact we decided to work together on this subject, and Sheree designed the additional part of the questionnaire, containing questions on the working methods and the attitudes in Chinese populations towards stuttering individuals.

The result of our work was published as a part of the International Stuttering Association online conference in 2001 (Reese & Jordania, 2001). Regarding the incidence, the results of our research indicated the following:

- The referral rate among Chinese is very low. Fewer than 150 stutterers (more precisely -- 148) were reported by all 28 speech pathologists (with a combined clinical experience of more than 110 years). This is less than one and a half stutterers per year in the caseloads of the working speech pathologists. Only two severe cases of stuttering were reported by all 28 speech pathologists during their entire working experience (one of them was a very unusual case of the onset of stuttering at the age of 14). Additionally, five respondents claimed they have never seen or treated a Chinese stutterer during their practice (although they had seen and treated other speech-related pathologies among Chinese populations), so together with these five more speech pathologists who did not see any stuttering cases, the ratio would be even lower. Another difference was a very high male/female sex ratio of stutterers (6:1 against the more usual 3:1 in European populations).

- One of the respondents wrote: "Some Chinese friends of mine who are stutterers have tried and tested many therapists for a 'cure' to their stuttering". This answer suggests that there is a possibility that some of the Chinese stutterers, who did go to different therapists, might be represented in our list of 148 stutterers more than once (from different speech pathologists who completed the questionnaire). Our questionnaire did not ask respondents to provide the names of stutterers, so it would be very difficult at this stage to identify cases of duplications. Of course, the existence of such duplications would further reduce the already very low referral rate.

- The number of hidden or "concealed" stutterers who do not seek professional speech therapy is not large as well. Only a few such cases were reported by all 28 respondents, mostly ethnic Chinese, who spent most of their lives among Chinese, from school years to adult years. All the reported

cases were mild. No moderate or severe cases were reported. Therefore, the information received from our respondents does not support the view that the main portion of Chinese stutterers never goes to speech pathologists and remains hidden in families.

- A comparison of the stuttering populations of Chinese and Indians in Singapore and Malaysia also points to a very small number of stutterers among the Chinese in comparison with Indian stutterers. For example, Anuj Thabar, a Singaporean speech pathologist of Indian origin (he was not among the 28 speech pathologists, as he contacted me later and worked predominantly with the Indian population, so his data was not included in the count), reported himself having seen twice as many Indian stutters than all the 28 speech pathologists working with Chinese stutterers. Thabar reported 350 Indian stutterers from his practice, 70 of them severe stutterers (against 148 Chinese stutterers seen by 28 speech pathologists working with the Chinese population, with only 2 severe cases among them). Of course, these numbers might not be very accurate, but they seem to show the general tendency of prevalence. By the way, the size of the Chinese and Indian populations in Singapore is very different: Chinese comprise 76.4%, and Indians comprise 6.4% of the population. The total population of Singapore on July 1998 was under 3.5 million. The size of the Chinese population was about 2.8 million, with potentially more than 20 thousand stutterers among them (if the European mean estimate of 0.8% is valid in the Chinese populations as well).

Another interesting indication on the low prevalence of stuttering among Chinese is the estimate given by a Singaporean speech pathologist Selena Young, the editor of the Speech Language and Hearing Association (Singapore) Newsletter. According to her opinion, based on her clinical work with the Chinese population in Singapore, cases of stuttering are *several times rarer* in Singapore than the cases of cleft palate (a personal communication from May 23rd, 2001). Selena actually changed her research profile from stuttering to cleft palate, because, on her opinion, cleft palate patient were much more numerous, so she could be more useful to Singaporean population as an expert of the cleft palate. It will be interesting for the readers to know that the prevalence of cleft palate among Chinese is about 1 case in 250 births (the percentage therefore is 0.4%). According to other estimate it is even lower – 1 case in more than 600 births, making the percentage less than 0.17% (see Tinanoff, 2007). If stuttering is really “several times rarer” than these already very low numbers, it can easily be less than 0.1%. If Selenas’ estimate is correct, the rate of stuttering among

Chinese could be 10 times (or more) lower than the average numbers for European populations (5% incidence among children, 0.8% prevalence among adults, and 1% prevalence among general population).

I also published a small paper in the newsletter of the Singapore Speech, Language and Hearing Association (Jordania, 2001) with similar conclusions regarding the very low incidence among Chinese.

There are also a few other publications that contain additional information that might be of interest to our topic. For example, Lilly Cheng from San-Diego University reported that most of the speech and hearing clinics newly opened in China, predominantly provide an audiovisual service for the hearing impaired (but not for the speech impaired. Cheng, 2001). Another study reported that “speech disorders in Patonghua-speaking children are rarely reported in the literature” (Zhu Hua & Dodd, 2006:96. “Patonghua” is a Chinese name for Mandarin). Although these sources do not mention the prevalence of stuttering, they still could be indicating the relatively smaller prevalence of speech disorders among Chinese.

Of course, we should not forget that, even if the incidence in China is much lower than in most European countries and the USA, we are still looking at many thousands of Chinese stutterers, trying to cope with their condition without the help of available professional speech pathologists. Establishing the specialty of speech pathology in China would lead to more available means of therapy and would generally improve the life conditions of Chinese stutterers. Fortunately, as I have become aware, the profession of speech pathology has become established in at least some Chinese cities during the last decade with the help of the International Stuttering Association Outreach Working Group (and their former representative Stefan Hoffmann).

To summarize our informal and preliminary survey of speech pathologists, working with the Chinese population of Southeast Asia, we can say that the **prevalence of stuttering among the Chinese might be considerably lower than among European and particularly, among sub-Saharan African populations**, but further study is needed to verify the preliminary findings.

The Official attitude towards prevalence studies

The cross-cultural study of the stuttering phenomenon is not a mainstream research topic in contemporary speech pathology. Even when speech pathologists write about cross-cultural differences in stuttering

prevalence, they often try to dismiss the existing differences in prevalence and attribute these differences to the methodological differences used in different studies. For example, summarizing prevalence studies from different regions of the world, Patrick Finn and Anne Cordes write: “Some cross-cultural variability is evident in the prevalence estimates, but much of that variability might be attributable to methodological variables such as the definitions of stuttering used in various reports, or whether reports were based on interview data or direct observations” (Finn, Cordes, 1997:224). Two questions would be logical to ask of the authors of these words:

(1) Can we accept a suggestion that the methodological differences between different researchers (mostly trained as professional speech pathologists in western universities), in estimating the prevalence of the populations with presumably the same prevalence, can cause the estimates to be as widely different (ten-fold in some cases)?

(2) Even if we accept that such methodological differences are possible for the professional speech pathologists trained in western universities, how can we explain the strange fact that all the scholars make mistakes by reducing the estimates when it concerns Native Americans, and grossly magnifying the estimates when they concern African populations and never the other way around?

Mainstream speech pathology is very reluctant to recognize the differences in stuttering prevalence in different regions of the world. According to the dominant view, there are only methodological differences between the different scholars making these estimates. Every population of the world has generally the same (European) prevalence.

One of the reasons for this reluctance to accept the differences in prevalence in different populations must be the prevailing genetic theory of the onset of stuttering. Genetic theory currently cannot explain the significant differences in stuttering prevalence between different populations. Faced with the obvious differences in prevalence in some populations, the only option that speech pathologists have is to recall the discredited diagnosogenic theory. But if the diagnosogenic theory can be responsible for such vast differences in stuttering prevalence, then on what grounds can we declare the genetic factor as the leading cause for the onset of stuttering?

The genetic nature of stuttering is well established and as time goes by, most likely more support will be found for the importance of the genetic factor in the onset of stuttering. According to the model suggested in this book, we do not need the help of the “diagnosogenic” theory of stuttering to explain these differences in the prevalence of stuttering in different populations of the world. I propose that the **significant differences in the prevalence of stuttering also have a genetic nature and can be explained within the genetic theory**. So, according to my suggestion:

- (1) **The genetic factor is decisive in the onset and development of stuttering;**
- (2) **Different populations of the world have different genetic inclinations towards stuttering.**

I suggest that the correlation between the relaxed child-rearing practices and the lower incidence of stuttering, established by Wendell Johnson, exists, but the cause and the result of this correlation must be reversed. According to diagnosogenic theory, in low prevalence societies children do not stutter because parents do not pay attention to their articulation difficulties. I suggest that parents do not pay attention to the articulation problems of their children because in these societies there is very little genetic predisposition towards stuttering and there are almost no adult stutterers in the society.

The psychological attitude towards stuttering in a society is crucial in this discussion. The same health problem can cause very different attitudes in humans. You would have a quite different reaction (depending on time and place) if your child, say, has an upset stomach, a simple upset stomach. If this happens somewhere in New York or Melbourne, this is not something that would worry you too much, so most likely you would give the child a medicine that can help in such cases (or even do nothing) and expect everything will be all right soon. Imagine now this happening while you and your child are traveling somewhere in a third world country, and you had been warned beforehand about the cases of cholera in this country. Most likely the same upset stomach will cause you much bigger worries. That's what I think has happened in interpreting the correlation of the parent's attitude towards stuttering and the actual stuttering prevalence in the society. I suggest that stuttering does not start in the “ears of the parents”, as Johnson suggested, it starts in the genes of a child.

Although I believe that the influence of cultural factors in stuttering prevalence is important, it should not be responsible for the huge differences

that exist in the prevalence of East Asian and American Indian populations on one hand, and sub-Saharan African populations on the other hand. I suggest that the impressive differences in stuttering prevalence are (at least partly) under genetic control.

The same tendency to mostly neglect the possible difference in stuttering prevalence is obvious in the case of China as well. For example, Bloodstein mentions China as one of the cultures where stuttering is "widely known" (Bloodstein, 1993:62), although **no studies have been done to establish the stuttering prevalence among the Chinese by speech pathologists**, and the only proof Bloodstein refers to for this claim is the word "stutterer" mentioned by Laotze in a poem written 2500 years ago. According to Bloodstein there is "no reason to expect a markedly different [from the European 0.8% -- J.J.] figures from India or China, on the basis of general observation" (Bloodstein, 1995:131). Unfortunately, the author does not specify the nature of "general observation" he is relying on.

On the other hand, there are at least a few published indications that the incidence of stuttering in China may be significantly reduced. "It appears to me, that if it be true, as has been asserted on very slender grounds, that *there are no stutterers in China* (italics mine, J.J.), the circumstance is not so much owing to the sing-song, nor to the rhythmical structure of the Chinese language, but chiefly to its being a mono-syllabic tongue" wrote anthropologist J. Hunt almost 150 years ago (Hunt, 1967:38 [1861]). This is the same J. Hunt that wrote about the absence of stuttering among American Indians before Wendell Johnson's studies. The German speech therapist, the creator of a new stuttering therapy (which is still in use) Oscar Hausdorfer mentioned as a well-known fact that there are no Chinese stutterers (Hausdorfer, 1933). Of course, we know now (and our research also pointed to this) that stuttering does exist in China, but the prevalence might be much lower than in Europe and particularly sub-Saharan Africa.

There are also two articles, published in the USA, which do not discuss the prevalence or incidence of stuttering among the Chinese but contain some potentially interesting observations regarding verbal communication among Asian-Americans. In an article, already discussed (Finn & Cordes, 1997), the authors write: "Taylor (1994) ... suggests that African-Americans place a 'high value on the oral tradition' and tend towards 'emotional intensity in communication', while Asian-Americans tend towards 'respect for silence' (Taylor, 1994:54)". This seems interesting, as according to some publications, mentioned earlier, the incidence of stuttering among African-

Americans is higher than in the general USA population, so these words from the article may imply that the prevalence of stuttering (at least the referral rate) among Asian Americans in the USA might be lower than among African Americans. The article does not provide any information about the incidence or referral rate.

In another article (Bebout & Arthur, 1997) the views of Chinese and American students on speech disorders are discussed. According to the results of the study, Chinese students in the USA believe that willpower is the most important element to fight fluency problems (unlike American students as a comparison group, who believe that the problem is innate and you can not do much to help yourself and become fluent). There is also an interesting note in the article stating that according to some Cantonese speakers "...they did not seek treatment for their own or their children's stuttering because such patterns would not have been considered a problem in their own country". These words imply that there might be a lower referral rate among the Chinese population in the USA, although the article still does not actually say that Chinese stutterers in USA clinics are represented less than among the general population.

Of course, these scattered bits of information, including our own preliminary research of the prevalence of stuttering among Chinese, although based on the opinion of professional Chinese speech pathologists, working with Chinese populations, is not sufficient to conclude that the world's biggest population has a much reduced number of stutterers. Fortunately, this question is not among the questions that cannot be answered precisely. More than a billion Chinese live on our planet, and a stuttering prevalence research among several thousand students from primary and secondary schools, conducted by professional and unbiased speech pathologists, should be able to give us a relatively precise answer to this question.

Reasons? Plenty of them!

Interestingly, there was no shortage of different explanations for the possibly reduced number of stutterers among the Chinese. These explanations were expressed by a very wide range of people, from the world's leading speech pathologists (Mark Onslow and Viktor Shklovsky) to ordinary people with some knowledge of Chinese culture. The most popular explanation, that the Chinese do not stutter because both Mandarin and Cantonese are tone languages ("stutterers do not stutter when they sing, and Chinese constantly 'sing' as they speak"), obviously does not work, because

West Africans also speak tone languages, but have arguably the highest stuttering prevalence in the world.

The monosyllabic and syllabic-timed character of the Mandarin and Cantonese languages was also suggested as the possible reason for the reduced prevalence (Onslow, letter from December 1st, 2000), although this cannot explain the reduced prevalence among Native Americans or the Central Asian Kazakhs. Even infanticide was suggested, although stuttering is not something you would notice when a baby is just born.

There are some well-researched publications about stuttering in Japan (see review in van Riper, 1971:39; Bloodstein, 1995:131). It would be interesting to know if the Ainu (carriers of the polyphonic traditions unique to East Asia) have somehow a higher stuttering prevalence in Japan to investigate whether the potentially higher prevalence in Japan (supposedly higher than in China) is due to the Ainu substratum among the Japanese.

Conclusions. It is too early to draw the final conclusions. The cross-cultural prevalence of stuttering is not researched sufficiently. Although some regions of the world are researched quite well, from the other regions information is very limited, and there is no information whatsoever from a few regions. However, there are a few regions that have been researched and show quite clear differences.

- European and North American populations of European descent have about a roughly 0.8%-1% prevalence (Bloodstein, 1995).

- African American, sub-Saharan African and West Indies populations (with the major part of the population of African descent) show a much higher stuttering prevalence (reaching up to 4%, 5% and even 9.2% in some populations). West Africa could be the region with the highest stuttering prevalence in the world. Unfortunately, no data is available regarding stuttering in Pygmy populations.

- At least some populations of North American Indians have a significantly reduced number of stuttering individuals.

- According to preliminary evaluation, Native Australians also have a much reduced number of stuttering individuals.

- The same can be true for some North Asian and Central Asian populations, although the available information can be treated only as preliminary.

- The same can be said about the largest population of our planet – the Chinese. According to preliminary research, the number of stuttering

individuals can be significantly reduced, although more detailed study is needed for more decisive results.

Therefore, the differences in the stuttering prevalence between different populations on our planet can turn out to be very significant. For example, the prevalence difference between some populations of West Africa and some populations of Native Americans can be more than 100 times larger. In this context the use of the European prevalence (0.8%) to characterize the stuttering prevalence of the world population is hardly a reasonable policy.

It is not a bad thing to remember the dangers of generalization of the European experiences:

- Europeans can drink milk, but most of the world's populations cannot ("milk drinking syndrome");
- European professional music started as monophonic and later, under the pressure of traditional polyphonic singing practice it became polyphonic, but this change from monophony to polyphony seems to be a unique occurrence in the history of music;
- European populations have a stuttering prevalence of about 0.8%-1%, but a large part of the populations of the world seem to have very different prevalence numbers (much lower among some Native Americans, or much higher among African populations and their descendants in different regions).

I am well aware of the possible reaction of speech pathologists to my bold declarations. Fortunately for all of us, my claim is very easy to disprove – even a simple prevalence survey conducted in a few schools with Chinese children could easily eliminate the biggest of my arguments.

But such a survey can provide the proof as well.

PS: What about polyphony?

So what about polyphony? We started discussing speech pathology in the first place because according to our model there must be a markedly different stuttering prevalence among major human populations due to the fact of the presence of choral polyphonic traditions: with a higher prevalence among the carriers of polyphonic singing traditions and a lower prevalence among carriers of monophonic singing traditions. Or simply: "more polyphony – more stuttering". Let us now have a look at the correlation of the stuttering prevalence and the distribution of vocal polyphony.

- The reduced number of stutterers among monophonic Native Americans, Australian Aborigines, and Polar Eskimos supports the idea of their earlier shift to articulated speech;
- The significantly increased number of stutterers in polyphonic sub-Saharan African populations and their descendants in North and Central America supports the idea of their late shift to speech.
- The incidence of stuttering in the most monophonic region, East Asia (mostly China) is still to be studied sufficiently. A preliminary survey suggested that the stuttering prevalence in China is also significantly reduced, but more studies are needed.
- Even the information about the presence of the unusually high (for Native Americans) stuttering prevalence in a few tribes from British Columbia, reported in the 1950s and mentioned earlier (Lemert, 1953) confirms this correlation, because the Native American tribes that have been found to have a higher number of stutterers (Nootka, Kwakiutl and Salish) are known in ethnomusicology as the carriers of the traditions of polyphonic singing, relatively rare among North American Indians (see the discussion of polyphony among Native Americans in part 1, also see Nettl, 1961, and Halpern, 1975).

Developmental dyslexia

Stuttering is not the only “evolutionary” disorder that could be affected by the chronology of the origins of articulated speech. Significant differences in the chronology of the emergence of spoken language in different human populations could have caused differences in the distribution of other forms of innate speech pathologies. According to the suggested model, different forms of innate speech pathologies should be less common in East Asia and among indigenous populations of America and Australia. So, the correlation again is expected to be “more polyphony – more speech pathology”.

One such pathology, developmental dyslexia, can also be related to this problem. Dyslexia is a developmental disorder connected not to speech, but to reading and writing. About 10% of European and North American population suffers from dyslexia (the estimates varies widely – see later). People with dyslexia find it difficult to acquire reading and writing skills and are generally behind their peers at schools, although they can be intellectually extremely bright. Several important factors link developmental dyslexia and stuttering:

- (1) Both pathologies have a major innate component;
- (2) Atypical dominance of brain hemispheres is crucial to both;
- (3) Incidence prevails among the male population;
- (4) The magnificent array of dyslexic scholars (which includes Albert Einstein and Thomas Edison) proves that developmental dyslexia is not connected to mental retardation (see review in West, 1997; Snowling & Thomson, 1991; DeFries et al. 1987);
- (5) Another coincidence between stuttering and developmental dyslexia is that the latter also reveals “impressive differences in the degree of incidence” in different regions of the world.

Despite these similarities, there are important differences as well. First of all, we must note that unlike stuttering, where no one actually disputes the presence of the condition (although Wendell Johnson disputed the presence of stuttering as a medical condition during 1950-1970s), there are still disagreements regarding the nature and character of dyslexia.

On one hand, most scholars agree on the genetic character of dyslexia, and there is an increasing number of studies which link dyslexia to genetic markers. For example, region on chromosome 6, DCDC2 has been linked to dyslexia as a result of a major recent study (Meng et al., 2005. See also Schumacher et al., 2007).

On the other hand, some dispute even the existence of dyslexia. Julian Elliot, a psychologist at Durham University in the United Kingdom, disputes the characterization of dyslexia as a medical condition, and believes it should be treated simply as a reading difficulty. According to Elliot, children of all levels of intelligence may struggle with learning to read, and that all can be helped by educational strategies appropriate to their needs. He feels that resources are wasted on diagnosis and testing, and favors early intervention programs for all struggling readers (Blair, 2007). A BBC4 documentary "The Dyslexia Myth" argued that the common understanding of dyslexia is not only false but makes it more difficult to provide the reading help that hundreds of thousands of children desperately need. Drawing on years of intensive academic research on both sides of the Atlantic, the film challenged the existence of dyslexia as a separate condition, and highlighted the many different forms of reading styles.

Also, although dyslexia is mostly believed to affect more males, there are claims that the actual difference is not so big and that the difference in referral rate is strongly affected by the behavioral stereotypes (Shaywitz S., Shaywitz, B. et al., 1990).

And finally, unlike stuttering, which is often a transient developmental phase in children's development (around four out of five stuttering children recover), dyslexia is a persistent, chronic condition.

Before we briefly review the existing studies on the cross-cultural prevalence of dyslexia, let me remind the reader that, according to the model suggested in this book, we should expect the prevalence of dyslexia to be somehow lower in East Asian countries, and higher in European and particularly in sub-Saharan African populations (and the countries of the West Indies).

Dyslexia in China and Japan

When it comes to reading and writing difficulties, the natural reaction of scholars is to look at the differences between the writing systems. And there *are* really impressive differences between some of the writing systems of the world, for example, between English and Japanese (or Chinese). English spelling is a nightmare not only for the learners of English as a second language, but even for the native speakers. Japanese spelling and pronunciation are, on the contrast, pleasingly close to each other. There are a few other languages, where unlike English, you generally “read what you see”.

Japanese primary school students have more learning to do: they first learn two parallel phonetic alphabets, hiragana and katakana, each containing 46 characters precisely relating to 46 different sounds, and then move on learning other writing systems (the Chinese system among them). According to Akira Uno, an expert in cognitive neuroscience and psychology associate professor at Tsukuba University who conducted a study on 1,200 primary school students, only 1% of surveyed children had difficulties in reading kana characters in the first years of primary school, and in the upper grades of primary school most children showed nearly 100 percent correct answers in tests of reading and writing hiragana and katakana. The figures were higher for reading kanji (5% - 6%), but still falling at least twice as short from the usual numbers of English speaking countries (Spaeth, 2003). Following his nine year study brought Akira Uno to a conclusion that Japan's two phonetic scripts correspond more exactly to sounds than the English

alphabet. In other words, they are simply easier: there are no irregular words and no stumbling over mystifying spellings (Spaeth, 2003).

Psychologist Tim Miles from the University of Bangor, Wales, came to the similar conclusion: “We do not know at present whether the biological anomalies which occur in dyslexics are common in all countries of the world or whether the distribution of these anomalies varies from one country to another. It seems likely, however, that the former is the case and that variations in the form taken by dyslexia in different parts of the world depend on environmental factors and, in particular, what writing system is used.” (Miles, 2004).

On the other hand, this does not mean that dyslexia is caused by orthography: instead, Ziegler et al (2003) claim that the dyslexia suffered by German or Italian dyslexics is very similar to the one suffered by English dyslexics, supporting the theory that the origin of dyslexia is biological. In a study by Paulesu et al. (2001) English, French, and Italian dyslexics were found to have the same brain function signature when studied with functional magnetic resonance imaging (fMRI), a signature that differed from non-dyslexic readers.

I should mention here that the correlation between the writing system and the prevalence of dyslexia is not new. This connection has been already suggested as early as in the 1960s (see: Makita, 1968), and has been already criticized (Flores d’Arcais, 1992. See the details shortly).

According to another cross-cultural survey reported in the “Cambridge Encyclopedia of Language”, the prevalence of dyslexia can be as different as 1% and 33% (Crystal, 1987:274). The most interesting fact for our discussion is that the lowest incidence (1%) was found in China (Crystal, 1987:274). Such a drastic difference of developmental dyslexia is usually attributed to the peculiarities of the Chinese logographic writing system. Rozin, Ponitzky, and Sotsky reported that American dyslectic children did not have substantial problems learning to read Chinese characters (Rozin et al., 1971). So again, scholars point to the obvious differences in writing systems to interpret the significant differences in the prevalence of dyslexia.

Despite this seemingly obvious correlation between the writing systems and the prevalence of dyslexia, the evidence available does not support this suggestion, as the same low incidence of developmental dyslexia, as it is in China, is also found in Japan, where the writing system kana is much closer to European writing systems than to Chinese characters. As for the popular suggestion that the simple and logical characteristic of Japanese kana is the main reason for the very low incidence of dyslexia among the Japanese

population, it has been criticized by Flores d'Arcais: "...if for Japanese children, as Makita (1968) proposed, the completely shallow kana orthography could favor reading activation, the same low incidence should be found for Serbo-Croatian, or, almost to the same extent, in Italian or Spanish, and this is not the case" (Flores d'Arcais, 1992:45).

I must note here that scholars who suggest that the simplicity of the Japanese writing system is the main reason for the significant drop in the prevalence of dyslexia among Japanese children avoid discussing the contradicting argument about other simple writing systems, where children still suffer from a high prevalence of dyslexia.

To summarize the points made in this section, we can conclude that "the evidence available is not clear and strong enough to support the notion of a real advantage of logographic systems in reducing the risk of developmental dyslexia" (Flores d'Arcais, 1992:45).

Despite the controversies in establishing the reasons for the lower rate of dyslexia among the populations in China and Japan, the possible influence of the genetic factor in these differences has never been seriously discussed. I believe that excluding the possibility of a genetic factor in the huge difference between the prevalence of dyslexia among the Chinese and Japanese populations on one hand, and the European and American populations on the other, limits the chances of scholars to establish the true reasons behind the significant cross-cultural differences in the prevalence of dyslexia.

Dyslexia in Europe, sub-Saharan Africa and the West Indies

The best studied regions of the world, as you would expect, are Europe, North America, and Australia. Generally accepted (although debated) mean figures in these regions are around 10%. (3% of them severe cases. Miles, 2004). According to another study, "in the United States, the prevalence of dyslexia is estimated to range from 5 to 17 percent of school-aged children, with as many as 40 percent of the entire population reading below grade level" (Shaywitz & Shaywitz, 2001). This means that significant portions of American (as well as European and Australian) children fail to develop sufficient reading and writing skills, inheriting all the consequences for their learning progress during their school years and adult life. Regarding the prevalence, according to some earlier publications (Benton, 1975; Rutter, 1978:25), some North European populations show an excess of this condition. We have already seen that the lower prevalence of dyslexia in

Japan and China is generally accepted by scholars. What About other major regions of the world?

Unfortunately, due to many social and educational problems, the prevalence of developmental dyslexia in many regions of the world is not available. The most important in this connection would be data about African populations. I would expect dyslexia to be higher among African populations than among European populations (let alone Chinese and Japanese populations where according to available publications the prevalence of this condition seems to be much lower than among European populations).

The West Indies featured in the cross-cultural study mentioned in the “Cambridge Encyclopedia of language”: Venezuela apparently had the highest (33%) dyslexia rate among the surveyed countries (Crystal, 1987:274).

On the basis of the data currently available, we can assume that the principle “more polyphony in a musical culture – more speech related problems in a population” seems to be working in the case of developmental dyslexia as well.

New studies about the distribution of the stuttering phenomenon (and dyslexia) in different countries and continents could shed new light not only on the origins of articulated speech, but also on the problem of the origins of stuttering and developmental dyslexia. This should not be surprising. A study of the earliest history of our species could reveal answers to some of the contemporary health problems of humanity. Even the sometimes puzzling differences in literacy achievements of primary and secondary school children in different countries might be illuminated.

“My child said today ‘biscu-it’: Cross-Cultural Aspect of the Acquisition of the Phonological System

We all are excited when our children start pronouncing their first words, maybe not so confidently at the start. Correct pronunciation is something that comes a bit later. Learning correct pronunciation, or, scholarly speaking, the acquisition of a phonological system, follows universal rules among the children of totally different ethnic and racial origins (Jakobson et al., 1963). At the same time, the idea that the ancestors of different human populations shifted to articulated speech in different epochs, and that the prevalence of speech pathologies might vary greatly as a result of this historical difference, leads to the proposition that the acquisition of the phonological system in the ontogeny of children from different regions of the world may occur at different ages. In other words, according to the non-synchronous model of speech origins, children in East Asian, American Indian and Australian Aboriginal populations might acquire a phonologic system earlier than children of European or sub-Saharan African descent.

To check this proposal one needs to compare the acquisition of a phonologic system among different populations on different continents. Fortunately, there are some studies and publications, which contain interesting information.

Acquisition of phonological system among Japanese and American children

In the article "The role of Distinctive Features in Children's Acquisition of Phonology" (Menyuk, 1968) Paula Menyuk details the acquisition and proportion of correct usage of consonants by Japanese and American children. The main result of the study is that "...one can observe the same order in acquisition and relative degree of mastery or correct usage of sounds containing the various features by groups of children from two differing linguistic environments, indicating that a hierarchy of feature distinction may be a linguistic universal" (Menyuk, 1968:142). So, the order of acquisition of a phonologic system (nasal, voice, grave, continuant, diffuse, strident) appears to be the same for American and Japanese children. But there is one difference and we are going to discuss it.

The only detail that differs in the acquisition of a phonologic system by Japanese and American children is a **very substantial difference in age**: the

acquisition of a phonologic system by American children goes on **from the age range of two and half to five years**, while the same system is acquired by Japanese children **from the age of one to three years** (Menyuk, 1968:140-141; Nakajima, 1962). There are two graphic figures in the article, showing the percentage of usage of features in consonants used correctly by American and Japanese children (separately). In the following figure I combined the graphics of both Menyuk and Nakajima figures:

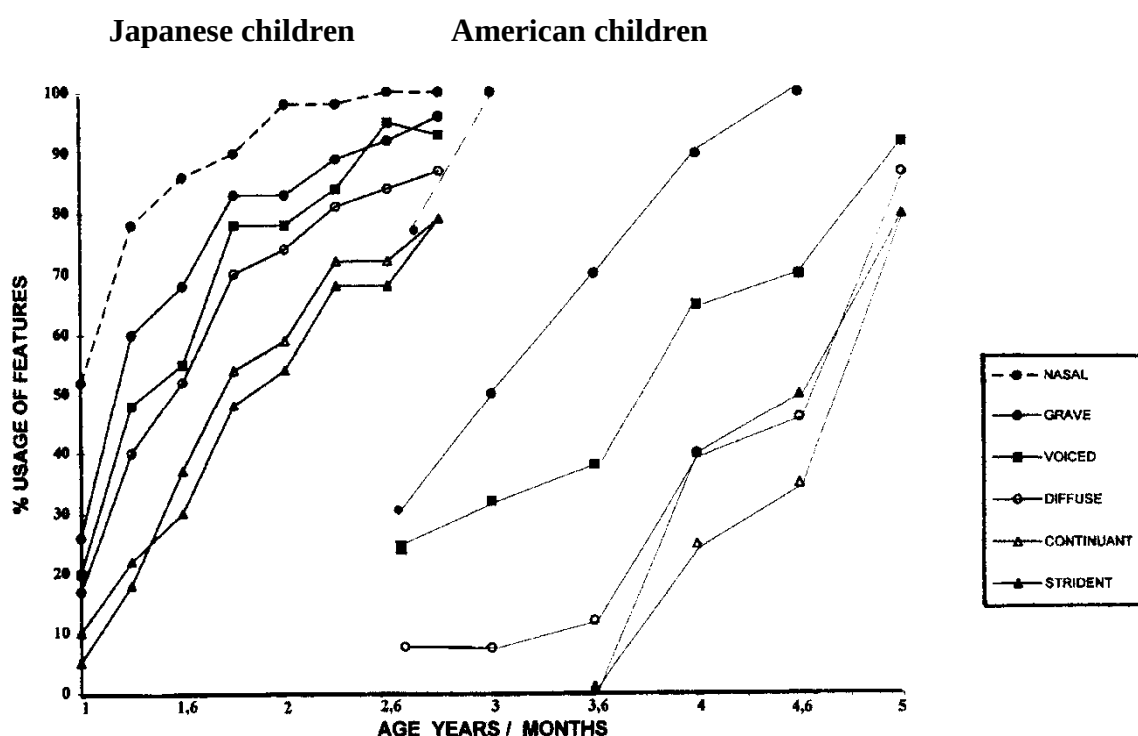


Figure 17. Acquisition of different elements of the phonological system (nasal, grave, voiced, diffuse, continuant and strident) by Japanese (bold lines) and American (regular lines) children (Menyuk, 1968:140).

The combined figure illustrates the conspicuous difference in the age of acquisition of a phonological system by Japanese and American children. Japanese children appear to have almost finished the process of acquisition of a phonologic system when American children are just beginning this process. This evidence should not be overlooked.

Interestingly, on the other hand, according to some studies, American children are much ahead of their Japanese counterparts in the acquisition of vocabulary. This difference has its social-cultural background: "...American mothers are inclined to verbally label the parts of toys their children play with; at 19 months, American babies have nearly twice the vocabulary of their Japanese counterparts" (Shweder, 1993:59).

Acquisition of phonological system among Chinese speakers

Information regarding the acquisition of the phonological system by the two main languages of China (Cantonese and Mandarin) is very important to our model. Unlike the neglected sphere of stuttering among Chinese discussed above, there are a few highly interesting publications available on this subject. According to the study by Lydia So and Barbara Dodd, the acquisition of the phonologic system among Cantonese-speaking children is more rapid compared to that of English-speaking children (So & Dodd, 1995).

Zhu Hua and Barbara Dodd, in their study of the phonetic development of English-speaking and Mandarin-speaking children, present a few graphic pictures which also reveal the significant differences in the age of acquisition. Namely, the 90 percent rate is achieved by English-speaking children from the age of three to seven years, and the same high rate is achieved by the Mandarin-speaking children from the age of one and half to four and half years (Zhu Hua & Dodd, 2006, see the figures on pages 42 and 92). This difference is not too far away from the figures given in the 1968 article of Paula Menyuk about American and Japanese children, although Menyuk did not even mention the difference in the age of acquisition of the phonological system between Japanese and American children.

To get the fuller picture and to understand the nature of the existing differences in the age of acquisition of the phonological system, more research is needed. When it comes to interpreting the results, it would be sensible not to disregard any of the possible reasons, including the possible importance of the genetic factor.

Conclusions: Any more questions?

We have reached the end of the part three, and this is the end of this book. Only the Conclusions, PostScript and Appendix are left. “Postscript” discusses the moral and ethical problems connected with the suggested model of the origins of human choral singing, intelligence, language and speech, and an “appendix” provides information about the special conferences dedicated to traditional polyphony that has been held in different countries of the world from 1966.

Before formulating a few main conclusions of this book, which I would like readers to remember, let me first hypothesize on the process of the disappearance of the tradition of polyphonic singing throughout human history. The gradual disappearance of the tradition of vocal polyphony, suggested in the conclusions of case studies #2 and #3, was an extremely long, multi-century and multi-millennia process, no question about that. This process started after articulated speech entered human evolution and transformed not only the supralaryngeal tract, the basicranium, and human facial details, but affected the whole set of social relationships and the efficiency of human communication. Speech must have been a main reason behind marginalization of pitch communication and gradual decline of human musical activities and abilities. The following couple of pages discuss the dynamics of the gradual disappearance of vocal polyphonic tradition. Despite the hypothetical nature of this reconstruction it can be thought-stimulating.

History of Polyphony: Attempt of the reconstruction

- The starting point is the archaic *Homo sapiens* society, where speech has not yet been established as a leading medium of human language (this population is also known as *Homo erectus*). Although they do not look anatomically completely modern, there is no difference of kind between their and anatomically modern *Homo sapiens* cognitive abilities. Human dialogical language and cognition are already present. Most of the social activities in this society are based on singing (some together with drumming and dancing): defending themselves from predators, obtaining food, relaxing, establishing and maintaining social bonds, avoiding conflicts, communicating, raising children, ritual singing. Everyone participates in musical activities and there is no division of society on the performers and the listeners. The struggle for survival favors individuals with a good musical

ear, good sound production and a good sense of rhythm. Most (possibly all) members of the society have perfect pitch. About 2 million years ago this population migrates out from Africa, gradually colonizing Western Asia, Europe, South-East and East Asia and Australia. They took the tradition of choral singing (based on sharp secondal intervals and drone, or D/D style of polyphony) along with them.

- Articulated speech enters human social life as a much more efficient medium of language. More elaborate ideas are communicated through the new medium (speech). Singing is marginalized from several of its important functions – everyday referential communication (almost completely), establishing and maintaining social bonds and avoiding conflicts (partially). On the other hand, the importance of music in rituals, religious practices, child rearing and possibly defensive and food-obtaining functions are still maintained. Since the emergence of articulated speech the struggle for survival within human groups favors individuals with good articulation. The musical ear and good sound production starts to decline. The number of individuals with perfect pitch is declining. Members of human societies are communicating via articulated speech, although the rate of speech pathologies (like stuttering) is very high.

- As the process of the decline of a musical ear and good sound production goes on, good sound production is the first to go (as a later element of evolution: let us remember: hearing is much older than sound production). As a consequence, some members of society stop participating in singing activities. These are group members who can hear musical sounds very well, but find it difficult to sing in tune. The number of people who do not participate in singing is growing as time goes by. On the other hand the importance of good articulation is growing. People with good articulation are becoming leaders and are socially more accepted. The prevalence of stuttering is further decreasing. People with a good musical ear and good sound production sing and entertain those who can hear and appreciate musical sounds, but cannot sing in tune themselves. Those who do not sing, form a new group in society – a group of listeners. A division in society of performers and listeners is born. Elements of professionalism appear.

- People still sing in groups (particularly in rituals, where mass participation is believed to have a magic power), but as the decline of precise sound production, a good musical ear and a sense of rhythm goes on, it is

increasingly difficult to sing as a well-coordinated and tight group. People gradually abandon singing different parts and start following the main melody. Unison and heterophonic texture is on rise. Polyphonic elements survive only in the cadencies of songs. New monophonic versions of polyphonic songs are born, where in the single melodic line the elements of different parts are united. This phenomenon can be observed very often (even today) when a person from a polyphonic culture tries to sing a polyphonic song alone, without co-singers.

- In the process of the decline of a musical ear and well-coordinated group polyphonic singing traditions, a new type of musical instrument – double (triple, quadruple) blown instruments are on the rise. Some processes that were traditionally accompanied by group singing are now accompanied by individual singing. Some go without singing at all. Some go with the instrumental accompaniment.

- Individuals with a good musical ear are appreciated in society as good singers and musicians. They become semi-professionals who are still involved in animal husbandry or agricultural processes but have some additional income from their musical activity as well. As time goes by, some talented individuals manage to lead a life as full-time musicians.

- Polyphonic elements in cadences are also lost. Double blown instruments stay formally double (the power of tradition, and a louder sound), but turn into unison instruments with the same length of pipes and the same number of holes. Full-time musicians start developing musical instruments, making them more virtuoso, they start going beyond the sounds and try to create a theory of music. Tractates about music are born. Performances of highly trained performers are listened to by the rest of the population. Competition between full-time professional musicians is on rise. The social model “one performer – many listeners” is in full swing, although some processes (like ritual singing, or agricultural works) might be still accompanied by group (unison or heterophonic) singing. The long process of evolution favoring individuals with good articulation causes a further reduction in the number of individuals with stuttering and other speech-related pathologies.

- As humans feel the enormous emotional power of musical sounds, state and religion, these two biggest powers that humanity had ever seen, try to

control musical life of their citizens. So they introduce moral and religious restrictions on music and musical activities. Rhythmically uniting military music and drill is widely accepted in national armies, as rhythmically trained armies are winning against the rhythmically untrained larger oppositions. Politicians discuss controlling musical tastes of their citizens (e.g. Plato in Ancient Greece, or communist ideologists in the Soviet Union), they ban some types of music, and sometimes even try to fundamentally transform musical culture of whole peoples (like in the USSR). Most religions control musical activity and ban earlier “barbaric” forms of music (like early Christianity, banning rhythmic and polyphonic music and pre-Christian dances), and some religions ban music almost completely as a sin (Islam). On the other hand, in some cases polyphonic singing becomes a symbol of national identity and receives a strong political and social boost (as found in Corsica, Bulgaria, Albania, Lithuania, or Georgia).

Main conclusions

After this hypothetical reconstruction of the long process of the disappearance of human polyphonic traditions, let me now formulate a few main conclusions:

- The problem of the origins of choral polyphony is not a musicological problem only. The origin of choral polyphony was an integral part of the evolutionary history of human language, intelligence, articulated speech, as well as a few other behavioral and morphological changes, and should be only discussed in this context.

- Singing has long existed in the animal kingdom, but group singing with a strict rhythmic organization seems to be characteristic of human singing only. The origins of human polyphony were initially connected to the appearance of the metro-rhythmic unity among groups of hominids, and it served crucially important functions in the defense against the major African ground predators and obtaining food (via confrontational scavenging).

- This rhythmic unity of the group and the feel of their united strength was a major factor in hominid survival, allowing our ancestors to decrease the size of their teeth, pushed them to increase the hominid group size, and led to more complex interactions between the group members and more demands on social intelligence.

- The hypnotic effect of the precise and loud rhythmic sounds on the human brain (still with us!) must be connected to the very long use of the primordial audio-visual intimidating display, consisting of rhythmically precise organized stomping and shouting/singing with body movements.

- I suggest that several important elements of human culture, including choral polyphonic singing, dance, body painting and the use of clothes usually attributed to *Homo sapiens* could have originated during early hominid evolution as a part of the hominid survival strategy. This strategy was used for defense against predators and as an aid in confrontational scavenging. I call this strategy “Audio-Visual Intimidating Display”, or AVID.

- With the appearance of the mental ability to ask questions our ancestors “crossed the line” between the animal kingdom and humans. Human dialogical language, self-developing intelligence and mental cooperation were born. According to the suggested model, the ability to ask questions is the defining element of human cognition and language. “Interrogo ergo Cogito” – “I ask questions, therefore I think”.

- The ability to answer questions is evolutionarily much older than the ability to ask questions (the same way as drumming behavior is evolutionary much older than the appearance of the sense of rhythm). New research is needed to check whether apes are able to use their natural curiosity and learn to ask questions. Apes are very good in understanding human questions and responding to them, but so far no serious claim has been made on apes’ ability to ask questions.

- According to my suggestion, four groups of protolanguage users (Bickerton, 1981, 1990, 2000) should be divided into two very different groups: (1) those who cannot ask questions (apes and feral children), and (2) those who can ask questions (children under two and pidgin language users). Asking questions seems to be a genetic ability, and the early human parent-child interaction is crucial for human babies to develop this genetic ability.

- The question (and accordingly, human intelligence) was born during ancient pitch-based vocal communication, before the advance of articulated speech. Question intonation is arguably the strongest linguistic universal among human languages and is the oldest means to ask questions (both in

phylogeny and ontogeny). Question-and-answer (responsorial and antiphonal) singing is universal for human group singing.

- Different contemporary human groups communicate via pitch-only based language, but no human speech exists without a pitch element (prosodic features). The pitch element of tone languages, whistle and drum languages must be the survivals of the archaic pitch-based system of referential communication.

- Although the elements of speech sounds are present even in ape and monkey vocal signals, the dramatic shift to fully articulated speech happened much later in human history.

- Groups of archaic *Homo sapiens*, that left Africa about 2 million years ago, developed the new articulated form of language in different regions of the world, separately from each other, and in different epochs. I suggest that the ancestors of East Asian, Australian Aboriginal and most of the Native American populations shifted to articulated speech earlier. Caucasoid and African populations shifted to articulated speech later.

- This difference in time of the shift to articulated speech might be reflected in the wide differences in distribution of traditions of vocal polyphony, in differences of the prevalence of stuttering, dyslexia and the acquisition of the phonological system in different populations of the world.

Therefore, according to the suggested model, *Homo sapiens* with human language and cognition occurred in Africa on the basis of choral singing and pitch-based musical communication before the wide dispersal of humans from that continent. Therefore, human cognition and language origins are monogenetic. *Homo sapiens* were born only once and this happened in Africa. As to articulated speech, although some phonetic elements obviously existed in pre-articulated pitch language, the dramatic shift to articulated speech happened in different regions, in different epochs, and by different strategies, after the wide dispersal of archaic *Homo sapiens* (known often as *erectus*) from Africa. Thus, speech origin seems to be polygenetic.

And above all, I would like readers of this book to remember that **music played the crucial role in human evolution, particularly during the early period of hominid prehistory. Ironically, music had been relegated to the “higher” and more “prestigious” realm of “culture” only after it lost its primary surviving function in human evolution.**

PostScript:

Moral and ethics issues

of the study of vocal polyphony

On 22nd March 1991 I delivered possibly the most controversial paper of my entire professional career at the conference at Mainz University, Germany. As the conference title (“Ethnomusicology and Historical Musicology: Common Goals, Shared Methodologies?”) suggested discussing the possibilities of interdisciplinary research in ethnomusicology and historical musicology, I decided to talk about the interdisciplinary research of the origins of choral polyphony. One of the parts of my paper was dealing with the fact of the geographic distribution of traditional polyphony and the correlation with the data of physical anthropology. This was less than a week before my Doctor of Music public defense at Kiev Conservatory. I had very good reports from all three official reviewers (including one from Valeri Pavlovich Alexeev, then the director of the Institute of ethnography and Archaeology and the number one physical anthropologist and population geneticist in the Soviet Union), and I was quite confident in my results. Besides, I had delivered papers on this topic a few times at different conferences, including international conferences, so the content of the paper was not new. But this was different.

Only after delivering my paper at the conference in Mainz I realized how sensitive the subject was for ethnomusicologists, and particularly in Germany. My paper was published (Jordania, 1997), and I was even congratulated on a very interesting paper by colleagues (even those attending the Mainz Conference), but I still clearly remember the awkward situation that followed my paper.

The problem of the morality and ethics in science is one of the fundamental issues that scholars may face. I am not going to discuss this problem in detail, as the responsibility of scholars in bringing new ideas and technologies to the knowledge of humanity is widely known. It was not only the creation of nuclear weapons or the LSD drug that teaches us to be responsible with new knowledge and ideas. Even Charles Darwin was long agonizing before deciding to publish his ideas about evolution.

We all can agree that morality and ethics are the backbone of our society. The matter is more complicated by the fact, that we do not have one shared by everyone model of morality and ethics. Although humanity is living in an

increasingly interconnected society, there are still too many fundamental issues that divide our societies. As the Football World Cup goes on, I have a big poster on the wall that has a few facts about the popularity and global impact of the world game in the contemporary world. Two amazing facts: the first states that the American footballer Mia Hamm has scored the most goals for her country's national team, more than any other soccer player in the game (female or male), and the other fact states that in 2006, for the first time in the history of Saudi Arabia, female spectators were allowed to watch a football game at the stadium.

Morality and ethics of our societies change in front of our eyes. Such fundamental elements of our lives, as gender segregation, norms of sexuality, gay and lesbian rights, have transformed enormously within the last few decades. There is a long way still to go, but the changes are striking.

Well, the origins of choral polyphony, hopefully, cannot create as much moral and ethical controversies, as the abovementioned issues, but they still are able to raise the brows. Marius Schneider was the first to discuss choral polyphony in the context of the whole world, and he was the first to face the controversies between the facts and ethics in the sphere of traditional polyphony. When he looked at the global distribution of traditional polyphony, he noticed that the geographic distribution of vocal polyphony was coinciding with the data of physical anthropology.

As a scholar, studying different aspects of vocal polyphony for the last 40 years, I believe this coincidence is a fact no unbiased ethnomusicologist can refute (Jordania, 1989). But **facts themselves are never immoral, or racist. It is our interpretations and our moral models that turn these facts into immoral, unethical, or racist statements.**

Unfortunately, Schneider could not escape the musicological axiom that “polyphony developed from monophony as the higher stage of musical thinking”. A combination of these two factors: (1) the coincidence of the distribution of vocal polyphony and the data of physical anthropology, and (2) the belief that polyphony was the later and higher stage of development, brought Schneider to the racist conclusion, that only some races managed to develop polyphony. This conclusion was very much in the milieu of the scholarly climate of the 1930s (Schneider's two-volume book appeared in 1934 and 1935 in Nazi Germany). At the same time, we should pay tribute to Schneider's bravery – in his book he argued that although Europe developed polyphony very well, Europeans (or Caucasoids) did not “invent” polyphony. According to Schneider, polyphony was “invented” somewhere in Southeast Asia and it reached Europe via the South Asian and Caucasian route.

Schneider's conclusion, that a new cultural trait, polyphony was not invented by Europeans, was not warmly greeted by Nazi ideologists, and according to the available information, Schneider's book was publicly burned by Nazis among other books that contradicted Hitler's ideology of white race supremacy (despite the fact that Schneider was the director of the Berlin Phonogram Archive).

Schneider's conclusion about the correlation of the regions of vocal polyphony with the data of physical anthropology became a virtual taboo in Ethnomusicology, a shameful legacy of the awful German science and ideology of the 1930s. In countless references to Schneider's book one can rarely read about his idea of the correlation between vocal polyphony and physical anthropology. I did not read German myself (although I am improving...), and from a few sources that were available to me in the Soviet Union about Schneider's work I did not even know until the second part of the 1980s that Schneider was connecting data of vocal polyphony and physical anthropology. Knowing only about Schneider's reliance on the theory of "cultural circles", I had to work out this coincidence myself.

In my opinion, Schneider's main mistake was the tacit acceptance of the idea of the later origin of polyphony as a more advanced stage of musical thinking.

To our discussion of the origins of vocal polyphony we need to bring one more name. As I have already mentioned briefly, the Russian musicologist Miron Kharlap suggested that choral polyphony must have been born earlier than monophony. Kharlap was not an ethnomusicologist, and he did not publish many works about his theory. He did not publish works on vocal polyphony either. His 1972 article was all he published about vocal polyphony (he also delivered a few papers, mostly on the origins of musical scales), but the unusual suggestion he made was very well known at least among Soviet ethnomusicologists. I remember myself criticizing Kharlap's theory (Jordania, 1989:240), believing that vocal polyphony and monophony were developing simultaneously in eastern and western areas of human evolution (eastern – East Asians and Australians, western – European and African populations). Later, with the accumulation of new information, understanding the crucial importance of the social factor in vocal polyphony, and most importantly, the accumulation of cases of the disappearance of vocal polyphony from different regions of the world convinced me that Kharlap's suggestion about the chronological primacy of vocal polyphony was correct.

It is a pity that I had a different view when I met the late Kharlap, only once, for lunch at a Moscow restaurant, together with Izaly Zemtsovsky, in the mid 1980s (I can not believe I did not write about this meeting in my diary!). Kharlap was already in his 70s. We discussed my article that was going to be published in the series “Music of Asia and Africa” (Kharlap wrote a peer review on my article), and of course, talked about the origins of vocal polyphony. We both had an opinion that vocal polyphony was an extremely ancient phenomenon, although our understanding of the very beginnings of vocal polyphony was different. It is still very different, as Kharlap was not proposing evolutionary links of the origins of choral polyphony with human intelligence, language or speech. For him music was secondary to language and he believed that as a phenomenon, music (singing) developed later from speech intonations, or prosodic features (in this Kharlap was close to Spencer’s and Steven Pinker’s ideas). The earliest and the most archaic forms of traditional singing, according to Kharlap, were heterophony and drone. Despite all the obvious differences of Kharlap’s ideas to the model suggested in this book, I must say, that Kharlap was the first who suggested that vocal polyphony did not come as a new higher stage of the development of musical thought, and that monophony came later than polyphony. I think it would be fair if the model of the origins of vocal polyphony, suggested in this book, is referred as the “Kharlap-Jordania Model.”

Let us go back to the moral and ethical problems that were haunting Marius Schneider’s conclusions. Marius Schneider’s conclusion about “only some races developing vocal polyphony” is fully rejected in this book, not because of its racist implications, but as the facts of the gradual disappearance of vocal polyphony in different regions of the world contradict his conclusions. But there are new ethical challenges for our model I want to discuss.

So, according to this model, there are at least three moral-ethical controversies:

- (1) Some populations shifted to articulated speech earlier than others,
- (2) Some populations have a more genetic inclination towards stuttering and dyslexia, and

(3) The development of the phonological system in children of different populations happens in different time frames.

From the very first moment, when the idea of the asynchronous shift to articulated speech was born in the discussion with Valeri Alexeev, I understood the possible ethical implications of the conclusions I was coming to in my research.

Gordon Hewes wrote in his survey of language origins theories: “if language... had multiple origins, they would hardly have been simultaneous, and the polygenic origin models therefore present the possibility that some human groups might have existed without language (or at least without spoken language) for a longer time than others. Such theories are hardly in keeping with egalitarian principles” (Hewes, 1977:49). The moral and ethics issue is addressed here directly. Hewes continues: “Monogenism, in accordance with Occam’s razor, possesses the virtue of elegance” (Hewes, 1977:49). Certainly, monogenism is the easier model for the origins of spoken language, but it fails to explain the possible serious differences in the prevalence of stuttering, dyslexia, and the acquisition of phonological system between different populations of the world. According to our model, human dialogical language, self-developing cognition and mental cooperation originated among our common ancestors in Africa. It was the shift to speech, the medium of language that went through a different scenario and time range in different regions of the world.

As I have already mentioned, and I would like to repeat again, that facts of nature or evolution cannot be immoral or unethical themselves. It is us, our interpretations through the moral models and ethical norms of our changing societies that make these facts “moral” or “immoral”.

Let us now have a look at our model of the evolution of choral singing, intelligence, language and speech from the point of view of the moral model and ethics of our society.

- Our model suggests that the ancestors of the populations of East Asia, Native Americans and Australian aborigines shifted to articulated speech earlier than the ancestors of European and African populations. I do not think this difference can be interpreted as a factor for the advantage of East Asian, Native American and Australian Aboriginal populations, who supposedly shifted to articulated speech earlier, or as a factor for the disadvantage of European and African populations that supposedly shifted to articulated speech later.

- Our model suggests that the lower rate of stuttering prevalence among East Asian, some Native American and Australian Aboriginal populations must be connected to their earlier shift to articulated speech, in comparison with the European and African populations. Unlike the first point, where it is just a **suggestion**, the difference in stuttering and dyslexia rates is a fact (or at least, can be tested relatively easily). How should we interpret the existing differences in prevalence? Does this suggestion point to some inferiority of the individuals with speech disorders and populations with higher prevalence of speech pathologies? I do not think so. All the known facts strongly suggest, that individuals with stuttering and dyslexia are among the humanities best known scholars and highest achievers: from Virgil, Erasmus, Demosthenes and Moses from the ancient world to Albert Einstein, Charles Darwin, Thomas Edison, Winston Churchill, Lewis Carroll, Nelson Rockefeller, Rodin and many more, they all suffered from stuttering or dyslexia (or even from both of them, like Winston Churchill). Even in China, where stuttering seems to be relatively rare, the most famous writer in modern Chinese history, Zhou Shu Ren (better known as Lu Xun, 1881-1936) is known to have suffered from stuttering.

Therefore, I believe there is nothing in the fact of a higher or lower stuttering or dyslexia rate, or in the suggestion of an earlier or later shift to articulated speech, to cause ethnic or racial tensions. Unless we make our own interpretations of the facts and the model presented in this book in order to seek some historical or biological advantages of some populations over the others. If my suggestions are proved (fortunately, many of them can be tested), we should accept it as a fact of our history. If we use these differences wisely, without turning a blind eye on human differences on one hand, and without turning these differences into ethnically or racially hot discussions on the other hand, we can draw plenty of positive feedback, for example, about the better distribution of humanitarian aid and specific medical help to some regions that need this help the most. Human populations have been living in different environments for many tens and hundreds of thousands of years. In this long process our ancestors adapted their eye, skin and hair color, gained genetic defense against local diseases, found ways to survive in drastically different environments. Our diversity is our treasure, the true testament of the strength of the human spirit and culture.

Appendix:

Conferences, Seminars and Symposia on traditional polyphony

I decided to add this appendix to the book to give the interested reader some information about the special conferences, symposia and seminars dedicated to the problems of traditional vocal polyphony. Of course, plenty of papers on different aspects of traditional polyphony have been delivered at countless ethnomusicological conferences all over the world, but here we discuss only the scholarly meetings that were **fully dedicated to traditional polyphony**. All the scholarly meetings discussed here had international participation.

Conferences, symposia and seminars on traditional polyphony, as I am aware, were organized in different countries from the 1960s, and became particularly widespread from the 1980s onwards. In this review I shall mention only the conference title, place, time, organizing body, names of the participants, countries they represented, and the titles of their papers. Some conference and symposia materials were not published at all, some were published as brief abstracts only, some were published as extended abstracts (from 2 to 4 pages), and some were published as collections of full papers (some even in more than one language).

Out of twenty five of such scholarly meetings, as I am aware of, only one has been organized in Africa (symbolically, the very first one in 1966), and one in Southeast Asia (in 2002). Most of these conferences, symposia and seminars were organized in Europe. No such scholarly meeting dedicated to traditional polyphony has been so far organized in North and South America, or Australia. Scholarly meetings in this review are organized in chronological order.

1966. Ghana. The University of Ghana in Legon, together with the Ministry of Education and Culture, hosted the Eighteenth International Conference of the International Folk Music Council. The conference was held from July 27th to August 3rd, 1966. The conference was **not** dedicated to the problems of traditional polyphony only. It had two main themes: (1) “The migration of folk music and its effect on musical style and context”, and (2) “Multi-part techniques in folk music and dance”. The subject of our interest is the second theme, mostly dedicated to polyphony in traditional music. Full

papers, delivered at the conference, were published in the *Journal of the International Folk Music Council*. Vol. 19 (1967), together with the concluding remarks by K. P. Wachsmann on the sessions on multi-part techniques. This is the list of scholars and their papers that were published in 1967:

1. Isabel Aretz, Venezuela, Caracas. "The polyphonic chant in South America."
2. Deborah Bertunoff, Israel, Tel Aviv. "A comparative study of the movement accentuation of the body in different cultures." [this paper was not dedicated to traditional polyphony]
3. Ernst Emsheimer, Sweden, Stockholm. "Georgian folk polyphony."
4. Nicholas England, USA, New York. "Bushmen counterpoint."
5. Akin Euba, Nigeria. "Multiple pitch lines in Yoruba choral music."
6. Felix Hoeburger, Germany, Regensburg. "Oriental elements in the folk dance and folk dance music of Greek Macedonia."
7. Atta Annar Mersah, Ghana, Legon. "The polyphony of Gyilgu, Kuozo and Awutu Sakumo."
8. Kwabena Nketia, Ghana, Legon. "Multi-part organization in the music of the Gogo of Tanzania."
9. David Rycroft, UK, London. "Nguni vocal polyphony."
10. Simkha Arom [Simha Arom], Central African Republic, Bangul. "Instruments de la musique particuliers a certaines ethnies de la Republique Centrafricaine."

1972, Georgia (USSR). The 5th National Seminar of the Musicologists and Folklorists of the USSR was held in Georgia on 27th May – 7th June. The title of the seminar was "Polyphony in Folk Musical Art." The seminar was organized as a joint venture of the Folklore Commission of the Union of Composers of the Soviet Union (chair – Eduard Alexeev) together with the Union of Composers of Georgia and the Musical-Choreographic Committee of Georgia. Scholarly sessions were organized in different cities of western Georgia. Seminar participants had meetings with numerous local ensembles (according to the official letter, 32 local ensembles), and over 200 songs were performed and recorded by the participants during these performances. Some scholars attended the seminar without the formal paper. Unfortunately, no papers or abstracts were published. The list of scholars and their papers is as follows:

1. Robert Atayan, Armenia, Erevan. "On polyphony in Armenian folk Music."
2. Vladimir Goshovski, Armenia, Erevan. a) "Classification of the types of polyphony"; b) "Is heterophony a polyphony?"
3. Elena Murzina, Ukraine, Kiev. "Sociological aspect of the study of group singing."
4. Nina Gerasimova-Persidskaia, Ukraine, Kiev. "Reflections of the characteristics of traditional polyphony in the manuscripts of the 17th-beginning of the 18th

centuries.” 5. Bairam Guseinli, Azerbaijan, Baku. “Element of polyphony in Azerbaijan traditional music.” 6. Grigol Chkhikvadze, Georgia, Tbilisi. “Georgian traditional polyphony and its characteristic features.” 7. Iakov Vitolin, Latvia, Riga. “Drone polyphony in Latvian traditional song.” 8. Nariman Mamedov, Azerbaijan, Baku. “Elements of polyphony in Azerbaijan mughams.” 9. Nikolai Bojarkin, Mordva [Russia], Saransk. “Stylistics of Mordvinian folk songs.” 10. Evsevi Chokhnelidze, Georgia, Tbilisi. “Issues of chordal structures of Georgian folk songs.” 11. Margarita Mazo, Russia, Leningrad. “Polyphonic types from Vologda.” 12. Igor Kniazev, Russia, Moscow. “Performance forms of part-singing according to the materials of fieldwork to the Voronezh region.” 13. Dmitri Pokrovsky, Russia, Moscow. “Some features of the instrumental polyphony in Pskov region.” 14. Valerian Magradze, Georgia, Tbilisi. “Reconstruction of the relict forms of Georgian folk polyphony.” 15. Mindia Jordania, Georgia, Tbilisi. “The ways of emergence of Georgian polyphony.” 16. Tatiana Ganzina, Ukraine, Kiev. “Distribution of different types of polyphony on the territory of the Ukraine.” 17. Vladimir Matvienko, Ukraine, Kiev. “Ways of development of polyphony in Ukraine.” 18. Atanazar Matiakubov, Uzbekistan, Tashkent. “Polyphonic thinking in Uzbek folk music.” 19. Bekten Beishenbiev, Kyrgyzstan. “Contemporary forms of Kyrgyz folk polyphony.” 20. Arvidas Karashka, Lithuania, Vilnius. “Peculiarities of polyphony of Lithuanian instrumental sutartines.” 21. Udo Kolk, Estonia, Tartu. “Setu polyphony.” 22. Shaban Shu, North Caucasia (Russia), Maikop. “Problems of polyphony in Adighian instrumental music.” 23. Iulia Krasovskaia, Russia, Moscow. “Linear means with polyphonic combination of choral lyrical wedding song and the bride’s weeping (wedding ritual of Pereslavl-Zelenskogo).” 24. Larissa Kostriukovets, Belarus, Minsk. “‘Kant Polyphony’ in Belarus.”

1973, Austria. “Drone in European Folk Music” was the title of the international conference that was held in Saint-Polten, Austria, on May 28-June 2, 1973. According to the conference program, 16 papers were delivered, and ten of them (one new among them, on drone polyphony in Iceland) were published as a separate collection in 1981 in German (see Deutsch, 1981). In this list the papers that were not published are marked with *:

1. Walter Deutsch*. “Der bordun in der europäischen volksmusik.” 2. Reidar Sevag*. “Bordunierende Volksmusikinstrumente in Norwegen.” 3. Karl Frank*. “Zur maultrommel in Suddeutschland.” 4. Brigitte Bachmann-

Geiser. "Schellenschütteln und Talerschwingen in der Schweiz." 5. Ivan Kachulev. "Zweistimmige Volksmusikinstrumente in Bulgarien." 6. Dragoslav Devich. "Typen serbischer Sackpfeifen." 7. Tibor Ehlers. "Formen und Möglichkeiten der drehleier." 8. Birthe Traerup. "Bordunierende Zweistimmigkeit in Mazedonien." 9. Felix Hoeburger. "Bordunbildungen in der Volksmusik Griechenlands." 10. Felix Karlinger*. "Die sardischen Launeddas." 11. Claudie Marcel-Dubois*: *La musique instrumentale à bourdon dans la tradition populaire française.* 12. John A. Brune. "Piob mhor und andere britisch-irische Sackpfeifen." 13. Klaus Walter. "Die Bordunpraxis in der europäischen Musik des späten Mittelalters und der frühen Renaissance anhand bildlicher, musiktheoretischer und musikalischer Quellen." 14. Rudolf Brandl*. "Der Bordun und seine Entwicklung in der Volksmusik des Dodekanes anhand eigener Feldaufnahmen 1965-1971." 15. Jan Steszewski*. "Der Bordun und die bordun-artigen Erscheinungen in der polnischen Volksmusik." 16. Franz Eibner. "Bordun – tonalität – Auskomponierung. Zum innermusikalischen sinngeladenen Bordunierenden Musizieren."

1984, Georgia. The 1984 conference "Problems of Folk Polyphony" at Tbilisi State Conservatory was the first of the series of biannual conferences on traditional polyphony. The conference was held in the Small Concert Hall of the Conservatory from 11th October to 14th October. Participants attended the scholarly sessions in the morning and afternoon, and attended concerts of Georgian traditional polyphony, specially organized for participants of the conference. Scholars from different republics of the USSR (currently many of them are independent states) delivered papers at the conference. Short versions of the papers were published as a separate collection in 1985 (Jordania, 1985), and several papers were added. Papers that were added later (and were not delivered at the 1984 conference) are marked with *.

1. Izaly Zemtsovsky, Russia, Leningrad. "Phenomenon of polyphony in music of oral tradition." 2. Moisei Boroda, Georgia, Tbilisi. "Some principles of rhythmic development in melodic of Georgian polyphonic songs." 3. Villis Bendorf, Latvia, Riga. "Types of Latvian polyphony and its possible external links." 4. Valerian Magradze, Georgia, Tbilisi. "Reconstruction of Meskhetian polyphonic songs." 5. Inga Bakhtadze, Georgia, Tbilisi. "Problem of origins of national polyphony in early Christian period." 6. Mzia Iashvili, Georgia, Tbilisi. "Two kinds of old Georgian professional music and the successiveness of the tradition of polyphonic singing." 7. Ketevan Baiashvili. Georgia, Tbilisi. "Available information on Georgian traditional

polyphony.” 8. Joseph Jordania, Georgia, Tbilisi. “On the emergence of drone three-part singing in Georgian traditional music.” 9. Otar Chijavadze, Georgia, Tbilisi. “Medieval Georgian chants and Mediaeval professional polyphony.” 10. Evsevi Chokhanelidze, Georgia, Tbilisi. “Chords in Georgian traditional music.” 11. Christopher Arakelov, Georgia, Tbilisi. “Multi-scale phenomenon in Georgian polyphonic songs (on Kartli, Kakheti, Svaneti, Samegrelo materials).” 12. Tamaz Gabisonia, Georgia, Tbilisi. “Harmonic functionality in polyphonic songs of Samegrelo.” 13. Nailia Almeeva, Tatarstan, Kazan. “Traditional polyphony of the ‘Christened Tatars’ from the middle Volga region.” 14. Gulnara Gvarjaladze, Georgia, Tbilisi. “Aspects of rhythmic organization in Georgian traditional song.” 15. Nikolai Bojarkin, Mordva, Saransk. “Two- and three-part polyphonic style of Mordvinian traditional songs and instrumental tunes.” 16. Edisher Garakanidze, Georgia, Tbilisi. “Polyphony in Kartli. 17. Nugzar Jordania. Georgia, Tbilisi. “The role of the base part in Gurian traditional polyphony.” 18. Vladimir Gogotishvili, Georgia, Tbilisi. “Fifths diatonic scale system in west Georgian polyphonic songs.” 19. Ivan Vindgolts, Russia, Karaganda. “Sociofolkloristics: Principle of realization of polyphony in folklore groups.” 20. Vitali Fedko*, Russia, Leningrad. “Realization of the idea of the “polyphony” in vocal ensembles of Russian-Belarus border.” 21. Viacheslav Shchurov*, Russia, Moscow. “Main types of Russian traditional polyphony.” 22. Galina Kutireva*, Russia, Moscow. “Polyphonic singing in western Belarus Polesie.” 23. Nikolai Dorofeev*, Russia, Leningrad. “Polyphonic singing of “Semeiskie” [Russian religious group living at the lake Baikal]. 24. Evgeni Pinchukov*. Russia, Sverdlovsk. “Harmonic and scale originality of Flamenco style.” 25. Mariam Ositashvili*. Georgia, Tbilisi. “The system of ‘Oktoixos’ in old Georgian professional singing.”

1986, Georgia. The second international conference with the title “Problems of folk polyphony” was held in the resort complex “House of Recreation and Creativity of Composers” in Borjomi, from 10th to 15th November. Scholarly sessions were held in the mornings and afternoons. Concerts of Georgian traditional polyphonic songs were presented by two ensembles from different regions of Georgia every evening. Extended abstracts were published (Jordania, 1986). Here is the list of the scholars and their papers according to the conference program and published extended abstracts:

1. Izaly Zemtsovsky, Russia, Leningrad. “Problems of Musical Dialogue: Antiphon and diaphony.” 2. Ivan Vindgholtz. Russia, Karaganda. “Marius

Scheider's 'History of Polyphony' half a century later". 3. Fedor Arzamanov*. Russia, Moscow. "Some peculiarities of Chinese traditional polyphony." 4. Nailia Almeeva, Tatarstan, Kazan. "Heterophonic texture: the case of the analyses of the polyphonic songs or Christened Tartars." 5. Alma Kunanbaeva, Kazakhstan, Leningrad. "Hierarchy of the stable elements of Kazakh epic singing in the system of "voice-instrument." 6. Oksana Nikitenko. Russia, Leningrad. "Creating a polyphonic model in a musical culture." 7. Evsevi Chokhonelidze. Georgia, Tbilisi. "On some problems of Georgian folk polyphony." 8. Viktor Kartsovnik. Russia, Leningrad. "Yuri Krizhanich on Byzantine polyphony." 9. Mzia Iashvili. Georgia, Tbilisi. "Unity of contrasts [ertobai shekovlebisai] and the antiquity of the Georgian tradition of polyphonic singing." 10. Nino Pirtskhalava, Georgia, Tbilisi. "Georgian three-part polyphony and the musical-aesthetic thought of Ioanne Petritsi." 11. Nikolai Kauffmann, Bulgaria, Sofia. "Traditional polyphony in Bulgarian professional music." 12. Zinaida Mozheiko*. Belarus, Minsk. "The tradition of polyphonic singing in Belarus Polesie." 13. Nikolai Bojarkin. Mordovia, Saransk. "On links between vocal and instrumental music of Mordvinians." 14. Valerian Magradze, Georgia, Tbilisi. "On the method of the reconstruction of the polyphonic singing of Meskheti." 15. Nino Kalandadze, Georgia, Tbilisi. "Polyphonic lullabies." 16. Nato Zumbadze, Georgia, Tbilisi. "On the peculiarities of women's polyphony in Georgia." 17. Edisher Garakanidze, Georgia, Tbilisi. "Interrelationships between Acharo-Shavshetian, Gurian and Svan musical dialects of Georgian traditional music." 18. Anatoly Rakhaev, North Caucasia, Nalchik. "The problem of choral accompaniment "Ezhu" in Balkarian traditional singing." 19. Tamara Blaeva, North Caucasia, Nalchik. "Peculiarities of the polyphonic texture in Adighian traditional songs." 20. Igor Macievsky, Russia, Leningrad. "The problem of forming Instrumental Polyphony among East Slavs and Balts." 21. Vaike Sarv, Estonia, Tallinn, Estonia. "The main types of polyphony in Setu traditional song." 22. Urve Lippus, Estonia, Tallinn. "Two-part singing in older songs of south Estonia." 23. Nugzar Jordania. Georgia, Tbilisi. "The form of Trio in a singing tradition of Western Georgia." 24. Laima Burkshtaitene, Lithuania, Vilnius. "Problems of the emergence of the late polyphonic style in northeastern Lithuania." 25. Ketevan Nikoladze, Georgia, Tbilisi. "Double blown instruments and the problem of vocal polyphony." 26. Ketevan Baiashvili, Georgia, Tbilisi. "The problem of assimilation of polyphonic traditions (on the example of Ertso-Tianeti)." 27. Khristofor Arakelov. Georgia, Tbilisi. "Cadences in Georgian (Svan) polyphonic choral songs." 28. Gulnara Gvardjaladze, Georgia, Tbilisi. "Aspects of rhythm in Georgian polyphonic song." 29. Tamaz Gabisonia,

Georgia, Tbilisi. "Compositional principles and types of Georgian traditional polyphony." 30. Oscar Elschek, Slovakia, Bratislava. "Traditional polyphony in European musical cultures." 31. Yulia Evdokimova*. Russia, Moscow. "On typology and cartography of European polyphonic regions." 32. Todor Todorov*. Bulgaria, Sofia. "The problem of polyphony in the research of Bulgarian ethnomusicologists." 33. Villis Bendorf, Latvia, Riga. "On the relationship between Baltic and Balkan polyphonic traditions." 34. Dunja Rihtman-Sotric, Bosnia, Sarajevo. "Polyphonic forms in Bosnia and Herzegovina." 35. Radmila Petrovich, Serbia, Beograd. "Two-part singing in Serbia." 36. Anaid Bagdasarian, Armenia, Erevan. "Elements of polyphony in Armenian monodic music." 37. Oleg Gerasimov, Mari, Russia. Yoshkar-Ola. "The principle of establishing the polyphonic texture in traditional Mari songs." 38. T. Ignatieva, V. Nikiforova, Russia, Novosibirsk. "Peculiarities of traditional texture in Yakutian "Osuokai." 39. Martin Boiko, Latvia, Riga. "Relicts of Sutartines in Latvia." 40. Daiva Rachiunaite, Lithuania, Vilnius. "Forms of Lithuanian linear polyphony." 41. Elena Murzina, Ukraine, Kiev. "Polyphony as a dynamic phenomenon of the traditional musical culture of the Ukraine." 42. Tatiana Rudichenko, Russia, Rostov. "The role of traditional timbre in the surviving polyphonic singing culture on the river Don." 43. Nadia Zhulanova, Russia, Perm. "Stylistic differences in the local traditions of vocal polyphony of the Komi-Permiaks." 44. Nino Tsitsishvili, Georgia, Tbilisi. "On South-Slavic – Georgian musical and ethnogenetic links." 45. Joseph Jordania, Georgia, Tbilisi. "Polyphony and ethno-genesis."

1988, Georgia. The third international conference with the title "Problems of folk polyphony" (and the last one to be held in Borjomi), took place on October 15-22. It was a joint venture of the Tbilisi State Conservatory, Tbilisi State University, the Union of Composers of Georgia, and the Georgian Choreographic Society. The next, the fourth conference was planned for 1991, invitations were sent (even the abstract of Dieter Christensen was received), but the worsening political and economical situation, then the civil war of 1991-1992, and the wars in South Ossetia and Abkhazia made any follow-up conference impossible for a decade. Extended abstracts of the 1988 conference papers were published (Jordania, 1988c). Here is the list of the scholars and their papers according to the conference program:

1. Izaly Zemtsovsky, Russia, Leningrad. "Specifics of polyphonic articulation: Texture and timbre."
2. Barbara Krader, USA "Traditional polyphony in Bulgaria."
3. Susanna Ziegler, Germany, Berlin. "Caucasian

polyphony in the mirror of German musicology.” 6. Margarita Mazo, USA “Types of Russian Polyphony.” 7. Dragoslav Devich, Serbia, Yugoslavia “Traditional two-part singing in Serbia.” 8. Nguen Van Nam, Vietnam (Russia), Nalchik “Polyphonic types in traditional music of Vietnam.” 9. Tamaz Gabisonia, Georgia, Tbilisi State Conservatory. “Ostinato polyphony in Georgian traditional music.” 10. Nailia Almeeva, Tatarstan (Russia), Kazan. “Fifth-Third texture [one of the types of polyphony] among Christened tartars and its analogues among the peoples of Middle Volga Region.” 11. Christopher Arakelov, Georgia, Tbilisi State. “Cadence in Georgian (Samegrelo) traditional polyphonic songs.” 12. Igor Macievsky, Russia, Leningrad. “On the role of the socio-psychological factors in the establishing of polyphonic texture in the compositions of traditional instrumental ensembles.” 13. Oleg Gerasimov, Russia, Mari. Yoshkar-Ola. “Genre and regional peculiarities of Mari polyphony” 14. Larissa Khaltava, Kazakhstan, Alma-Ata. “The phenomenon of drone polyphony in the system of cosmogonist images of Turkic-Mongol peoples.” 15. Joseph Jordania, Georgia, Tbilisi. “Genesis of polyphony and the origins of articulated speech.” 16. Martin Boiko, Latvia, Riga. “Ethno-historical aspects of Latvian drone polyphony.” 17. Ketevan Baiashvili, Georgia, Tbilisi. “The problem of the origins of Georgian polyphonic dirges and funeral hymns.” 18. Eduard Barsegian, Armenia, Erevan. “On polyphony in Ancient Armenia.” 19. Villis Bendorf, Latvia, Riga. “Some preliminary remarks on the links between Baltic and Caucasian polyphony.” 20. Tamara Blaeva, North Caucasia (Russia), Nalchik. “Traditional types of polyphonic textures in Adighian traditional songs.” 21. Liudmila Bojarkina, Mordva (Russia), Saransk. “Mordvinian and South Russian polyphonic traditions (question of interrelationships).” 22. Nikolai Bojarkin, Mordva (Russia), Saransk. “On the issue of common features of traditional vocal and instrumental music of Mordva.” 23. Liubov Berger, Russia, Moscow. “Georgian folk polyphony in the context of the origins of West European polyphony.” 24. Edisher Garakanidze, Georgia, Tbilisi. “Considerations of the origins of Georgian polyphony.” 25. Nato Zumbadze, Georgia, Tbilisi. “On antiphonal polyphony (on the materials of women’s songs from East Georgia).” 26. Mzia Iashvili, Georgia, Tbilisi. “On the structural principles of Georgian neumatic writing in the light of Ioanne Petritsi teaching.” 27. Viacheslav Kartsovnik, Russia, Leningrad. “Secondal diaphony in Medieval Italy and in the Balkans.” 28. Mikhail Lobanov, Russia. “Russian traditional polyphony of the Pynezh region according to contemporary materials (60th anniversary of the publication of “Pynezh songs” by E.V. Gippius and Z.V. Evald).” 29. Valerian Magradze, Georgia, Tbilisi. “Characteristic melodic formulas as an

important structural element of Meskhetian traditional music.” 30. Tamar Meskhi, Georgia, Tbilisi. “Georgian polyphonic urban songs.” 31. Iaroslav Mironenko, Moldavia, Kishinev. “On the double nature of unison singing.” 32. A. Mozas, Russia, Leningrad. “On the study of traditional polyphony from the point of view of singers behavior and self-assessment.” 33. Mariam Ositashvili. Georgia, Tbilisi. “On the interrelationships of the parts in Georgian chants.” 34. Daiva Rachiunaite, Lithuania, Vilnius. “The role of the “collector” in forming the sutartines.” 35. Maria Roditeleva, Russia, Ufa. “Polyphony as the essence of the musical process in Russian folk music.” 36. V. Sai, Russia, Leningrad. “Elementary contrapuntal forms in musical cultures of written and oral traditions: Towards the establishing of the united theory of counterpoint.” 37. Vaike Sarv, Estonia, Tallinn. “Polyphonic dirges in the singing traditions of Setu.” 38. Elena Khodorkovskaia, Russia, Leningrad. “The problems of traditional polyphony in theoretical conception of B.L. Yavorsky.” 39. Nino Tsitsishvili, Georgia, Tbilisi. “Balkan-Georgian musical-ethnographic parallels.” 40. Evsevi Chokhonelidze, Georgia. Tbilisi State Conservatory. “The phenomenon of Georgian folk polyphony.”

1989, Russia. The conference entitled “Vocal Polyphony of the Peoples of Russia” was held in the Russian city of Voronezh, from September 24th-29th 1989. It was organized by the Musicology and Folklore Committee of the Union of Soviet Composers and the Gnesin State Musical-Pedagogical Institute. Short versions of the papers (each over three pages, some with musical examples) were published in Russian (see Engovatova, 1989). Here is the list of scholars and their papers according to the conference program and the published materials (some of the papers were not published and they are marked with *):

1. B. Efimenkova*, Russia, Moscow. “Russian vocal polyphony in the light of the structural-typological research.”
2. Yulia Evdokimova*, Russia, Moscow. “Principles of classification of the early forms of polyphony in foreign studies.”
3. Izaly Zemtsovsky, Russia, Leningrad. “Drone in the music of the aural tradition: Results and the perspectives of the international study of the problem.”
4. Inna Nazina, Belarus. Minsk. “The principle of droning in traditional vocal and instrumental music of Belarus.”
5. Olga Pashina, Russia. Moscow. “On the specifics of drone diaphony in eastern Polesie.”
6. Inna Fedorenko, Russia. Kransoyarsk. “The system of polyphony in lyrical songs of Russian-Belarus-Ukrainian border region.”
7. Zhanna Krasnova, Russia. Leningrad. “Some characteristics of forming and structure of heterophonic polyphony of Russian folk songs (on the materials of one

tradition from Russian-Belarus border).” 8. Evgenia Reznichenko, Russia. Moscow. “Some observations on North Russian variant heterophony.” 9. Valentina Listichkina, Russia, Moscow. “The correlation of melody and texture in wedding songs of the middle region of the river Mezen.” 10. Margarita Engovatova, Russia. Moscow. “Two-part singing with “podvodka” in Russian lyrical song.” 11. Tatiana Digun, Russia, Chekhov. “On some types of polyphony of the traditional songs of the north regions of the river Don.” 12. Elena Shishkina, Russia, Astrakhan. “On the polyphonic structure of wedding songs of the river Volga-Aktiubinsk basin (Astrakhan region).” 13. Tatiana Kaluzhnikova, Russia. Sverdlovsk. “Polyphony in songs of the Ural mountains [Gornozavadskoï Ural].” 14. Larisa Muxomedshina, Russia, Irkutsk. “On polyphonic structure of traditional “drawn out songs” of the river Angara.” 15. Natalia Giliarova, Russia, Moscow. “Polyphony as one of the components of the musical dialect.” 16. Alexander Banin, Russia, Moscow. “Polyphony and the problem of the evolution of the musical system.” 17. Alexandra Sokolova, Ukraine, Odessa. “On the types of polyphonic texture and its links with the scale basis of a song.” 18. Ekaterina Dorokhova, Russia, Moscow. “On the correlation between the types of polyphony and other levels of pitch organization of songs.” 19. Anatoli Ivanov, Russia, Moscow. “Canon in semi-periodic form (on the example of the dirges of Kazak-Nekrasov’s).” 20. Mikhail Lobanov, Russia. Moscow. “Polyphony and temp.” 21. Nikolai Bojarkin, Mordva (Russia). Saransk. “Mordvinian polyphony in the context of Finno-Ugric musical folklore.” 22. Nadia Zhulanova, Komi (Russia). Perm. “Some peculiarities of the polyphony of Komi-Permiaks.” 23. Larisa Shipitsina, Komi (Russia), Perm. “On traditional polyphony of Komi-Permiaks’ musical culture.” 24. Rimma Churakova. Russia, Izhevsk. “On the vocal polyphony of south Udmurts.” 25. Elena Boikova, Russia. Perm. “On two forms of collective singing among south Udmurts.” 26. Tatiana Ananicheva, Russia, Moscow. “Some features of polyphonic texture of Russian wedding and round-dance songs of the villages of the basin of the river Sur.” 17. Anatoly Rakhaev, North Caucasia (Russia), Nalchik. “Forms of polyphonic singing in the epic tradition of the peoples of North Caucasia.” 18. Tamara Blaeva, North Caucasia (Russia), Nalchik. “The tradition of singing with the alternation of a soloist and a group in its connection with the musical-stylistic peculiarities of Adighian songs.” 19. Khamza Ikhtisamov, Russia, Ufa. “Overtone-harmonic polyphony in the musical folklore of Turkic peoples.” 20. Dashinima Dugarov, Russia, Ulan-Ude. “The problem of the emergence of the genre “ai-don” and heterophonic polyphony among western Buriats.” 21. Evgeni Trembovelsky, Russia, Voronezh. “The ‘Extending’ [raskrivaiushiisia] scale

in folk and professional music (on the example of compositions of M. N. Musorgsky).” 22. Simha Arom*, France, Paris. “Recording methodology for polyphonic music”.

1991, France. Polifonies Vivantes (the first international scholarly body, focusing on the study of traditional polyphony, director – Simha Arom), under the patronage of the French Ministry of Culture and the National Centre for Scientific Research, and with the help of the Royaumont Foundation, organized a conference “Russian Traditional Polyphony” in Royaumont Abbey, from May 30th – June 2nd. All these papers were fully published as a separate collection of the articles *Les polyphonies populaire russes* (see Arom and Meyer, 1993). Here is the list of participating scholars and their papers:

1. Ekaterina Dorokhova, Russia. “Plurivocalite traditionnelle du sud de la Russie.”
2. Margarita Engovatova, Russia. a) “Plurivocalite traditionnelle de ‘O’uest de la Russie”; b) “Plurivocalite traditionnelle des Russes du Nord.”
3. Anatoly Ivanov, Russia. “A propos des polyphonies instrumentales et vocals des regions de Kursk et de Belgorod.”
4. Nadia Zhulanova, Russia. “Plurivocalite traditionnelle des ethnies fino-ougriennes de la Volga et de l’Oural.”
5. Nikolai Kaufman, Bulgaria. “Plurivocalite traditionnelle des Cosaques de Bulgarie.”
6. Alexander Medvedev, Russia. “La plurivocalite populaire russe en tant que systeme dans l’art musical russe.”
7. Tamara Pavlova, Russia. “Plurivocalite traditionnelle des Cosaques de Koubagne.”
8. Anne-Helen Trottier, “Contextes et reperes.”

1994, France. Polifonies Vivantes, under the patronage of the French Ministry of Culture and the National Centre for Scientific Research, and with the help of the Royaumont Foundation, organized a meeting of the working group of experts in traditional polyphony of different cultures in Royaumont Abbey, from March 1-4, 1994. Participants also attended performance-demonstrations of African polyrhythmic, Corsican polyphony, and Georgian polyphony. No materials of this meeting were published. According to the conference program, the following papers were delivered:

1. Simha Arom. Paris. “Zentralafrikanische Formen der Mehrstimmigkeit.”
2. Mantle Hood, Baltimore. “Heterophonie in der Gamelanmusic auf Java.”
3. Ito Loh, Manila: Mehrstimmigkeit der Bergstamme in Taiwan.”
4. Marcel Peres, Paris. “Mehrstimmigkeit auf Korsika (Professional Und Kirchenmusik).”
5. Susanne Furniþ, Vincent Dehoux, Paris. “Mehrstimmigkeit in Afrika.”
6. Emanuelle Olive, Paris.

“Bushmannpolyphonie”. 7. Bernard Lortat-Jacob, Paris. “Aasthetische und anthropologische aspekte der Mehrstimmigkeit in Rumanien, Albanien and auf Sardinien.” 8. Jaume Ayats, Barcelona. “Polyphone elementa in der Volksmusik in Spanien”. 9. Anne Caufriez, Brussels. “Portugal- vokale Mehrstimmigkeit der Frauen”. 10. Oscar Elschek. Bratislava. “Vokale Mehrstimmigkeit in Horechronie (Slowakei).” 11. Susanne Ziegler, Berlin, and Edisher Garakanidze, Tbilisi. “Georgische Polyphone.” 12. Alica Elschekova, Bratislava (spis). 13. Ricardo Canzio, Paris. “Polyphones Musizieren bel Amazonas-Indianern.” 14. Nikolai Kaufman, Sofia. “Bulgarische Diaphonie.” 15. Tran Quang Hai, Paris. a) “Mehrstimmigkeit bei minderheiten in Vietnam”, b) “Buddistische Musik in Korea un China”, c) “Obertonsingen.” 16. Jose Maceda, Quexon City. “Mehrstimmigkeit auf den Philippinen.” 17. Franz Fodermayr, Wien. “Ison in der byzantin Kirchenmusik.” 18. Werner Deutch, Wien. “Psychoakustische Aspekte der Mehrstimmigkeit”.

1998, Georgia. The series of conferences on traditional polyphony came back after ten years of silence in Georgia. The conference was organized by the Tbilisi State Conservatory (rector Manana Doijashvili and vice-rector Rusudan Tsurtsunia) and was held from October 15-22, 1998. Papers were fully published in the language they were presented in, although extended abstracts in alternative languages (English or Georgian) were also published (see Tsurtsunia, 2000). Most of the participants were from Georgia (unless indicated otherwise). Here is the list of scholars and their papers according to the collection of published papers:

1. Caroline Bithell, UK. (a) “Polyphony in the Corsican tradition structure: Style: Context: Motivation.” (b) “The Corsican sound: Identity, evolution and transformation.”
2. Tamaz Gabisonia. “Classification of the Georgian polyphony forms.”
3. Vladimer Gogotishvili. “On characteristics of the mood-intonational system in Georgian (Megrelian) lyrical songs.”
4. Malkhaz Erkvanidze. “On the nature of Georgian polyphony.”
5. Nato Zumbadze. “The system of multi-part singing in Georgian women’s songs.”
6. Nino Kalandadze-Makharadze. “Zari – polyphonic dirge in Georgian folklore.”
7. Tamar Meskhi. “Georgian urban polyphonic songs.”
8. Joseph Jordania, Australia. “Question intonation, speech pathologies and the origins of polyphony.”
9. Nino Pirtskhalava. “Ioanne Petritsi’a aesthetics and Georgian three-part singing.”
10. Manana Shilakadze. “Polyphony and Georgian folk musical instruments.”
11. David Shugliashvili. “On polyphony of Georgian hymns.”
12. Nino Tsitsishvili, Australia. “A systematic study of

the relationships between polyphony and monophony in the Kartli-Kakhetian table and solo work songs.” 13. Kukuri [Evsevi] Chokhanelidze. “The art of improvisation and Georgian polyphonic music.”

2000, Georgia. An international conference “Problems of Polyphony in Sacred and Secular Music” was organized at the Tbilisi State Conservatory by the Tbilisi State Conservatory with the help of the foundation “Open Society – Georgia.” Papers were published in the language in which they were delivered, with abstracts in the English (or Georgian) language (Tsurtsunia, 2001). Here is the list of scholars and the papers according to the published collection (most of the participants were from Georgia unless stated otherwise):

1. Tamar Chkheidze. “Peculiarities of musical Composition of Orthodox Liturgy and Catholic Mass (comparative analyses).”
2. Dali Dolidze. “The old Georgian Synodikon”
3. Khatuna Managadze. “Historic-Liturgical and musical aspects of lent chants.
4. Manana Andriadze. “On *Chrelis* preserved in *Gulanis*.”
5. Ekaterine Oniani. “Some considerations of Georgian “beautified” chanting.”
6. Christiana Dimitriou, Romania. “The manuscripts of Byzantine music preserved in Monastic and Episcopal libraries of Cyprus.”
7. Malkhaz Erkvanidze. “The nature of Georgian polyphony: On unity of form.”
8. David Shugliashvili. “Unison” polyphony of Georgian chant.”
9. Magda Sukhiashvili. “On some aspects of Georgian original hymnography historical development.”
10. Nestan Sulava. “Annunciation in Georgian hymnography.”
11. Marine Tsintsabadze. “St Ketevan the Queen in Georgian hymnography.”
12. Zivar Huseinova, Russia, Saint Petersburg, “Musical papers of the Church Bulletin of the Georgian Exarchate.”
13. Elena Shevchuk, Ukraine. “Types of polyphony in the 17th century art of Ukrainian folk songs and church chants.
14. Tamaz Gabisonia. “Some aspects of the relation between Georgian church hymns and Georgian folk songs.”
15. Nino Kalandadze-Makharadze. “World anthology of vocal impressions and Georgia polyphony in the ethnomusicological department of Paris Museum of Man.”
16. Vladimer Gogotishvili. “On certain characteristics of mode systems of Georgian polyphonic folk songs.”
17. Tina Zhvania. “The role of instruments in Georgian polyphony (the relationship between vocal and instrumental music).”
18. Manana Shilakadze. “Aspects of Georgian musical folklore study in the works by foreign scholars (about the work of Sylvie Bolle-Zemp).”
19. Kukuri (Evsevi) Chokhanelidze. “On some historical and theoretical aspects of tone concept.”
20. Nato Zumbadze. “Georgian polyphonic song and methods of

teaching it.” 21. Joseph Jordania, Australia. “Moral models and ethics in the study of the origins of choral polyphony.”

2002, Georgia. On October 2-8 2002 the First International Symposium on Traditional Polyphony was held at the Tbilisi State conservatory on a much larger scale. The Tbilisi State Conservatory (Rector Manana Doijashvili, Vice-Rector Rusudan Tsurtssumia) and The International Centre of Georgian Folk Music (President – Anzor Erkomaishvili) hosted the symposium. The President of Georgia Eduard Shevardnadze and the Catholicos Patriarch of Georgia attended the opening ceremony. During this symposium the International Research Centre for Traditional Polyphony was established with the help of UNESCO and the financial support of the Japanese Government (the director of the Centre – Rusudan Tsurtssumia). Noriko Aikawa, Director of the Intangible Heritage Section of UNESCO, attended the symposium and addressed the participants. Full papers delivered at the conference were published in 2003 in two languages – Georgian and English (Tsurtssumia and Jordania, 2003). Here is the list of participants and the titles of the papers (papers that have not been published are marked with *):

1. Izaly Zemtsovsky, USA. “Polyphony as a way of creating and thinking: The musical identity of *Homo Polyphonicus*.”
2. Steven Brown, USA. “Contagious heterophony: A new theory about the origins of music.”
3. Joseph Jordania, Australia. “Multidisciplinary approach to the problem of the origins of vocal polyphony.”
4. Rusudan Tsurtssumia, Georgia. “Polyphony – a category of Georgian traditional musical thinking.”
5. Evsevi Chokhonelidze, Georgia. “On an important period of a qualitative shift in Georgian musical-aesthetic thinking.”
6. Nino Pirtskhalava, “Ioanne Petritsi’s philosophy and Georgian polyphony.”
7. Simha Arom, France. “The recording of complex polyphonic music by a re-recording technique.”
8. Franz Fodermayr and Werner Deutsch, Austria. “Psychoacoustics and vocal polyphony.”
9. Oohashi Tsutomu (Yamashiro Shoji), Nishina Emi, Kawai Norie, Honda Manabu, Nakamura Satoshi, Yagi Reiko, Japan. “The micro-temporal sound signal structure and its function as traditional vocal expression around the world.”
10. Malkhaz Erkvanidze, Georgia. “On the Georgian scale system.”
11. Stuart Gelzer, USA. “Testing a scale theory for Georgian folk music”.
12. Johan Westman, Sweden*. “On the problem of the tonality in Georgian polyphonic songs: The variability of pitch, intervals and timbre.”
13. Dieter Christensen, USA/Germany. “Vocal polyphony and multisonance in south-eastern Arabia.”
14. Timothy Rice, USA. “The

geographical distribution of part-singing styles in Bulgaria.” 15. Tran Quang Hai, France. “Polyphony in one throat.” 16. Nino Maisuradze, Georgia. “On some problems of Georgian traditional polyphony.” 17. Ketevan Nakashidze, Georgia. “On polyphony in Georgian funeral songs.” 18. Vladimer Gogotishvili, Georgia. “On some characteristics of more-intonational scales in Kartli-Kakhetian long table songs (East Georgia).” 19. Maka Khardziani, Georgia. “the formation of three-part singing and determination of the type of polyphony in Svanetian traditional music.” 20. Nino Kalandadze-Makharadze, Georgia. “On one peculiarity of articulation in Georgia polyphonic singing.” 21. Thomas Hausermann, Switzerland. “Observations on Georgian Christmas songs.” 22. Marina Kvizhinadze, Georgia. “The Gurian song ‘Aguna’.” 23. Manana Shilakadze, Georgia. “On regional styles in Georgian instrumental music (Svaneti).” 24. Nina Shvelidze, Georgia. “Georgian multistemmed salamuri – *Larchemi (Soinari)*.” 25. Ketevan Nikoladze, Georgia. “On the problem of interrelationship between the forms of polyphony in vocal and instrumental music.” 26. David Shugliashvili, Georgia. “Georgian chanting schools and traditions.” 27. Manana Andriadze & Tamar Chkheidze, Georgia. “The system of *chreli* in Georgian sacred music.” 28. Ekaterine Oniani, Georgia. “On the problem of decoration (“gamshvenebe”) of hymns in Georgian chanting.” 29. Mariam Ositashvili, Georgia. “On some peculiarities of Georgian old professional music.” 30. Nino Tsitsishvili, Australia. “The study of gender in Georgian ethnomusicology.” 31. Tamar Meskhi, Georgia. “On Georgian traditional music in the Soviet period.” 32. Marine Kavtaradze, Georgia. “The transformation of traditional musical cultures within typologically foreign cultures.” 33. Susanne Ziegler*. Germany. “Voices from the past”: Caucasian polyphony in historical sound recordings from the Berlin Phonogram Archive.” 34. Nato Zumbadze, Georgia. “Georgian polyphonic songs and its foreign performers.” 35. Frank Kane, France. “Learning techniques for Georgian singing used by Georgian choruses abroad.” 36. Michael Bloom, UK. “Georgian singing in the United Kingdom – joys and pitfalls.” 37. Richard Gough, UK. “Georgian song in Wales and beyond (part 1 – An account of beginnings, imaginings and savoring).” 38. Joan Mills, UK. “Georgian song in Wales and beyond (part 2 – The development of interest in Georgian song within the “community Choir” movement and in performance training).”

2002, Taiwan. An International Ethnomusicology Conference “Polyphony in Traditional Society: Behavior and Aesthetics” was organized

by Taipei National University of the Arts, Department of Musicology. The conference was held from October 21st to October 25th. The conference was accompanied by the concerts of traditional polyphony from Taiwan, mainland China, Mongolia, Vietnam, Austronesia, and Mediterranean. The proceedings of the conference were published (Wu, 2002). The following papers were delivered at the conference:

1. Jiin Fure Yu, Taiwan. "Polyphonic improvisation and Social restriction of the *Segez* group in Atayal."
2. Chun-Yen Sun, Taiwan. "Exploration of polyphonic technique and aesthetics of Malan Amis through the singing of Ying-Nan Kuo".
3. Ming-Jay Zhou, Taiwan. "The operation and specialties in Paiwan polyphony."
4. Run-Shum Wu, Taiwan. "The oral tradition and practice in polyphonic singing: polyphonic form, sonic facts and Divers Variation from Bunun's *Pasi but but*."
5. Xiu Zhao Yang, China). "A description and discussion of Tong's multi-voice folk songs in Guan Xi Province."
6. Xiu-Zhao Yang, China. The tradition and insistence of multi-voice folk-song in Tong, Guan Xi.
7. Tran Quang Hai, France. "Polyphony in overtone singing in Central Asia: The case of Mongolia and Tuva."
8. Xin-Rung Chang, China. "Eight-voice polyphony of Hani, Unan."
9. Jian-Zhong Qiao, China. "Field-work report of Miaw's polyphonic singing, Gui-Zhou (1999)."
10. To Ngoc Thanh, Vietnam . "The heterophonic singing of some Vietnamese Minorities."
11. Philip Haruitara, Solomon Islands. "Polyphonic jodel and pipe flutes of 'Are'are', Solomon Islands."
12. Felicidad A. Prudente, Philippines "Weaving voices of the Highland Peoples of Northern Philippines."
13. Anne-Florence Borgeuf, France. "The *a Tenore* polyphonic singing of Sardinia."

2004, Georgia. The second International Symposium on Traditional Polyphony was organized from September 23-27, 2004 at the Tbilisi State Conservatory. After the symposium participants traveled to Western Georgia, Guria, to attend the "First International Festival of Gurian Traditional Polyphonic Song" (29-30 September). Full papers (in English and Georgian) were published in 2005 (see Tsurtsumia and Jordania, 2005). Here is the list of scholars and the titles of the papers:

1. Izaly I. Zemtsovsky, USA. "Polyphony as 'Ethnohearing' and its 'Musical Substance': Homo Polyphonicus in action."
2. Joseph Jordania, Australia. "'Interrogo Ergo Cogito'" – "'I Am Asking Questions, Therefore I Think': Responsorial singing and the origins of human intelligence."
3. Woolf van Silver. UK. "Is polyphonic singing uniquely human?"
4. Gia Bagashvili, Georgia. "The aesthetic polystageness of georgian musical

folklore.” 5. Nino Pirtskhalava. “On the significance of Ioanne Petritsi in the history of Georgian hymnography.” 6. Tamaz Gabisonia, Georgia. “Hypotheses about the process of the formation of Georgian polyphonic singing.” 7. Dieter Christensen, USA. “Vocal polyphony in Bosnia-Herzegovina in the Georgian and Mediterranean context.” 8. Daiva Rachiunaite-Viciniene, Lithuania. “Manifestations of drone in the tradition of Lithuanian polyphonic singing.” 9. Nato Zumbadze, Georgia. “Georgian Batonebi songs.” 10. Ardian Ahmedaja. “On the diversity of multipart singing among the Albanians: The relationship between the parts in the songs of Toskeri and Myzeqe.” 11. Nino Kalandadze-Makharadze, Georgia. “The funeral ‘zari’ in traditional male polyphony.” 12. Evgeni Efremov, Ukraine. “The role of a tonality in the formation of early texture types in Ukrainian Polesie.” 13. Bozena Muszkalska, Poland. “‘Dirty Singing’ as a feature of the sound ideal in the traditional polyvocality of Mediterranean cultures.” 14. Maka Khardziani, Georgia. “The reflection of the tradition of hunting in Svan musical folklore.” 15. Vladimer Gogotishvili, Georgia. “On authentic and plagal types of monotonic (non-octave) scales in Georgian traditional vocal polyphony.” 16. Thomas Hausermann, Switzerland. “The Georgian calendar song for easter ‘Chona’.” 17. Nino Gambashidze, Georgia. “The tradition of Chona (Easter Ritual) and some issues of its genesis.” 18. Otar Kapanadze, Georgia. “The interrelationship between the round-dance songs of the East Georgian mountain and plain regions.” 19. Gerlinde Haid, Austria. “The yodel from Austria: A contribution to early European polyvocality.” 20. Ketevan Manjgaladze, Georgia. “Varieties of krimanchuli (yodel) in West Georgia’s folk songs.” 21. Marina Kvizhinadze, Georgia. “Rhythmic and intonational features of the ritual songs dedicated to the deity of the vine.” 22. Franz Foedermayr & Werner Deutsch, Austria. “Analysing drone polyphony.” 23. Emi Nishina, Manabu Honda, Tadao Maekawa, Satoshi Nakamura, Masako Morimoto, Reiko Yagi, Norie Kawai and Tsutomu Oohashi, Japan. “Hyper-symbolic sound structure of kartuli polifonia.” 24. Elguja Dadunashvili, Georgia. “The problem of cultural heritage documentation.” 25. Lela Makarashvili, Georgia. “The Georgian folk music database system.” 26. Mikhail Lobanov, Russia. “The polyphonic performance of folk songs and the systematisation of tunes.” 27. Zaal Tsereteli, Georgia. “The possibility of interpreting ancient Georgian chants through 19th century transcriptions.” 28. Davit Shugliashvili, Georgia. “On a tradition of the east Georgian chants.” 29. Tamar Chkheidze, Georgia. “On the interrelation of a ‘list of Chreli’ [Chreli – Type of Hymns) and the system of neumes.” 30. Khatuna Managadze, Georgia. “Heirmoses of St. Andrew of Crete’s ‘Canon of Repentance’” 31. Magda Sukhiashvili, Georgia. “On some

aspects of the manifestation of *dasdebelis metsniereba* [‘Science of Hymns’] in Georgian chants.” 32. Mariam Ositashvili, Georgia. “On the Interconnection of Georgian Secular and Sacred Polyphony.” 33. Manana Shilakadze, Georgia. “Polyphony and Georgian folk music instruments (*chonguri*).” 34. Tina Zhvania, Georgia. “Harmony of the Georgian song and *chonguri* tunings.” 35. Rebecca Stewart, USA. “Traditional Georgian polyphony, a veritable *zedashe*.” 36. Clayton Parr, USA. “Toward a new choral multiculturalism.” 37. Laurent Stephen, France. “Why do foreigners sing traditional Georgian songs?” 38. Nino Tsitsishvili, Australia. “The embryo of change: Heavy rock, gender relationships and traditional music-culture in Georgia.” 39. Nona Lomidze, Austria. “Phonogramm archive and Georgian records.” 40. Norie Kawai, Satoshi Nakamura, Yuriko Tsuchiya, Akira Yajima, Mikio Kametani. Japan. “An historical overview of Geinoh-Yamashirogumi’s approach to Kartuli Polyphonia: 1969-2004.”

2004, Estonia. An international conference “Finno-Ugric Multi-Part Music in the Context of the Music Culture of the Slavic and Baltic Nations” was organized by the Estonian Academy of Music and Theatre and the Estonian Literary Museum in October 2004. A collection of the papers of the conference with the title “Finno-Ugric Multi-Part Music in the Context of other Music Cultures” was published in 2008 as a separate volume, containing papers in Russian, with English and Estonian summaries (editors: Triinu Ojamaa and Zhanna Partlas). Here is the list of the authors and their papers included in the published collection:

1. Izaly Zemtsovsky, USA, Russia. “Musical ‘Dalogy’.”
2. Lyudmila Boyarkina, Mordovia, Russia. “On the Mordvinian Polyphony and methods of Areal Research.”
3. Nikolay Boyarkin, Mordovia, Russia. “Mordvinian Traditional Instrumental Polyphony: Typology and Relations to Vocal Polyphony.”
4. Irina Nurieva, Udmurtia, Russia. “Polyphony in the Udmurt traditional Music: Some Research problems.”
5. Nailya Almeeva, Tatarstan, Russia. “Tatar-Kryashen Polyphony in the Ethnocultural Context of the Volga-Kama Region (Ritual Singing, Heterophony).”
6. Janika Oras, Estonia. “Heterophony in Kihnu Regilaul.”
7. Zanna Partlas, Estonia. “The Principles of Bourdon and Harmonic Coordination in Setu Multipart Singing: The Rules for the Upper voice – Killo.”
8. Daiva Rachiunaite-Viciniene, Lithuania. “Traces of Bourdon in Lithuanian Folk Song Traditions.”
9. Guldzhon Jussufi, Russia. “The Forms of Homophony in Pamirian Traditional Instrumental Music.”
10. Ruzha Neikova, Bulgaria. “Lazaritsa in Southwest Bulgaria – Song and Ritual Meanings.”

2005, Austria. An international symposium “European voices: Multipart singing in the Balkans and in the Mediterranean” was organized from March 11-13, 2005. The symposium was organized as a joint venture of the Institut für Volksmusikforschung und Ethnomusikologie, the Universität für Musik und darstellende Kunst Wien, the Österreichisches Nationalkomitee im ICTM, and Wiener Konzerthaus. A research centre of European traditional polyphony was established (Ardian Ahmedaja, Gerlinde Haid). Full papers of the symposium were published in 2008 (see Ahmedaja, Haid, 2008). Following papers were delivered (papers that have not been published are marked with *):

1. Giorgio Adamo, Italy. “Social roles, group dynamics and sound structures in multipart vocal performance: The female repertoire for Good Friday at Cassano Allo Ionio (South Italy).”
2. Ardian Ahmedaja, Austria. “Changes within tradition: Parts and their number in multipart songs among Albanians.”
3. Sofia Bajrektaveric, Austria. “About multipart singing in Bosnia and Herzegovina.”
4. Mauro Balma, Italy. “Liguria: A multipart song from the Alps to the sea.”
5. Rudolf Brandl, Germany. “New considerations concerning diaphony in Southeast Europe.”
6. Josko Caleta, Croatia. “Modern klapa movement – Multipart singing as a popular tradition.”
7. Salwa el-Shawan Castelo-Branco, Portugal. “The politics and aesthetics of two-part singing in southern Portugal: The case of Alentejo.”
8. Jean-Jacques Casteret, France. “Mainland France multi-part singing: Of men and patterns.”
9. Dimitrije Golemovich and Selena Rakocovic, Serbia and Montenegro*. “Two-part singing in Serbia and Montenegro.”
10. Thede Kahl, Romania. “Multipart singing among the Aromanians (Vlachs).”
11. Bernard Lortat-Jacob, France*. “Cord and discord in polyphony.”
12. Ignazio Macchiarella, Italy. “Harmonizing on the islands: Overview of the multipart singing by chording in Sardinia, Corsica, and Sicily.”
13. Jaume Ayats and Silvia Martinez, Spain. “Singing in processions and festivities: A look at different models of multipart singing in Spain.”
14. Lozanka Peycheva, Bulgaria. “Multipart songs and transformations: A Bulgarian case.”
15. Velika Stojkova, Macedonia*. “Macedonian multipart singing: some basic characteristics.”

2006, Georgia. The Third International Symposium on Traditional Polyphony was held at the Tbilisi State Conservatory from September 25-29, 2006. The Symposium was accompanied by the series of concerts of traditional polyphony from several cultures. Full texts of the papers (in

English and Georgian) were published in 2008 (see Tsurtsunia and Jordania, 2008). Here is the list of participants and their papers (in alphabetical order):

1. Simha Arom (France). "Polyphony by way of polyrhythm."
2. Mauro Balma (Italy). "Two repertoires, two styles of multipart singing: the *trallalero* (multipart singing) and the *canto a bordone* (singing with drone) (Liguria, Italy)."
3. Josko Caleta (Croatia). "The Multipart singing of Croatia - Vocal traditions of the Adriatic Islands."
4. Jean-Jacques Casteret (France). "Multipart singing in France (Basque and Occitan Pyrenees)."
5. Dieter Christensen, USA. "Sound archives: technology, research, state."
6. Pantxo Etchegoin (France). "'Kantuketan' – Universe of the Basque traditional song."
7. Franz Foedermayr & Werner Deutsch (Austria). "Examples of virtual multi-part music and their psychoacoustic foundation."
8. Tamaz Gabisonia, Georgia. "The notion of 'polyphony' (multi-voiced singing) and Georgian folk music."
9. Giorgi Gotsiridze & Nino Gambashidze, Georgia. "Liturgical nature, appraisals and table chants of Georgian traditional feast."
10. Vladimer Gogotishvili, Georgia. "Mode-intonational peculiarities of the 'Georgian cadence' of type 1."
11. Joseph Jordania, Australia. "The origin of rhythm: The beginnings of choral polyphony and the defense strategy in human evolution."
12. Franz Lechleitner (Austria). "The Georgian wax cylinder collections – Recording technology and recommendations for restoration."
13. Gerda Lechleitner & Nona Lomidze (Austria). "Bukharian and Georgian Jews in Vienna."
14. Otar Kapanadze & Davit Shugliashvili, Georgia. "Presentation of new fieldwork materials from Surebi [a mountain village in Guria, western Georgia]."
15. Andrea Kuzmich (Canada). "Non-change in the traditional Georgian polyphonic songs of Tbilisi ensembles."
16. Mikhail Lobanov (Russia). "A previously unaccounted type of Russian vocal polyphony."
17. Nona Lomidze (Austria). "Georgian song, transcription and computer."
18. Florian Messner (Australia). "The multi-part vocal tradition in Eastern Flores (Indonesia), Middle Western Bulgaria and Baluan Island, Manus Province (Papua New Guinea): A Comparison."
19. Ruzha Neykova (Bulgaria). "The polyphonic singing in a female ritual of South Western Bulgaria."
20. Lauren Ninoshvili (USA). "Georgian polyphony in English liturgical music for the 21st century."
21. Emi Nishina, Norie Kawai, Manabu Honda, Reiko Yagi, Masako Morimoto, Satoshi Nakamura, Tadao Maekawa, Yoshiharu Yonekura, Hiroshi Shibasaki and Tsutomu Oohashi (Japan). "The biological mechanism for the perception of the inaudible high-frequency component included in musical sounds."
22. Anna Piotrowska (Poland). "Folklore as a source of national identification in music."
23. Jaksa Primorac (Croatia). "Local styles in Dalmatian *klapa* singing."
24. Nino Pirtskhalava, Georgia. "On Georgian notion *Mortulebi*,

denoting musical harmony, in the works of Ioanne Petritsi.” 25. Teona Rukhadze, Georgia. “Achara-Shavsheti wedding (best men’s) songs.” 26. Manana Shilakadze, Georgia. “Table Songs in the context of traditional-domestic culture.” 27. Davit Shugliashvili, Georgia. “*Shesvladi* in Georgian Sacred Chant.” 28. Daiva Rachiunaite-Viciniene, Lithuania. “Seeking the origin of songs with the refrain *tumba* and their interpretation.” 29. Nino Tsitsishvili, Australia. “Gender and improvization in Georgian polyphonic singing.” 30. Rusudan Tsurtsunia, Georgia. “The Georgian wax cylinder collection.” 31. Polo Vallejo, Spain. “Music and logic among the *wagogo* people from Tanzania.” 32. Susanne Ziegler, Germany. “Polyphony in historical recordings of the Berlin PhonogrammArchiv.” 33. Natalia Zumbadze, Georgia. “Georgian Songs on the birth of son.”

2007, Portugal. The International colloquium “Multipart Singing in Europe: Historical Trajectories and Current Perspectives” was held in Portel, Alentejo, on October 4-6, 2007. It was organized by The Institute of Ethnomusicology (INET) of the Faculty of Social Sciences and Humanities of the Universidade Nova de Lisboa, in collaboration with The City Hall of Portel and the Regional Directorate of Culture in Alentejo. The colloquium was coordinated by Salwa el-Shawan Castelo-Branco. Several concerts of traditional polyphony of Alentejo were organized. Proceedings of the conference are in the press. Here is the list of participants and their papers:

1. Joseph Jordania (Australia/Georgia) “Vocal Polyphony in Europe: An attempt at classification from a historical perspective”.
2. Caroline Bithell (UK) “Multipart singing in Corsica: Continuity and renewal”.
3. Maria do Rosario Pestana (Portugal) “Cramois, Cantas e Cantareus: Levantamento e Arquivo de Praticas Polifonicas no Doura Litoral”.
4. Susana Sardo (Portugal) “Homens au Largi: Cantadas e Modas em Terras de Santa Maria. Processos Performativos de Canto a Vozes no Feminino”.
5. Ardian Ahmedaja (Austria) “Particular relationships between words and music in the performance practice of multipart songs in southern Albania”.
6. Alla Sokolova (Adyghea, North Caucasia, Russia) “Adyghian (Circassian) traditional polyphony and its transformation in post-Soviet Caucasia”.
7. Maria Jose Barriga (Portugal) “Praticas Performativas e Folclorizacao no Baixo Alentejo”.
8. Paulo Lima (Portugal) “Notas em Torno do Cancioneiro Popular Presente na Regiao Historica do Alentejo”.
9. Salwa el-Shawan Castelo-Branco (Portugal) “ Grupos Corais Alentejianos e a Patrimonializacao do Cante”.
10. Antonio Cartagena (Portugal) “O Papel da Comissao de Liturgia e do Coro do Carmo de Beja na Recolha, Recuperacao

e Reinterpretacao do Cancioneiro Popular do Baixo Alentejo”. 11. Luisa Tiago de Oliveira (Portugal) “Imagens do Alentejo em Giacometti”. 12. Luis Clemente (Portugal) “Glocalizando o Cante Alentejano: Antonio Marvao – Cozinhando a Tradicao”. 13. Jorge Moniz (Portugal) “A Tradicioanlizacao do Canto Alentejano: Um Estudio de Caso do Grupo Coral Os Ceifeiros de Cuba”. 14. Ignazio Macchiarella (Italy) “The valorisation of Sardinian multipart singing and its impact on the village practices. 15. Natalia Zumbadze (Georgia) “Georgian folk singing and its regularities” .

2008, Georgia. The fourth International Symposium on Traditional Polyphony, organized by the Tbilisi State Conservatory and the International Research Center for Traditional Polyphony was held at Tbilisi State Conservatory on September 15-19, 2008. A series of concerts of polyphonic singing (Georgian, Corsican, Latvian, Bulgarian polyphony) were running parallel to the conference. Number of scholars were not able to attend the Symposium (mostly due to the Russian-Georgian war in August 2008. Names of scholars who did not attend the symposium are marked with *). Full texts of the papers (including the papers of scholars who sent their papers before the symposium but could not participate) are expected to be published in 2009 in English and Georgian. Here is the list of participants and their papers (in alphabetical order):

1. Simha Arom & Polo Vallejo (France & Spain) “Towards the study of the ‘grammar’ of Georgian polyphony: The first steps”. 2. Munir Beken* (USA) “Virtual heterophony: An overview”. 3. Caroline Bithell* (UK) “Polyphony in the global village: Motives and meanings”. 4. Margery Bray (UK) “‘Sweetening the soul’: Early infant-mother vocal behavior and ‘call and response’ in Georgian polyphony”. 5. Dieter Christensen (USA/Germany) “Vocal polyphony in Western Polynesia”. 6. Ursa Civic (Slovenia) “Traditional polyphony of Slovenian regions: Past and present”. 7. Ekaterine Diasamidze (Georgia) “On some aspects of polyphony in Georgian chants”. 8. Malkhaz Erkvanidze* (Georgia) “On one method of the development of Georgian folk songs (problems and considerations)” 9. Franz Födermayr & Werner A. Deutsch (Austria) “Multipart songs from Guria recorded by Robert Lach”. 10. Tamaz Gabisonia (Georgia) “The forms of Georgian folk instrumental polyphony”. 11. Victor Grauer* (USA) “Notable features of Pygmy and Bushmen polyphonic practice, with special reference to survivals of traditional vocal polyphony in Europe”. 12. Joseph Jordania, (Australia/Georgia) “Music and emotions: Humming in human prehistory”. 13. Maka Khardziani (Georgia) “Svan hunting songs”. 14. Gita Lancere*

(Latvia) “Drone singing in the Augšzeme region of Latvia: Achievements and problems in Reconstruction”. 15. Taida Lange (Latvia) “Insight of Latvian immaterial culture”. 16. Nona Lomidze (Austria) „The phenomenon of vibrato in Kakhetian folk music“. 17. Nino Makharadze (Georgia) “Polyphonic lullabies in Georgia”. 18. Gerald Florian Messner* (Australia) “‘They howl like wolves’ (*“ululant ad modum luporum...”*): A new look at an old persistent Lombardian polyphonic oral tradition loathed by medieval and renaissance music scholars”. 19. Jane Freeman Moulin* (Hawaii, USA) “Tahitian *HĪMENE TĀRAVA*: Polyphonic strains of history, place, and song”. 20. Zanna Partlas (Estonia) “A ‘hen-and-egg’ problem: Interrelationship between scale structure and vertical structure in Setu multipart songs”. 21. Anna G. Piotrowska* (Poland) ”World music and traditional music: The problem of authenticity”. 22. Manana Shilakadze (Georgia) “Early forms of accompaniment in Georgian music”. 23. John Shortis & Moya Simpson (Australia) “Georgian folk music meets The Beatles”. 24. Alla Sokolova* (Adighea, Russia) “Zhiu (vocal bass): One of the parts of Adighian traditional instrumental polyphony”. 25. Rusudan Tsursumia (Georgia) “Georgian polyphony in contemporary socio-cultural context”. 26. Nino Pirtskhalava (Georgia) “On Ioane Petritsi’s musical-aesthetic thinking in ‘On Human Nature’ by Nemesius”. 27. David Shughliashvili (Georgia) “Atypical elements in Georgian folk song”. 28. Zaza Tsereteli (Georgia) “Deciphering the ancient Georgian neumatic system and the ways of implementing them into practice”. 29. Lu, Yu-Hsiu* (Taiwán) “A phenomenon or a concept: The polyphony of Aborigines in Taiwan”. 30. Carsten Wergin* (Germany) “Sounds of creolization: ‘Social polyphony’ in the southwest Indian Ocean”. 31. Susanne Ziegler* (Germany) “Siegfried F. Nadel and his contribution to the study of Georgian Polyphony”. 32. Natalia Zumbadze* (Georgia) Georgian traditional polyphony and its regularities.

2008, Austria. The second International conference “European Voices II. Cultural Listening and Local Discourse in Multipart Singing Traditions in Europe” was held in Vienna from October 23-25. The conference was organized by the Institut für Volksmusikforschung und Ethnomusikologie, Universität für Musik und darstellende Kunst Wien, Österreichisches Nationalkomitee im ICTM, and Wiener Konzerthaus (Ardian Ahmedaja, Gerlide Haid). The conference was accompanied by a series of concerts of traditional polyphony from different countries of Europe (Austria, Italy, Lithuania, Croatia, Slovakia, and Bulgaria). Participants also watched the

film “singing for a lost country”, made by Bernard Lortat-Jacob and Hélène Delaporte (Albania/Greece, 2006). Full papers were published. Here is the list of conference participants and their papers:

1. Mauro Balma (Italy) “The tradition of sacred songs in Liguria (northern Italy): Sunset of a culture facing an identity crisis and a reaffirmation of local pride” 2. Jean-Jacques Casterét (France) “Cultural listening and enunciation contexts in Pyrenean multipart singing”. 3. Piotr Dahlig (Poland) “Multipart singing in Poland as a cultural and musical phenomenon”. 4. Klaus Ehrenberger (Austria) “The brain makes the music” (Keynote address). 5. Tamaz Gabisonia (Georgia) “Terminological priorities of Georgian traditional polyphony. 6. Joseph Jordania (Australia/Georgia) “Music without listeners: Polyphonic singing in traditional societies”. 7. Ivan Lešnik (Slovenia) “Multipart singing in Slovenia as a ‘performing by ear’ phenomenon”. 8. Bernard Lortat-Jacob (France) “Singing in company” (Keynote address). 9. Ignazio Macchiarella and Sebastiano Pilosu (Italy) “Terminology and transmission of multipart singing in Sardinia”. 10. Zlata Marjanović (Serbia and Montenegro): “Cultural listening in multipart singing on the Montenegrin Coast and in the Hinterland”. 11. Zanna Partlas (Estonia): “Men’s songs in a women’s song tradition: Some remarks on men’s multipart singing in Setus, Southeast Estonia”. 12. Ankica Petrovic (Croatia) “The phenomenon of multipart singing in rural communities of the Dinaric Alps”. 13. Lozanka Peycheva (Bulgaria) “Verbal projections of multipart singing from central-western Bulgaria” 14. Daiva Raciunaitė-Vyciniene (Lithuania) “Interaction of the voice and instrument in lithuanian multipart music: Viewpoints of insiders and outsiders”.

After 2008 number of conferences dedicated to the study of traditional polyphony were organized. Most of these conference programs (sometimes with the full papers in English) can be found on the internet. Here is the list of such conferences:

2010, Italy, ICTM Polyphony Study Group 1st Conference held in Sardegna. Papers were published in 2012;

2010, Georgia, 5th International Symposium for Traditional Polyphony, organized by the International Research Centre for Traditional Polyphony, Tbilisi. Papers published in 2011.

2011, Albania, ICTM Polyphony Study Group 2nd Conference, held in in Tirana. Papers published in 2013.

2012, Georgia, 6th International Symposium for Tradirional Polyphony, organized by the International Research Centre for Traditional Polyphony, Tbilisi. Papers published in 2013.

2013, Hungary, ICTM Polyphony Study Group conference was held in Budapest. Paper in press.

2014, Georgia, 7th International Symposium for Tradirional Polyphony, organized by the International Research Centre for Traditional Polyphony, Tbilisi. Papers in press.

The dynamics of the scholarly meetings from the 1960s to the 2000s shows a steady increase in the interest of ethnomusicologists in the problems of traditional polyphony. The 1960s witnessed only one conference, or, more precisely, a part of a conference, dedicated to traditional polyphony (in Ghana); In the 1970s two conferences were organized (in Georgia and Sent-Polten, Austria); In the 1980s the number of conferences went up to four (three in Georgia and one in Russia). The 1990s was the only decade when the number of conferences decreased (only three conferences, two in Paris and one in Georgia), mostly because of the disastrous political and economic situation in Georgia after the break-up of the Soviet Union. As the new millennium starts, within ten years (2000-2009) ten special conferences have already been organized (five in Georgia, two in Austria, one in Taiwan, one in Portugal, and one in Estonia). During the next five years (from 2010 to 2015) six conferences were organized (three in Georgia, one in Italy, one in Albania, and one in Hungary).

This increase in the number of polyphonic conferences indicates the steadily growing interest of ethnomusicologists in the problems of traditional polyphony. This “polyphony of conferences” on human choral singing hopefully will lead us to a better understanding of our evolutionary roots, and will provide us with a positive historical example of the strength and the importance of the cooperative singing of the human race.

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INDEX

- Ababda..... 181
 Abdushelishvili, Malkhaz..... 25, 276
 Abkhazia..... 8, 70, 71, 531
 Achara 102, 111, 333, 543
 acquisition of a phonological system..... 14
 among Chinese..... 512
 comparison between English and Mandarin speakers..... 512
 difference between Japanese and American children 510
 in children 510
 in different populations 478
 universality of 510
 Adler, Guido 35
 Admiralty Islands 214, 407
 Afghanistan...62, 173, 174, 184, 186, 202, 217, 312, 368
 Africa.....38, 39, 40, 41, 43, 45, 48, 58, 59, 60, 174, 209, 216, 221, 252, 261, 281, 321, 323, 327, 346, 364, 372, 376, 378, 392, 429, 470, 473, 474, 476, 477, 481, 482, 513, 518
 big cats of..... 409
 characteristics of vocal polyphony..... 58
 conference on vocal polyphony in 525
 general characteristics of polyphony..... 38
 grammatical use of tones in tone languages in 437
 language and cognition, but not speech originated in 518
 major predators of..... 16, 389, 394
 rhythm in..... 40
 scale systems in..... 45
 semitic peoples in North 323
 three major regions in 58
 tone languages in 41, 483
 African apes..... 377, 382, 385, 450
 drumming of 394, 429
 African Talking Drums..... 436
 Afro hairstyle
 as the oldest human hairstyle 398
 makes human body to look taller 398
 survival function of..... 397, 398
 aggressive scavenging 393, 408
 role of singing and drumming in..... 418
 Ahmedaja, Ardian 22, 137, 139, 540, 541, 542, 544
 Aiello, Leslie 395, 417
 Aikawa, Noriko 537
 Ainus 12, 33, 174, 188, 189, 190, 191, 202, 217, 227, 244, 314, 315, 316, 317, 318, 331, 348, 369, 487, 501
 Aja 54
 Aka 47, 48, 49
 Akan 54
 Akawaio..... 208
 Alans..... 74, 75, 231
 Albacete.....166, 278, 279, 280, 283, 322, 323
 Albania 23, 126, 130, 137, 138, 139, 232, 261, 269, 279, 280, 283, 311, 516, 544, 546
 Aldhelm 155
 Alentejo 543
 Alex, a grey parrot..... 381
 Alexander the Great 304
 Alexandrova, Boryana..... 9, 22
 Alexeev, Eduard 23, 188, 483, 526
 Alexeev, Valeri.....25, 74, 231, 232, 272, 276, 314, 315, 316, 318, 330, 470, 472, 473, 479, 480, 481, 487, 493, 519, 522
 Algeria.....56, 57
 Almeeva, Nailia.....23, 81, 82, 528, 529, 531
 Almschroa 160
 Alps 57, 133, 160, 168, 221, 224, 266, 269, 281, 283, 307, 542, 546
 Amazonian region 208
 American Indians (see also native Americans)
 206, 207, 217, 224, 227, 328, 329, 330, 331, 345, 348, 350, 369, 489, 500
 drone polyphony
 in British Columbia..... 328
 in Eastern Coast 205
 stuttering among 489, 502
 vocal polyphony in 203
 Ami..... 196
 Amu, Ephraim 38
 Andes.....207, 346, 350, 351
 Andriadze, Manana 22, 536, 538
 Angelov, Mladen 9
 Angola 47, 49, 50
 answering questions 462
 in apes..... 430, 466
 Anuta 214
 Aotearoa, New Zealand..... 213
 Apan, Valeriu 126
 apes
 able to respond to questions..... 460
 and questions 455
 and sign language 430
 answer questions but do not ask 17
 asking questions..... 517
 Apex Predator..... 393
 Apex Scavenger
 definition of the term 393
 hominids and early humans as 393
 Arab.....45, 53, 56, 237, 304, 324, 369
 Arapaho 205
 Araqishvil, Dimitri 9, 71, 99, 112, 121, 122, 125, 246, 353
 archaeology 14, 301
 Arens, William 420
 Armenia.....179, 180, 220, 234, 275, 276, 426, 526, 530, 531
 Armstrong, Frankie 22
 army drill – helps to achieve psychological unity of soldiers 389
 Arom, Simha 22, 29, 35, 38, 39, 40, 41, 42, 47, 48, 225, 252, 492, 526, 534, 535, 537, 542, 545
 Aromanians 126, 278, 542
 Articulated speech (see also ‘speech’) .. 14, 16, 17, 18, 378, 437, 440, 441, 442, 443, 444,

453, 471, 472, 473, 474, 475, 477, 478, 479, 480, 481, 483, 486, 487, 488, 505, 513, 514, 516, 518, 523, 531 as the last major acquisition in human history 478 asynchronous origins of 522 difference between language and 433 origins of 25	and bipedalism 396 and body painting 399 and clothes 401 and scavenging 517 and the origins of stone tool manufacturing 412 and very loud singing style 407 as a defense system that does not require physical contact 408
Asafiev, Boris 230, 425	Azerbaijan 28, 76, 100, 220, 234, 249, 275, 276, 526
Asia 77, 82, 119, 173, 188, 202, 281, 287, 301, 303, 314, 322, 346, 483 as mostly monophonic region 201 documented cases of the disappearance of vocal polyphony in 261 polyphony in 173, 174 asking questions 451 ability of 450 and human intelligence 17 and intellectual capacity of human group 453 and responsorial singing 17 as a cognitive revolution 453 as the main difference between humans and animals 517 before speech 453 children start before the age one 463 critical period in acquisition of the ability of 17 evolutionary advantage for human groups 452 evolutionary advantage of the ability of 452 in ‘motherese’ 469 in ontogeny and phylogeny 517 needs no syntax 467 no publications available on the ability of 448 responsorial singing and 454 the first human being with the ability of 452 to babies 469	Babenzele 47 baby talk 469 Bach, Johann Sebastian 34, 164, 230, 261, 267, 403 Badraa, Jamtsyn 299 Bahrain 175, 176, 201, 321, 323, 324, 338, 341, 369 Bai 193 Baiaashvili, Ketevan 22, 528, 530, 531 Baits 299 Bakhtadze, Inga 528 Bakhtadze, Yuri 24 Balkans. 79, 126, 134, 137, 140, 141, 221, 222, 224, 232, 239, 243, 262, 265, 266, 279, 304, 307, 308, 311, 312, 339, 341, 363, 368, 406, 407, 532, 541 Balkarians and Karachaevis 62, 69, 72, 73, 221, 232, 288 Ballanta, George 38, 39, 40 Baltic.. 142, 146, 147, 149, 190, 225, 266, 292, 293, 304, 307, 311, 322, 530, 532 Bantu 41, 45, 47, 48, 49, 50 Barriga, Maria Jose 544 Barrow, John 427 Bartok, Bela 144, 295, 308, 353 Bashkirs 62, 77, 81 Baskakov, N. 299 Basque.. 91, 162, 165, 166, 267, 268, 269, 272, 322, 542 battle trance and body painting 399 hominids in 412 Bazmadzain 180 Beatles, The.... 24, 31, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 370, 402, 404, 545 Bedouins 180, 202 Beethoven, Ludvig van .. 10, 12, 180, 352, 360, 361, 362, 380, 403, 404 Belarus ... 23, 62, 66, 88, 89, 90, 266, 269, 270, 278, 283, 286, 287, 322, 527, 529, 533 Belgium 162 Bellona 214 Belosvetova, Irina 23, 85, 86 Bemmel, Eric van 24 Bendorf, Willis 23, 148, 528, 530, 531 Benzon, William 428 Berber 53, 55, 56, 57, 59, 321 Berdzenishvili, Levan 21 Berdzenishvili, Vladimer 103 Berlin Phonogram Archive 24, 521, 538 Betsileo 55 Bickerton, Derek ... 17, 461, 466, 467, 468, 517

- bigger groups
 - safety and living in..... 395
- Binford, Louis..... 393
- bipedalism..... 19, 397, 410, 412
 - habitual 397
 - role of music in origins of..... 413
 - the origins of 396
- Bithell, Caroline ... 22, 163, 164, 535, 544, 545
- Blacking, John 38, 50, 52, 424, 425
- Blaeva, Tamara..... 23, 71, 319, 530, 532, 534
- Bloodstein, Oliver..... 486, 488, 489, 491, 492, 499, 501, 502
- blown instruments..... 179, 209, 210, 302, 332, 333, 335, 336, 343, 344, 345, 530
 - and singing..... 369
 - double 334
 - double unison and polyphonic types..... 334
 - polyphonic 515
 - unison double..... 515
- Blumenschine, Robert 393
- bodily hair
 - and sexual attraction 408
 - reason of losing among hominids 408
- body painting 408
 - among hominids..... 399
 - among wrestlers 400
 - and aggressive scavenging..... 399
 - appearance of 396
 - as camouflage 400
 - changing function from intimidation to camouflage 400
 - external and internal functions of..... 399
 - in contemporary military..... 400
 - in hominids 516
 - in human evolution 400
 - in hunting..... 399
 - in military..... 399
 - in order to change personality..... 399
 - internal and external functions..... 400
 - intimidating effect of 400
 - origins of..... 398
 - psychological effect of..... 400
 - role of music in the origins of 413
 - survival function of..... 399
 - universality of 398, 400
- body percussion 373, 379
- body size
 - increase without increasing the strength in hominids..... 411
- Boetius..... 43
- Bogdanov, Igor 23
- Boiko, Martin 23, 145, 148, 225, 292, 530, 531
- Boiles, Charles..... 342, 343
- Bojarkin, Nikolai ... 23, 78, 526, 528, 530, 532, 533
- Bojarkina, Liudmila..... 79, 532
- bonobo 381, 431, 466
- Borfeuf, Anne-Florence..... 539
- Borjomi..... 10, 180, 319, 449, 529, 531
- Bororo..... 394
- Bosnia and Herzegovina 132, 133, 232, 295, 530, 542
- Botswana 49, 50
- Brambats, Karl 225, 292
- Brandel, Rose 42
- Brandl, Rudolf.....33, 225, 304, 405, 406, 407, 528, 542
- Brazil..... 449
- Breton..... 162
- Broughton, Simon 22
- Brown, James Cooke 22, 382, 427
- Brown, Steven 22, 427, 428, 434, 537
- Bryansk 64, 287
- Bryant, Gregory..... 428
- Bucher, Carl 195, 392, 425
- Buffey family 24
- Bulgaria 9, 13, 22, 77, 126, 128, 129, 130, 135, 232, 262, 269, 278, 283, 313, 333, 405, 407, 516, 529, 531, 534, 538, 542, 543, 546
- Bunun 195, 196, 197, 539
- burial 421
 - and cannibalism in evolution 420
 - as a means of predator control 418
- Burkina Faso 57
- Burma 199, 202
- Burundi..... 45
- Bushmen.....49, 223, 328, 354, 405, 526, 545
- Byrne, Richard 23, 395, 433, 469
- Californian Indians 204, 251
- Caluza, Reuben..... 52
- Calvin, William 390
- Cambrensis, Giraldu .116, 153, 155, 156, 157, 251
- canines
 - chimpanzee..... 409
 - decline of 410
 - in humans 409
 - in *Sahelanthropus tchadensis* 411
- cannibalism 421
 - and endocannibalism 421
 - as a means of predator control 418, 420
 - as a survival strategy..... 420
 - humans have special genes as a consequence of the long practice of 421
 - in besieged Leningrad..... 393
 - origins of the ritualistic 421
 - reasons for 421
 - refuted..... 420
 - was common in early human societies .. 420
- canon 305, 308, 533, 540
- canonic polyphony 30, 33
- canto a dispetto..... 169
- canto a vatoccu 169
- Cantonese 494, 500, 501, 512
- Carroll, Lewis, as a stutterer..... 523
- Carstairs-McCarthy, Andrew 433
- Cartagena, Antonio 544
- Carthage 57
- Castelo-Branco, Salwa-el Shawan.....165, 542, 544
- Caucasia 69, 71, 73, 74, 75, 76, 77, 79, 179, 221, 232, 256, 280, 304, 307, 308, 310, 319, 341, 363, 368, 406, 527, 530, 532, 534, 544
- Cavalli-Sforza, Luigi Luca .268, 272, 273, 315, 316, 318, 320, 322, 326, 330, 331, 346, 350, 472, 479

- Central Africa.....35, 47, 48, 49, 50, 235
Central African Republic.....44, 47, 48, 526
Central Asia.....12, 56, 76, 174, 181, 183, 184,
188, 202, 217, 275, 276, 287, 301, 302, 303,
310, 316, 331, 368, 369, 477, 539
change of population in 301
earlier populations of 302
overtone singing in 298
Central Europe.....157, 159, 161, 254, 281, 301
Chacma baboon..... 402
has bigger canines than lions 409
Chadwick, Helen 22
Chameri.....137, 138, 139, 278, 279, 280, 283,
311, 322, 323
Chamorro, Arturo 342
Chang, Xin Rung..... 539
Chaplin, George 396
Chavchavadze, Zurab 21, 115
Chechens 62, 69, 75, 221
Cheng, Lilly.....497
Chijavadze, Otari.....22, 528
child development 21, 445
chimpanzees 384, 385, 460
stopped singing on the ground..... 385
using loud sound displays in the evening to
scare predators 418
China 13, 173, 174, 191, 192, 193, 195, 198,
216, 301, 316, 320, 325, 330, 348, 368, 478,
481, 487, 493, 495, 499, 500, 501, 503, 535,
539
stuttering in..... 493, 497
very low dyslexia in..... 507
Chinese minorities.....191, 192, 193, 194, 202
Chiurlionyte, Jadviga 291
Chkhikvadze, Grigol 22, 83, 99, 246, 526
Chokhonelidze, Evsevi.....122, 527, 528, 529,
532, 536, 537
Chomsky, Noam.....441, 445, 462, 463, 464
choral polyphony
as a means of communal safety and military
capability 403
choral singing.25, 48, 156, 181, 244, 255, 256,
377, 388, 425, 454, 475, 479, 548
100 000 years old..... 226
accompanied by dance..... 373
among Oglala Sioux 205
among Q'ero..... 207
and language..... 427
and stuttering 487
as communication 16
as the central feature of pre-linguistic
communication 16
born out of cooperation..... 386
characteristics of the hypothetical
primordial 373
connections with the evolution of language,
speech and cognition..... 13
creating bigger overall sound..... 403
decline of the tradition of..... 474
everyone involved in 11
evolution of..... 523
in Africa..... 51
in Europe 171
in hominids.....516
in Sumer 339
in Switzerland.....161
in Wales.....155
losing survival value after the appearance of
speech 16
mountains and 266
on Anuta Island 214
origins and evolution of.....14
origins of 20, 371
rhythm in 373
uneven distribution of.....475
chordal polyphony.....30, 36
Christened Tatars 81, 82, 528
Christensen, Dieter... 16, 22, 25, 180, 531, 538,
539, 542, 545
Christian hymns 45, 46, 212, 255
Christianity..... 53, 54, 142, 156, 259
ban of the pre-Christian music styles and
dances 516
Churchill, Winston, as dyslexic and stutterer
.....494, 523
Chuvash 82
Circassians 71
Clemente, Luis 544
clothes
as a part of visual intimidation 401
as protection from cold weather 401
change of function from visual intimidation
to protection from cold 401
in hominids.....516
origins of 401
survival function of 401
cognitive revolution 464
Collaer, Paul 117, 179, 180, 224, 259, 266, 271
communication. 16, 18, 31, 110, 188, 219, 355,
356, 370, 378, 382, 424, 425, 426, 427, 428,
430, 431, 432, 435, 436, 437, 438, 439, 440,
441, 442, 443, 444, 445, 446, 448, 449, 453,
454, 455, 458, 459, 461, 463, 464, 469, 471,
472, 474, 475, 484, 500
advantages of vocal forms over gestural 433
and questions 463
animal.....23
before the emergence of vocal chords 379
music as.....424
non-articulatory means of.....430
non-vocal forms of 432
pitch-based musical 518
vocal vs gestural 430
comparative studies
in ethnomusicology 218
Condillac, Étienne Bonnot de 430
confrontational scavenging 16, 516, 517
in hominids.....393
Congo.....48
Congo, Democratic Republic of.....47
consonances 404
consonant harmony 404
contact calls..... 20, 415, 454
contrapuntal polyphony.... 29, 30, 34, 101, 215,
273, 296
as primordial human music 429

conversation	381, 435, 447, 450, 457, 459, 460, 472, 493
cooking	
and the use of fire	410
Cooper, Eugene	23, 492
cooperation	26, 386, 395
adaptive role of music in hunting	427
mental	517
Corbett, Jim	381, 393
Corsica	163, 164, 228, 252, 278, 282, 322, 516, 544
Cossacks	65, 87
Craig, Ashley	23, 494
Croatia	133, 134, 167, 232, 269, 542, 546
Crooks, Mary	24
Cross, Ian	428
culture	
as an adaptation for survival	403
Cusco	207, 210
Cushitic	45
Czech	132, 158, 222
Czekanowska, Anna	22
D/D (Drone-Dissonant Polyphony) ...	172, 265, 310, 311, 406
as a possibly very recent style of polyphony	406
as common singing style of humanity	407
as possibly the oldest style of human music	374, 405
d'Arcais, Flores	507, 508
d'Arezzo, Guido	43, 168
Dadunashvili, Elguja	22, 540
Dagestan	76, 77
Dai	193
Dan	54, 427
dance	40, 48, 112, 159, 162, 179
among Ainu	189
among Californian Indians	204
among Creek Indians	205
among Tuaregs	57
among Venezuelan Indians	209
among Yakuts	187
and music inseparable in sub-Saharan Africa	40
children games and	126
in African churches	49
in Africa	39
in Georgia	246
in hominids	516
in India	201
in Nuristan	184
in Svaneti (Georgia)	247
in Tahiti	214
in Tibet	195
needs rhythmic music	136
ritualistic combat	181
round dance as archaic form of	248
survival of pagan	162
Dargins	76
Darwin, Charles ...	24, 250, 408, 409, 410, 413, 424, 427, 441, 494, 519, 523
De Niro, Robert	399
Demirkhanian, A.	426
Demosthenes, as a stutterer	523
Denmark	153, 157
Densmore, Frances	203, 205
dialogical language	
origins of	523
dialogue	435, 449
without questions	450
diatonic scales	122
difference between male-female voice ranges	402
Digun, Tatiana	65, 533
Dilmun (see Bahrain)	338
Dissanayake, Ellen	417, 428, 469
dissonance	137, 363, 403, 404
in reconstructed primordial polyphony	376
Django, Reinhardt	380
Dodd, Barbara	512
Doijashvili, Manana	22, 535, 537
Dolidze, Dali	536
Dolidze, Lia	22
Dong	193
drone	313, 316, 317, 321, 322, 323, 324, 329, 331, 333, 334, 336, 338, 339, 340, 343, 345, 350, 351, 364, 365, 368, 374, 375, 526, 527, 528, 531, 533, 540, 542, 545
among Adyghes	71
among Ainu	190
among Kpelle	374
among Maasai	374
among Tuaregs	58, 59
and ostinato	34
as dominant polyphonic type in Europe	171
as the earliest type of polyphony	374, 522
disappearance of	251
distributed in isolated regions	69
in Abkhazia	70
in Africa	53, 57, 59
in Albania	137
in American Indians	203, 205
in Ancient Egypt	223
in Andes	210
in Asia	202
in Balkans	32
in Baltic	32
in Beatles songs	364
in Belarus	88
in Bosnia and Herzegovina	132
in Bulgaria	128
in Caucasasia	32
in Central Asia	182
in Chechnya	75
in Czech	158
in Dagestan	77
in eastern Slavs	88
in England	154
in Estonia	149
in Europe	527
in Georgia	95, 273
in Georgian women's singing tradition	125
in Greece	140
in Italy	168
in Jewish music	177
in Latvia	147

in Lithuania.....	142, 145, 146
in Macedonia	135
in Manus Island	215
in Melanesia.....	214
in Middle East.....	176
in Montenegro	132
in Mordva	78
in Nuristan	187
in Ossetia	74
in Papua New Guinea	215
in Polesie	32, 85, 86
in Polynesia	211
in Q'ero.....	207
in reconstructed primordial polyphony..	376
in Romania	127
in Russia	64
in Samaritans	178
in Sardinia.....	170
in Serbia.....	130
in Sicily.....	169
in Slovakia	158
in Slovenia.....	135
in Spain.....	166
in Taiwan.....	196
in the middle of the texture.....	33, 102
in Tibet	195
in Tonga.....	212
in Tueareg music	57
in Vietnam	198
in Yemen	179
Indo-Europeans and.....	264
instrumental in Indian music	200
instrumental in Armenia	179
instrumental in Australia	216
instrumental in Beatles music.....	365
mixture of ancient D/D polyphony and melismatic monophony.....	277
narrow range and wide range.....	32
neglect in Ukrainian ethnomusicology	85
neglected in Russia	66
pedal and rhythmic	32
pedal drone in eastern Georgia	96
pedal drone in the middle of the texture	102
possibility of very recent origins of.....	225
single note and moveable	32
subtypes of.....	32
vocal and instrumental.....	8
vocal drone to accompany flute.....	58
vocal in Beatles music	364
drone polyphony classification of.....	32
Drone-Dissonant Polyphony [see D/D] as the earliest type of polyphony	20
drumming .40, 51, 52, 161, 185, 186, 356, 376, 391, 392, 394, 396, 397, 426, 513 and the origins of Paleolithic industry ...	412
apes and.....	429
as a means to scare away predators	389
older than the sense of rhythm.....	517
drums [see also drumming] as a means to intimidate opponents	394
Dunbar, Robin	20, 395, 417, 428
Duple rhythm.....	40
Durkheim, Emile.....	399
Dylan, Bob	360
dyslexia	14, 478, 505
among the high achievers	505
and Chinese writing system.....	507
and polyphony	518
and stuttering.....	505
and writing systems.....	506
as a chronic condition.....	506
atypical hemisphere dominance in	505
correlation with writing systems	507
cross-cultural differences	523
cross-cultural prevalence	506
depends on writing system	507
difference between populations.....	507
disputes over the existence of.....	505
does not depend on writing system	508
English spelling causes.....	506
genetic character of	505
genetic differences in prevalence	522
genetic markers of	506
has a biological basis.....	507
higher prevalence in polyphonic populations	509
highest rates in West Indies.....	509
in Africa	509
in Australia	508
in different regions of the world.....	505
in Europe	508
in Europe and USA	509
in Italian	508
in Japan and China	509
in North America.....	508
in North Europe.....	509
in Serbo-Croatian	508
in Spanish.....	508
incidence of	21
innate component in	505
is not caused by orthography	507
Japanese writing system and	506
male/female ratio possibly affected by stereotypes.....	506
not a medical condition, but a reading difficulty	506
origins of	509
possible genetic differences in prevalence of	508
prevails in male population	505
prevalence is not available in many regions of the world	509
very low rate in China	508
East Africa	45, 49
East Asia .. 13, 56, 60, 188, 191, 217, 287, 315, 316, 319, 331, 348, 371, 473, 478, 482, 483, 505, 513 earlier shift to articulated speech in.....	473
tone languages in.....	483
East Georgia.....	95, 273
Eastern Europe	62
ecological zones	326
Edison, Thomas (as a dyslexic).....	505, 523
Efremov, Evgeni	85, 287, 540
Egypt.....	181, 338, 339

Einstein, Albert (as a dyslexic).....	505, 523
Ekmalian, Makar	180
Elkin, Yuri	23
Elliot, Julian.....	506
Elschek, Oscar	22, 224, 319, 530, 535
Elschekova, Alica	157, 158, 224, 292, 295, 535
emotional power of music	375
evolutionary importance of.....	417
survival value.....	413
Emsheimer, Ernst.....	224, 271, 292, 333, 526
endocannibalism	421
England.....	153, 154, 155, 328, 434, 488
England, Nicholas.....	38, 50, 51, 526
Engovatova, Margarita	64, 66, 533, 534
Enigma, rock band.....	196
entrainment	376
Epir, Epirus.....	127, 140, 313, 334
Erasmus, as a stutterer	523
Erigena, Johan Scot	155
Erkomaishvili, Anzor.....	9, 106, 108, 109, 125, 537
Erkomaishvili, family of traditional singers	22, 106, 116
Estonia	23, 142, 149, 150, 251, 292, 333, 527, 530, 532, 545, 546
Estreicher, Zygmunt	376, 394
Ethiopia.....	41, 45
ethnomusicology	14, 15, 20, 26, 29, 30, 38, 61, 63, 83, 84, 85, 128, 131, 173, 179, 214, 217, 218, 219, 222, 223, 242, 246, 252, 261, 271, 290, 425, 449, 519, 538
comparative and deep regional	
studies in	220
Europe	18, 31, 41, 55, 60, 61, 62, 63, 77, 83, 88, 90, 91, 92, 112, 116, 117, 119, 125, 126, 128, 131, 137, 140, 142, 149, 150, 151, 153, 157, 159, 160, 162, 163, 166, 171, 172, 173, 174, 176, 211, 212, 216, 223, 224, 253, 259, 261, 264, 265, 266, 267, 268, 269, 270, 271, 272, 275, 277, 279, 280, 281, 282, 286, 287, 288, 289, 291, 293, 295, 296, 309, 310, 313, 314, 316, 317, 322, 325, 327, 330, 340, 348, 349, 350, 351, 353, 364, 368, 369, 371, 375, 473, 477, 478, 479, 480, 481, 482, 500, 513, 520, 542, 543, 545, 546
conferences on vocal polyphony in.....	525
general characteristics of polyphony in ...	60
European Centre of Study of Polyphony	15
European professional polyphony	60, 91, 106, 133, 151, 153, 172, 224, 226, 244, 251, 257, 258, 259, 260, 262, 280, 281, 282, 283, 294, 295, 303, 309, 310, 317, 368, 370, 376
late development of.....	258
Evdokimova, Yulia.....	23, 530, 533
Evrei	83
eyebrows.....	423
as anti-predatory defense	423
as communicators of changing moods ...	422
as eyespots	422
function of.....	422
eyelashes	
as a part of the eyespots	423
eyespots	
cats are good at noticing	422
eyebrows and eyelashes as	422
eyebrows as	421
humans are bad at noticing	422
in hominids	418, 422
in humans	422
on the sleeping human face	423
Ezhu.....	530
Falk, Cathy	22
Falk, Dean	434, 471, 480
Farsheroti.....	127, 278, 283
Fasi	213
Fedorenko, Inna.....	66, 68, 533
Finland.....	150, 173
Finney, Ben	347
Finno-Ugric	77, 81, 142, 149, 267, 368, 533
Fitch, Tecumseh	23, 384, 394, 402, 429
Flores.....	198, 407
Fodermayr, Franz	22, 535, 537
Fonagy, Ivan.....	426, 439
food	
plenty on the ground	384
role of music in finding	413
Fossey, Dian	459
France	15, 22, 31, 161, 162, 163, 166, 173, 269, 434, 435, 534, 537, 539, 540, 542, 545, 546
Frolov, Boris	23, 426
Ga54	
Gabisionia, Tamaz	22, 35, 36, 94, 102, 528, 530, 531, 535, 536, 539, 542, 545, 546
Galao	193
gamelan	28, 173, 197, 219
Gamkrelidze, Thomas	22, 271, 322
Garakanidze, Edisher.....	22, 77, 95, 96, 98, 99, 100, 104, 112, 113, 114, 117, 118, 121, 125, 183, 528, 530, 532, 535
Garrincha.....	380
Gasser, Alan	22
Geissmann, Thomas	23, 382
Gelzer, Stuart.....	22, 537
genetic drift	398
genetics.....	21, 347
Genie	465, 467, 468
as protolanguage user	465
inability to ask questions	465
Georgia	8, 9, 24, 28, 32, 62, 69, 70, 74, 75, 76, 83, 85, 91, 94, 95, 98, 100, 101, 103, 106, 111, 112, 116, 117, 120, 121, 123, 124, 125, 145, 179, 180, 220, 228, 229, 234, 235, 236, 237, 246, 247, 248, 249, 252, 253, 265, 269, 273, 274, 275, 276, 277, 278, 281, 283, 296, 312, 314, 319, 323, 325, 333, 335, 340, 344, 353, 354, 357, 362, 392, 440, 444, 449, 516, 526, 528, 529, 531, 535, 536, 537, 539, 542, 544, 545, 546, 547
characteristics of polyphony	92
church music in.....	117
consists of fifteen ethnographic regions ..	93
contrapuntal polyphony in	101
different types of drones together in.....	33
improvisation in.....	106
monophonic songs in	94
no native theories of polyphony in	104

polyphony and gender in	125
religious music of	116
Research Center for Traditional Polyphony	
in	126
scale systems in	122
table traditions is.....	92
two different basses in	95
urban music in	119
western.....	101
yodel in	101
Georgian Choreographic Society	531
Gerasimov, Oleg.....	23, 80, 530, 531
Gerasimova-Persidskaia, Nina	23, 526
Germany.....	23, 137, 159, 218, 269, 281, 328, 519, 520, 526, 531, 538, 542, 543, 545
Gerson-Kiwi, Edith	176, 177, 178, 225
Gippius, Evgeni.....	67, 72, 83, 251, 532
glee singing	154
Gnesin State Musical-Pedagogical Institute.....	532
Gogo.....	46, 234, 526
Gogoladze, Vazha	22, 106, 108, 110
Gogotishvili, Vladimer.....	122, 123, 152, 529, 535, 536, 538, 540, 543
goigs	165
Golden Fleece.....	24
golosnik.....	65
Goodall, Jane.....	439, 459
Gorani.....	24
Gordeziani, Rismag.....	21, 271, 322, 340
Gough, Richard	22, 538
Grauer, Victor.....	22, 226, 405, 429, 545
Great Britain.....	154, 494
Greece	13, 122, 126, 127, 138, 140, 141, 175, 178, 232, 262, 269, 270, 278, 279, 313, 334, 435, 546
musical tastes controlled in Ancient	515
Greenhood, William.....	382, 427
Grimaud, Yvette	48, 223
group singing	
in rituals.....	514
Guadalcanal Island	215
Gunther, Robert.....	38
Guria.....	9, 101, 102, 106, 107, 109, 117, 353, 539, 543, 545
Gymanfa Ganu	156
Hagen, Edward	428
Hai, Tran Quang.....	22, 183, 535, 538, 539
Haid, Gerlinde.....	22, 160, 540, 541
hairless body.....	413
and AVID	408
and sexual attraction	408, 409
Halpern, Ida.....	204, 504
hamhama	176
Hammerich, Angel	151
Han.....	192, 193
Hani	193, 194, 539
harmony.....	42, 44, 45, 46, 52, 84, 92, 141, 148, 152, 153, 154, 155, 160, 161, 162, 170, 171, 173, 178, 180, 194, 205, 207, 208, 213, 234, 237, 256, 257, 260, 295, 305, 332, 337, 342, 352, 358, 359, 360, 361, 362, 363, 364, 365, 366, 402
singing in harmony creates bigger	
sound	403
Harrison, George.....	128, 356, 364, 365
Haruitara, Philip	539
Hassan, Scheherazade	22
Hastings, Annaliese.....	23, 494
Hauser, Marc.....	379, 388, 416, 429
Hausermann, Thomas.....	22, 538, 540
Hawaii	213, 545
head hair.....	20, 413
appearance of	396
evolutionary function of	397
makes body taller	397
the length of.....	397
to protect the head skin.....	397
Hebrides	156
Hellmer, Jose Raul	342
Henrdix, Jimmy.....	405
heterophonic polyphony.....	30, 35, 79
heterophony	29, 32, 36, 86, 285, 286, 287, 289, 526, 537, 545
age of.....	13
among eastern Slavs	286
among Q'eros	207
appearance of	514
as a 'shadow' of the unison	35
as a later phenomenon	287
as a model of the emergence of polyphony	285
as the earliest type of polyphony	522
contagious	428
different from monophony and polyphony	35
elements in Australia	216
in Amazon region	210
in Belarus	90
in Chinese minorities.....	194
in East Europe	227
in Europe	284
in Han music	192
in Komi.....	80
in Lithuania	309
in Macedonia	136
in Mari.....	80
in Mordva	288
in northern Asia.....	188
in Romania	126
in Russia	65, 286
in Serbia	131
in southern Italy.....	169
in Ukraine.....	85
in Vietnam.....	198
unison-.....	29, 368
variant-	172
very wide distribution in eastern Europe.....	286
Hewes, Gordon ...	430, 432, 433, 475, 476, 522
Heyerdahl, Thor	23, 237, 347, 350, 351
Hibberd, Lloyd.....	116, 154, 155, 157
Hickmann, Hans.....	337, 338, 339
Himalayas	406
himene tarava	213
Hindukush.....	406
Hindustani	200
hiragana.....	507

hockett	53
Hoffmann, Stefan.....	23, 497
Holland	162
Holloway, Ralph.....	410, 411
hominids	386, 390, 393, 403, 423, 425, 428, 429, 434, 438, 445, 470, 471, 478, 516
aggressive scavenging in.....	392
as Apex scavengers.....	419
asking questions in.....	452
cannibalism among	20, 420
capable of referential vocalizations.....	431
communicating with whistling in.....	436
function of head hair in	397
hairless body in	408
increase of body size in.....	411
language among	432
night time security in	418, 423
obtaining long head hair in	20
origin of language in	471
origins of stone tool technology in.....	412
practical function of byrial in.....	419
reclaiming dead bodies in	419
silence as a sign of danger in	417
singing in	386
started singing on the trees.....	439
survival against major African predators in	16, 516
survival strategy in.....	387, 390
synchronous calling in	385
use of eyespots in.....	422
Homo erectus.....	427, 470, 471, 474, 476, 481, 482
as archaic Homo sapiens.....	470
as Homo sapiens	513
Homo habilis	470, 471
Homo sapiens	17, 18, 371, 377, 378, 411, 427, 434, 470, 471, 474, 476, 478, 479, 480, 482
archaic.....	470, 513, 518
Hornbostel, Erich Moritz von	151, 203, 204, 214, 222
Hottentots	49
Hua, Zhu.....	512
human body lice	
and clothes	401
human evolution	14, 19, 409, 411, 412, 413, 417, 425, 427, 428, 434, 443, 452, 454, 471, 476, 488, 521, 543
role of music in	518
human head hair	
as a means to look taller.....	398
as a protection of skin from the Sun	398
humming.....	20, 98, 103, 414, 417, 438
alone as a message	415
and whistling.....	415
as contact call.....	416
evolutionary function of.....	414
group	20
in hominids and early humans	416
in the head.....	414
innate basis for.....	416
out of tune induces negative feelings.....	415
positive communitative function of	415
vocal grooming and	417
when feeling good	415
Hungary.....	10, 173, 325, 447
hunting.....	48, 393, 400
and body painting	399
and the use of camouflage body painting.....	400
beat method of.....	387, 400
cooperation through music in	427
in human prehistory	387
man-eating tigers	381
overtone singing is used in northwest Mongolia for	300
throwing for defence and.....	391
throwing objects for.....	390
versus scavenging debate.....	393
hunting bow (as musical instrument)	51
Huron, David.....	429
Hurrians	
polyphony among	340
Hutsler, Jeffrey	429, 440
Iakubov, Manashir.....	23, 77
Iashvili, Mzia.....	22, 115, 528, 529, 532
Ibn-Sina (Avicenna)	175
Iceland	142, 151, 153, 157, 224, 251, 264, 265, 266, 527
ICTM, International Council for Traditional Music	218, 541, 546
Igbo	54
Ikhtisamov, Khamza.....	182, 299, 534
Imazighen.....	57
Imereti	93, 102, 283
India	13, 28, 173, 174, 192, 200, 201, 202, 264, 327, 328, 381, 390, 477, 500
Indo-European languages.....	74, 91, 232, 264, 266, 267, 268, 282, 323, 444
Indo-Europeans	264, 275, 280, 293, 368
and distribution of polyphony in Europe.....	266
and mixed styles of polyphony in Europe	279
appearance of.....	406
as mostly carriers of monophonic singing traditions	268
brought monophony to the Balkans.....	279
carriers of mixed musical styles	279
closeness of musical traditions with the carriers of Turkic and Semitic languages	323
in Georgia	275
melismatic melody and free rhythm in music of	280
musical influence of.....	301
musical legacy of.....	273, 277, 310
never appeared in Africa	323
pushed carriers of vocal polyphony in peripheries.....	270
use of the elite-dominance model	264
Indonesia	197, 407
infant-directed speech.....	469
Ingushes.....	75
Institut für Volksmusikforschung und Ethnomusikologie, Vienna	541
instrumental polyphony.....	16, 48, 171, 175, 209, 210, 252, 296, 332, 333, 335, 337, 342, 343, 345, 527

- intelligence ... 18, 370, 377, 445, 446, 448, 450, 451, 452, 453, 465, 466, 539
- ability to ask questions as the unique feature of human 17
- and language 378, 447
- evolution of 20, 523
- in apes 17
- in feral children 466
- language, speech and 14
- language, speech, polyphony and 516
- self-developing 517
- social 516
- without the ability to ask questions 17
- International Research Centre for Traditional Polyphony 15, 537
- intimidation 412
- and bipedalism 19
- and the decrease of human canines 411
- and the increase of body size 411
- as a strategy for survival of hominids 410
- body painting used for 400
- in order to obtain food 392
- instead of violence in human evolution . 411
- lions using 393
- reclaiming dead bodies via 419
- singing as 385
- size is more important than strength for 411
- use of stone hitting for audio 412
- using hairstyle for 398
- Iobishvili, Tele 9
- Ireland 156
- Islam 45, 53, 54, 55, 56, 69, 73, 175, 309
- ban on music 516
- Istria 135
- Italy 160, 164, 167, 168, 169, 170, 171, 178, 251, 269, 281, 532, 542, 544, 546
- Ivanov, Viacheslav 23, 271, 322, 426, 429
- Ives, Charles 144, 295, 308, 353
- Jablonski, Nina 396, 397, 398
- Japan... 12, 22, 33, 82, 188, 189, 190, 191, 192, 217, 314, 315, 317, 323, 325, 348, 537, 540, 543
- dyslexia in 508
- stuttering in 501
- Javae 208
- jazz 11, 52, 357, 363, 366, 428
- Jespersen, Otto 382, 424, 442
- Jewish music 176
- Jews ... 62, 69, 83, 177, 178, 202, 254, 451, 543
- Jingpo 193
- Jizeng, Mao 193, 195
- Johnson, Wendell 486, 489, 490, 491, 499, 500, 505
- Jones, Arthur 42, 45
- Jordania, Mindia 25, 92, 94, 117, 122, 527
- Jordania, Nugzar 26, 103, 109, 117, 529, 530
- Jordania, Redjeb 22
- Justus, Timothy 429, 440
- juuz, juuzli (yodel)* 161
- Kabardinians 70, 72
- Kaeppler, Adrienne 211, 212, 213, 215, 252, 347
- Kajang people 215
- Kakheti 93, 95, 99, 273, 274, 276, 528
- Kalandadze, Nana 22
- Kalandadze-Makharadze, Nino 22, 530, 536, 538, 540
- Kana 508
- Kancheli, Giya 22
- Kane, Frank 22, 538
- kanji 507
- Kanzi 456, 467
- able of voluntary vocalizations 431
- can answer human questions 466
- can understand human speech 381
- compared to child language comprehension 466
- does not ask questions 457
- failed to manufacture stone tools 412
- Karbelashvili family singers 116
- Kartomi, Margaret 22
- katakana 507
- Kaufmann, Nikolai 22
- Kazakhstan 174, 184, 493, 529, 531
- Kazuyuki, Tanimoto 22, 188, 189, 190, 191, 315
- Kenya 45, 46
- Kenyah people 215
- Khakassia 182, 298
- Kharlap, Miron 426, 475, 521
- Khevsureti 95, 99, 246, 247, 248, 252
- secondary archaism in 247
- Khoikhoi 49, 50
- Khoisan languages 49, 50, 59
- Khrushchev, Nikita 23
- Kiknadze, Zurab 21, 247
- Kilmer, Anne Draffkorn 224, 337, 338, 340, 341
- King, Barbara 431, 458, 470
- King, Roger 24
- King, Tunde 54
- Kiwele, Joseph 49
- Knight, Paul 22
- Kogan, Nathan 427
- Kolessa, Filaret 84
- Komi 23, 62, 77, 79, 80, 531, 533
- Komitas 180
- Kortlandt, Adriaan 389, 392, 418
- Kpelle 54
- Kuba, Ludvik 132, 222
- Kubik, Gerhard 38, 42, 46, 47, 49, 50, 223, 225
- Kumiks 76, 77
- Kunanbaeva, Alma 339
- Kunst, Jaap 214, 215, 223, 407, 546
- Kuril Islands 188, 191, 202, 315
- Kuti, Fela Anikulapo 54
- Kutireva, Galina 23, 88, 89, 90, 529
- Kvitka, Klyment 84, 333
- Kvizhinadze, Marina 26, 117, 538
- Kwakiutl 204, 491
- stuttering among 503
- Kyrgys, Zoia 300, 527
- Laade, Wolfgang 22, 163, 164, 252
- Laberi .. 137, 138, 139, 283, 308, 311, 312, 313
- Lahu 193
- lakalaka 212

Laks	76	leopard.....	419
Lancere, Gita	23, 545	eyesspots on the back of the head	422
Lange, Taida	23	Levin, Ted	22, 182, 298, 300, 457
language		Levitin, Daniel.....	429
Ainu	188, 315	Levman, Bryan	427
and apes	431, 464	Lewis, David	347
and choral singing.....	427	Libya	57
and intelligence	17, 378, 447	Liedertafel	159
and musilanguage	428	Lima, Paulo	25, 544
and questions	458	Lincoln, Michelle	23, 494
and speech.....	433	Lineva, Evgeniya.....	64, 84
and speech in apes.....	456	linguistics	25
articulated	437	Linich, Carl	22
Basque.....	162	lion	383, 385, 388, 391, 393, 395, 397, 398, 399, 403, 409
critical period in learning to ask questions	466	ancestors of.....	391
decreasing of the number and size of teeth	411	attacking speed augments the force of the	391
in evolution and.....	411	defense throwing.....	391
development of	14	can afford loud vocalizations.....	383
dialogical.....	453, 471, 517	canines.....	409
difference between speech and	378, 433	eyesspots of the back of the head	422
drum.....	436	group shouting to shoo away	387
Estonian	149	hominids intimidating.....	392, 393, 399, 419
evolution of.....	13	killing hominids.....	394
gestural.....	430	killing humans	419
in apes	455	prefers to attack when a pray can not see	390
intelligence, speech, polyphony and	370, 516	them	390
lateralization	430, 431	ritual 'lion dance'	392
localization of	431, 432	throwing objects at	390
monogenetic origins of	476	listeners	546
music and	425, 428	absence of in polyphonic cultures.....	11
music and the origins of.....	424	and performers.....	39
music as supernatural.....	425	appearance as a result of losing of musical	514
music more stable than	231	abilities.....	514
origins of.....	378, 434, 445	at a classical music concert.....	10
pitch	441, 444, 483	at a jazz music performance	11
pitch-based	517	at a rock concert.....	12
polygenesis and monogenesis	475	at a rock concert are invited to join in	11
polygenic model of	522	behavior in defferent styles of music.....	357
pre-Indo-European	166	performance without.....	11
pre-syntax	463	relationship between performers and.....	10
proto-Caucasian	272	Lisu.....	193
Pygmy	47	Lithuania	13, 23, 33, 142, 143, 145, 146, 147, 251, 283, 290, 291, 293, 294, 295, 296, 305, 307, 308, 309, 317, 333, 516, 527, 530, 532, 539, 543, 546
questions and	463	Livingstone, Frank	382, 392, 396, 425, 434, 486
reconstruction of primordial	372	Lloyd, Albert	261
spoken	439	Lomax, Alan.....	38, 47, 48, 56, 60, 124, 191, 201, 207, 211, 212, 214, 219, 224, 266, 271, 349
stable or mobile.....	230	Lombardy	167, 168, 251
Sumerian	339	Lomidze, Nona	22, 541, 543, 545
tone	41, 42	London Zoo	415
Turkic.....	267	low male voice	
uniqueness of human	455	to intimidate predators.....	402
use of intonation in none-tone languages	437	Lu Xun (as a stutterer).....	524
whistle.....	435	lullaby	
whistling and.....	426	and humming	416
without a speech.....	434	innate basis for.....	416
Latvia.....	23, 32, 142, 145, 147, 148, 149, 251, 283, 292, 296, 312, 313, 368, 407, 526, 528, 530, 531, 545	Maasai	45, 46, 483
laulalo	213	Macchiarella, Ignazio	169, 542, 544, 546
Launeddas.....	527		
Lennon, John.....	352, 355, 356, 359, 360, 361, 365		

- Macedonia ..135, 136, 137, 232, 251, 252, 269, 526, 542
- Mache, Francois-Bernard 428
- Macievsky, Igor.....228, 530, 531
- Madagascar 45, 54, 59, 350
- Magradze, Valerian 22, 100, 248, 527, 528, 530, 532
- Mainz..... 519
- Makah..... 203
- Makarashvili, Lela.....22, 540
- Makarevich, Andrey..... 356
- Makita, Kiyoshi..... 507
- Makushi..... 208
- Makwaya 52
- Malagasy 54, 55
- Mali 57, 481
- Malisori 132, 137
- Mandarin (Patonghua).....494, 497, 501, 512
- Mangareva..... 213
- Manus Island 407
- Maonan..... 193
- Mari 23, 62, 77, 80, 82, 530, 531
- Marine Signal Flags 434
- Marti, Samuel 342, 343, 344
- Mathews, Grant 24
- Matiashevili, Ketevan 22
- Matvienko, Vladimir 23, 85, 527
- Maubach, Christoph 24
- McCartney, Paul.352, 355, 356, 359, 360, 361, 362, 365
- McDermott, Josh 388, 416, 429, 440
- McFarlane, Iain 22
- McNeill, William 389, 457, 464
- medieval European polyphony 23, 151
- Mediterranean.....55, 57, 60, 62, 163, 167, 179, 216, 220, 224, 225, 226, 251, 259, 266, 267, 282, 287, 289, 321, 322, 334, 350, 369, 373, 539, 541
- Melanesia ...211, 212, 214, 215, 216, 304, 327, 348, 406, 407
- Melgunov, Yuli 63, 64
- Mende..... 54
- mental cooperation
- and asking questions 18, 466
 - and group cognition 453
 - and self-developing human brain..... 453
 - before speech 471
 - in archaic Homo sapiens..... 474
 - origins in Africa..... 523
- Menyuk, Paula.....23, 381, 510, 511, 512
- Merina 55
- Merker, Bjorn.....385, 386, 427, 428
- Merriam, Alan 38, 39
- Meshveliani, Jokia..... 22
- Meskheta 100, 248, 252, 530
- Mesoamerica 23, 343, 350
- and Polynesia..... 351
 - decline of polyphony in pre-contact 345
 - harmony in Ancient 342
 - instrumental polyphony from Ancient... 341
 - polyphony in pre-contact 209, 369
 - Thor Heyerdahl transatlantic theory 350
 - vocal polyphony in pre-contact 332, 343
- Mesopotamia 23, 113, 224, 248, 324, 332, 336, 339, 341, 369
- contacts with Bahrain 338
 - musical writing system in ancient 337
 - vocal polyphony in 341
- Messner, Gerald Florian22, 129, 132, 160, 214, 215, 222, 224, 265, 271, 292, 295, 304, 313, 405, 406, 407, 543, 545
- Mestizo.....208
- Metallica (rock band) 12
- Mexico 41, 207, 325, 342
- Miao 193
- Micronesia.....212, 216, 348
- Middle East 56, 83, 174, 175, 179, 191, 201, 227, 235, 259, 324, 477
- mil-alol 185
- Miles, Tim.....507
- military helmets 397
- Afro hearstyle as the natural 398
- military music
- widely accepted in armies 515
- milk absorption, genetic differences between populations 255, 258
- milk drinking syndrome (unjustified extrapolation of European experience on the rest of the World) 489, 502
- Miller, Geoffrey 413, 427
- Mills, Joan.....22, 538
- Mithen, Steven ... 382, 383, 385, 386, 392, 424, 428, 432, 436, 441, 443, 446, 467, 486
- Mocas, José 25
- Modulation.....97
- Mohapelo, Joshua.....52
- Mohawk hairstyle
- as a means for intimidation 398
- Mongolia 181, 182, 298, 299, 300, 301, 310, 315, 316, 331, 539
- Moniz, Jorge 544
- Montenegro 131, 132, 232, 542, 546
- Mordva 23, 78, 266, 288, 526, 528, 532, 533
- Morita, Minoru.....22, 314
- Morris, Desmond 397, 402, 422
- Morse coding system 434
- Moses (as a stutterer) 523
- Moslem .. 57, 59, 73, 74, 77, 81, 100, 111, 132, 184, 221, 232, 322
- motherese 469
- mother-infant interaction.....417, 428
- Moulin, Jane Freeman.....214
- Moxo 208
- Moyle, Richard 212
- Mozambique 49, 52
- Mozart, Wolfgang Amadeus160, 352, 361, 362
- Mozheiko, Zinaida 23, 89, 90, 529
- Mubangazi, Benedicto 46
- mugham 28
- Mulao 193
- Muller, Talita 24
- Multi-part 29, 525, 526, 542
- multipart singing 543
- Multiphonies 24
- Multiregional Evolution Theory ..18, 470, 481, 482

- Muotatal..... 161
- music (moral and religious restrictions on) 515
- music notation
- precise alphabetic notation predated neumes 340
- music therapy..... 20, 417
- musical ear
- decline of 514
- musical professionalism
- and creation of theoretical tractates 515
 - appearance of 514
 - competition between musicians and 515
 - origins of 515
- musilanguage..... 428, 434, 441, 464
- Muszkalska, Bozena 226, 265, 540
- Myanmar – see Burma..... 199
- Myzeqe 137, 139, 540
- na bas (singing style) 133, 134, 281, 283
- Na, Jessica 24
- Nadel, Siegfried 223, 259, 425, 546
- Naduri 101, 102, 105, 106, 125, 312, 392
- nahma 176
- naksh..... 183
- Nam, Nguen Van 22, 198, 319, 531
- Namibia 49, 50
- Nart..... 75, 221
- Native Americans (see also American Indians)
- 343, 491, 498, 501, 523
 - drone polyphony among 331
 - polyphony among 203, 328, 343, 345
 - stuttering among 489
 - stuttering studies in 490
- natural selection 398
- Naxi 193
- Neanderthals
- as archaic Homo sapiens 476
 - body painting among 399
 - cannibalism among 420
 - capacity for speech..... 479
 - classic..... 479, 480
 - classic and progressive forms of 479
 - had better musical abilities..... 443
 - progressive 479
 - singing among..... 436
 - use of clothes among..... 402
- Nedelino 128
- Nepal 199, 202, 435
- Nettl, Bruno . 22, 203, 205, 206, 207, 224, 258, 328, 329, 425, 504
- Network Theory (as alternative name for the Multiregional Evolution Theory) 482
- neurology 14
- New Guinea 212, 215, 221, 435, 543
- Newman, Ernst 424
- Newman-Bertrand, Lynn 15, 24
- Niger 57
- night time security in hominids 392, 418
- Nikoladze, Ketevan 22, 333, 335, 530, 538
- Nilotes 45
- Nim 456
- Nketia, Kwabena 38, 39, 42, 53, 225, 526
- nomads..... 57
- Nootka 203, 204, 491
- stuttering among 503
- North Africa .38, 52, 53, 55, 56, 57, 58, 59, 60, 192, 321, 322
- as a monophonic region..... 56
 - general characteristics..... 55
- North America.....55, 176, 203, 204, 207, 328, 329, 330, 331, 343, 369, 489
- North Asia 63, 187, 217, 318, 327, 330
- North Caucasia 23, 69, 74, 530, 534
- North Europe.....142, 251, 267, 272, 280
- Northern Voice..... 24
- Norway 153, 157, 328
- Nuristan 24, 174, 184, 185, 186, 187, 202, 227, 296, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 316, 322, 368, 407
- O'Brien, Sue..... 209, 494
- object throwing..... 390
- as a defense in hominids 390
- Occam's razor 408, 476
- Oceania..62, 211, 212, 214, 216, 261, 281, 349
- ocellus (eyespot) in humans..... 421
- octave scales 122, 123
- Oglala Sioux 205
- Oliveira, Luisa Tiago de 544
- Olsen, Dale ..176, 180, 208, 323, 324, 341, 342
- Onslow, Mark.....23, 494, 501
- organ..... 116, 456
- organum.....29, 31, 42, 45, 151, 177, 178, 179, 188, 224, 225
- origins of music..413, 424, 425, 426, 427, 428, 438, 446, 537
- review of the existing works..424, 425, 426, 427, 428, 429
- Orinoco River 208
- Orkney Islands..... 156
- Orovela 276, 277
- Ossetians62, 69, 73, 74, 75, 221, 231, 232, 238
- ostinato 57, 531
- in reconstructed primordial polyphony.. 376
- ostinato polyphony 30, 34
- Osuokai 530
- overlapping polyphony 30, 36
- overtone singing .13, 46, 51, 82, 174, 181, 182, 183, 202, 217, 222, 227, 244, 298, 299, 300, 301, 302, 303, 310, 314, 368, 539
- oxytocin
- group singing and 392
- Pacific Islands 211, 215, 347
- paghjella 163, 164
- Paiwan 195, 197, 539
- Paleolithic industry
- origins of..... 411
 - role of music in the origins of..... 413
- Palessie 88, 89, 90, 91, 278
- Palmer, Roy 22
- Panbanisha.....381, 457, 466, 467
- Pannonia 134
- Papago 205
- Papua New Guinea 407
- parallel polyphony 30
- parallelism 29, 31, 32, 36, 42, 58, 90, 188, 223, 342, 374
- in reconstructed primordial polyphony.. 376

- Partlas, Zhanna 23
- part-singing 11, 39, 47, 137, 153, 155, 158, 162, 168, 177, 200, 203, 211, 230, 262, 475, 527, 538
- Pashina, Olga 66, 68, 533
- Patamona 208
- Pavlenko, Nikolai 254
- Pavlishyn, Marco 22
- Pegg, Carolle 298, 299
- pentachordal scales 123
- pentatonic scale 44, 141, 182, 196, 222, 300
- perestroika 256
- Peretz, Isabelle 432
- perfect pitch
- among archaic *Homo sapiens* 513
 - declining of 514
 - in animals 443
 - in babies 440, 469
- performers (and listeners) 39
- Persian Gulf 174, 175, 201
- Pestana, Maria do Rosario 544
- Peyote 205
- Phonogrammarchiv Vienna 47
- physical anthropology 14, 21, 25, 272, 301, 472
- and vocal polyphony 519, 520
- Pike, Kenneth 41, 483, 484
- Pinker, Steven 427, 438, 440, 441, 442, 443, 445, 465, 522
- Pirin 128, 129, 262, 278
- Pitch language (referential vocal system before the advance of speech) 434, 439, 440, 483
- podgolosochnaia polifonia ... 63, 68, 80, 87, 91, 287
- Pokrovsky, Dmitri 65, 527
- Poland 22, 66, 88, 157, 269, 540, 543, 545, 546
- Polesie 88, 89, 91, 295, 406, 529, 533, 540
- Chernobyl disaster in 89
- Polifonies Vivantes 15, 534
- Polissia 84, 85, 86, 88, 91
- Polynesia 61, 211, 212, 213, 214, 216, 237, 252, 255, 347, 348, 349, 350, 351, 354, 369, 371, 545
- polyphony
- Africa – general characteristics 58
 - African and Medieval European 222
 - among Ainu 188, 314, 369, 487
 - among American Indians 369
 - among Assamese 200
 - among Basques 162
 - among Bedouins 180
 - among Bushman 50, 52
 - among Chinese minorities 192
 - among Chuvash 82
 - among East Slavs 265
 - among Mordovians 78
 - among Nootka and Kwakiutl 204
 - among North American Indians 203, 224, 325
 - among Pygmies 47, 226
 - among Q'eros 207
 - among Roma in Russia 83
 - among Russians 63, 64, 67
 - among Samaritans 178
 - among Setu 149
 - among Sumerians 337
 - among Tatars 81
 - among Tuaregs 57, 321, 339, 368
 - among Udmurts 81
 - ancient European 282
 - and genetic markers in Africa 226
 - and mountains 266
 - and multiregional hypothesis 482
 - and origins of articulated speech 378, 472
 - and stuttering 485, 503, 518
 - as a higher form of music 250
 - as a higher stage of musical thinking 520
 - as a recent phenomenon 225
 - as a symbol of national identity 516
 - as a term 29, 30
 - as an extra-musicological problem 21
 - as an international phenomenon 226
 - as ancient universal means of human communication 16
 - as the invention of medieval monks 259
 - attempt of reconstruction of the history of 513, 514, 515
 - attempts to create in Soviet Union 256
 - cartography of 227
 - cartography of European 266
 - cases of the appearance of 255
 - cases of the disappearance of 250
 - among Californian Indians 251
 - among Pygmies 252
 - in Georgia 252
 - in Indonesia 252
 - in Italy 251
 - in Latvia 251
 - in Macedonia 251
 - in North Europe 251
 - in Polynesia 252
 - in Russia 251
 - in Sicily 251
 - in Taiwan 251
 - in Venezuela 251
 - the reasons of 252 - centre for the research of 534
 - comparison of Ainu and Lithuanian 317
 - comparison of Nuristan and Lithuanian 305
 - conferences and seminars on traditional 525, 547
 - correlation with physical anthropology 232
 - degradation of 246, 248, 252
 - disappearance in Eastern Europe 287
 - disappearance of 16, 18, 262, 312, 367, 369, 372, 378, 475, 513
 - discovering 329
 - distribution of 12, 27
 - elements in Turkey 181
 - emergence from monophony 261
 - emergence of European professional 259
 - Europe – general characteristics 60
 - European and Polynesian 349
 - European connections of Ainu 318
 - European connections of Tuareg 321
 - European features among North American Indians 331

European professional.....	257
evolution from monophony.....	285
evolutionary function of.....	377
Georgian and Medieval European.....	223
heterophony and drone in Russia.....	68
historical dynamics of development of ..	250
in a free metre	274
in Abkhazia.....	72
in Albania.....	137, 278
in Amazonian region.....	208
in ancient civilizations	13
in Ancient Egypt	223
in ancient Mesoamerica	343
in Asia	201
in Bahrain.....	323, 338, 369
in Bahrain and among Tuaregs	324
in Balkans	126
in Balkaria and Karachaevia	73
in Baltic region.....	142
in Belarus	88
in Bosnia and Herzegovina	132
in Bulgaria	128, 278, 531
in Central Africa	44
in Central Asia	12, 188
in Chechnya and Ingusheti.....	75
in Corsica	163, 228
in Croatia	133
in Dagestan	77
in Denmark and Norway	157
in Eastern Europe.....	62
in England.....	153
in Estonia	149, 251
in Europe.....	171, 477
in Finland	150
in France	162
in Georgia	93, 228, 353, 535, 536
in Germany	159
in Greece	140, 278, 313
in Iceland	151, 527
in India.....	200
in Indonesia.....	198
in isolated regions	267
in Italy	167
in Jewish music.....	176
in Komi	79
in Latvia	147, 312
in Lithuania	142
in Macedonia	135, 278
in Mari	80
in Melanesia.....	214
in Mesoamerica.....	341
in Mesopotamia.....	336
in Mesopotamia and Mesoamerica	332
in Montenegro.....	131
in Nepal and Burma	199
in New Guinea	215
in North Africa.....	55
in North Asia.....	187
in North Caucasia.....	69
in North Europe	142
in Nuristan	24, 184, 304, 368
in Ossetia	74
in Persian Gulf	175, 323
in Poland.....	157
in Polesie	90
in Polynesia	212, 252, 347, 369
in Portugal	165, 278, 291, 544
in Romania	126
in Russia	533
in Sardinia.....	170
in Scotland and Ireland	156
in Serbia.....	130
in Sicily.....	169
in Slovakia	158
in Slovenia	134
in South American Indians	207
in Southeast Asia	320, 368
in Spain.....	165
in sub-Saharan Africa.....	40, 225, 236, 374, 481
in Sweden	156
in Switzerland.....	161
in Taiwan.....	195, 539
in Tibet	195
in Ukraine	83, 87
in Vietnam	198, 319
in Wales.....	155
in West Africa.....	53
increasing interest in studies of.....	15
Indo-Europeans and European.....	277
influence of late professional.....	282
instrumental in Armenia	180
instrumental in Kazakhstan	184
international research bodies for the study of	15
links between vocal and instrumental....	332
Mediterranean.....	179
methodology of comparative study of ..	227, 238
mixed styles of.....	273
model of gradual disappearance of	426
multidisciplinary approach to	537
neglect in Asia	173
neglect in Ukrainian musicology	84
of pre-Indo-European populations	280
old and new styles in Europe	61
origins from monophony	256
origins of.....	222, 224, 244, 246, 516
ostinato as the earliest type of.....	375
parallels between blown instrumental and vocal.....	333, 369
persecutions against in Medieval Europe.....	253
polytonality in traditional	296
primary and secondary forms of	227, 373
primordial	378
question intonation, dialogue and	449
reasons of uneven distribution of.....	378
reconstructing of the primordial state of.....	372, 376, 394
research centre of European.....	541
review of the study on	222
Samaritan and Syrian church organum ..	225
signs of decline and disappearance of.....	13
social.....	16, 192
spontaneous	178
stability of.....	367
stable and mobile elements of.....	227

stable elements of	241	two distinct groups to be distinguished	
stuttering and	19	among users	467
sub-Saharan African	437	protoquestion.....	461, 462
survival of.....	271	Prudente, Felicidad.....	539
the first international research body of the		Pshavi.....	95, 99
research of.....	225	psycholinguistics.....	21
the idea of late emergence of	258	Pygmies.....	47, 50, 51, 59, 223, 225, 239, 335, 375, 394, 405, 443
time of the emergence.....	377	have no professional musicians	48
traditional polyphony in rock music	366	stuttering among.....	492
type of, as a stable element.....	239	Q'ero	207
types of European traditional.....	283	Qia, Shen.....	193, 194
types of Russian.....	64	Qiang.....	193
uneven distribution of.....	377	Qiao, Jian Zhong.....	539
vocal and instrumental	224	Qollas	209
was earlier than monophony	522	question intonation	448, 454, 458, 459, 460, 461, 462, 463, 467, 468, 469, 470, 536
who invented	256	first questions are asked by	17
wider historical distribution in Europe ..	288	used before the grammatical forms of	
yodel as a part of primordial	375	questioning	463
polyrhythmic	35, 40, 50, 535	questions	
polytonality	144, 295, 296, 308, 317, 353, 451	and apes.....	466
in sutartines.....	368	and curiosity	461, 465
Portel	543	and mental cooperation	18
Portugal	165, 224, 278, 279, 284, 535, 542, 543, 544, 548	and mental retardation	465
predators.....	16, 385, 386, 387, 388, 389, 391, 392, 394, 395, 419, 423, 438	and protoquestion	461
audio-visual intimidation of.....	411	and three functions of language.....	453
avoiding.....	413	and TOM (Theory of Mind)	458
body painting to intimidate	399	answering	517
defense from heavier predators on higher		apes and.....	455, 457, 460, 462, 464
branches of the tree	383	apes comprehending human	456
eyespot used by hominids against	422	apes failure to ask.....	457
night time security	418	apes know question words.....	456
object throwing at	390	as a cognitive revolution	464
reclaiming dead bodies from	418	as a crucial element of human intelligence	
rhythmic singing used to avoid.....	388		458
role of music in avoiding.....	413, 418	as a genetic trait.....	17
safety measures to avoid.....	388	as a revolution in information exchange	453
sharing ground with.....	383	as fundamental cognitive ability in humans	
singing and dancing as a defense from..	513		467
singing and drumming to intimidate.....	397	as the most important element of human	
singing and vocalizations attract.....	385	communication	463
stop singing not to attract.....	395	asking and answering	17
struggle against.....	408	chimpanzees using question intonation ..	459
threat to birds on the ground.....	384	cognitive development and asking	452
throwing stones at.....	412	development in ontogenesis	462
Premack, Ann.....	455, 457, 464	dialog and	449
Premack, David	430, 455, 456, 457, 458, 464	evolutionary advantage of asking.....	451
Presley, Elvis	365, 447	genetic and environmental factors in the	
Pressl, Herman	184, 185	development of the ability to ask.....	468
primates		genetic factor in the development of the	
canines in.....	409	ability to ask	464
male/female voice ranges	402	grammatical forms of	463
primatology	14, 21, 25	how babies learn to ask	465, 467, 468
prion diseases.....	421	how to teach apes to ask	456, 457
professionalism		human ability to ask	448, 450
beginning in music history	16	in australopithecines	470
Protestant Revolution	260	in children.....	17
protolanguage	17, 461, 467	in children before the development of	
asking questions and.....	517	syntax	463
in feral children.....	466	in feral children	465
in four groups of users	467	in hominids	452
questions and	468	in Homo habilis	470

- in motherese 469
 in squirrel monkeys 460
 in very young children 458
 needs no syntax 462
 no publications available of the origins of 448
 origins of 461
 protolanguage and 467, 468
 understanding 466
 unique to human intelligence 17
 universality of intonation of 463
 use of the intonation for the earliest 462
 who could answer the first 462
 why apes fail to ask 464
 why we ask 451
 Quilici, Felix 163, 252
 Racha 112, 115, 125, 274, 333
 Rachiunaite-Viciniene, Daiva 23, 144, 145, 146, 290, 291, 292, 294, 295, 296, 539, 543
 Rachmaninoff, Sergey 10, 359
 raga 28, 173, 200
 Rakhaev, Anatoly 23, 74
 Rakotomalala, Mireille 55
 Rapa Nui (Easter Island) 214, 347
 Rappoport, Dana 22, 198, 252
 Recent African Origin Theory 18, 481, 482
 Red Hot Chili Peppers 404
 red ochre
 the use for body painting 399
 Red Sea 45, 181
 Reese, Sheree 23, 495
 regional studies
 in ethnomusicology 218
 Renaissance 260, 527, 545
 responsorial singing 45, 54, 205
 and asking questions 17
 in monophonic cultures 216
 in reconstructed primordial polyphony .. 376
 universality of 373, 449, 454
 Rhodes 334
 rhythm 36, 40, 50, 51, 68, 98, 129, 154, 155, 158, 164, 167, 169, 171, 185, 189, 192, 241, 242, 275, 277, 305, 373, 391, 394, 403, 426, 443
 among animals 387
 among archaic Homo sapiens 513
 and language 395
 and metre 239, 241
 and synchronic body movements 16
 and trance-inducing effect 391
 as a built-in-metronome in human brain 394
 decline of 514
 drumming before the sense of 394
 emotional bonding through 444
 following the 10
 free ... 75, 130, 138, 166, 183, 209, 212, 229, 275, 276, 277, 279, 280, 282
 genetic component in 440
 in reconstructed primordial polyphony .. 376
 inbuilt metronome in a human brain 376
 more important than pitch in Africa 51
 origin of 543
 selection for better sense of 378
 sense in humans 376
 universality of simple 374
 work and 195
 Rice, Tim 22, 128, 129, 136, 195, 218, 313, 414, 417, 538
 Richman, Bruce 382, 427, 439, 475
 Rihtman, Cvjetko 132, 133, 223
 Rihtman, Dunja 10, 530
 rimse 189
 rock music 11, 196, 227, 352, 354, 356, 357, 358, 365, 366, 367
 Rockefeller, Nelson, as a stutterer 523
 Rodin, as a stutterer 523
 Roditeleva, Maria 23, 532
 Roederer, Juan 426
 Romania 13, 126, 127, 135, 140, 278, 283, 536, 542
 Rosaleer-Green, Frank 22
 Rousseau, Jean-Jacques 424
 Russia 15, 23, 62, 63, 64, 65, 66, 67, 68, 69, 74, 76, 79, 81, 83, 88, 90, 251, 266, 269, 287, 298, 333, 526, 528, 529, 531, 533, 534, 536, 540, 543, 544, 545, 547
 polyphonic conference in 532
 Rwanda 45
 Rycroft, David 38
 Sabaliauskas, Adolfas 145, 290
 Sachs, Curt . 223, 291, 336, 337, 338, 339, 340, 341, 425
 Sahara 38, 41, 45, 53, 55, 56, 57, 58, 59, 60, 216, 321, 481
 Saingilo 100, 249, 252
 Saint-Polten 527
 Saisat 195, 197, 251
 Sakalava 55
 Samaritans 178
 Samegrelo 102, 528, 531
 San 49, 50, 51, 52, 376
 Sardinha, Jose Alberto 22
 Sardinia 167, 170, 171, 224, 278, 282, 322, 539, 542, 546
 Sardo, Susanna 544
 Sarv, Vaike 23, 149, 530, 532
 Savage-Rumbaugh, Sue 381, 455, 456, 457, 460, 466
 scale
 anhemitonic 191
 chromatic 73, 265
 chromatic and diatonic 131
 combination of fifth and fourth diatonic systems in East Georgia 274
 connections between scale systems and the type of polyphony 223
 different systems in related cultures 242
 eight, fifth, fourth diatonic systems 122
 fifth diatonic 122, 123, 247, 265
 fifth diatonic system in Iceland polyphony 152
 fourth diatonic 123
 hexatonic 49
 in Ancient Greece and Middle Eastern links 175
 in Georgian music 121

in sub-Saharan Africa	43	Sikharulidze, Ilarion.....	9
in West Africa.....	54	silence	
Istrian.....	134	among chimpanzees	385
measuring different scales	242	as a sign of danger.....	417
Middle Eastern tetrachordal.....	123	as a sign of danger for social animals.....	416
non-octave	540	Simonishvili, Varlam	110
octave.....	16	singing.....	51, 64, 184, 542, 545, 546
octave, fifth and fourth diatonic systems.....	242	alone with performers.....	11
pentachordal	16, 240	among animals	516
pentatonic	82, 242, 247, 288	and drumming for the night time safety	392
polyphonic traditions and pentachordal	123	and whistling	433
suggestions to ban certain scales	175	birds do not sing on the ground	384
tetrachordal	16, 240, 260, 275	body percussion is older than	379
tetratonic	44	difference in European classical music and	
various systems in Europe	265	rock music style of.....	357
with augmented seconds	134, 222, 276	evolutionary cost of.....	382
scavenging.....	412	gender and	124
confrontational.....	377	in Australopithecines.....	382
hominids and humans as Apex scavengers		in human culture.....	27
.....	393	in parallel seconds	143
in hominids	393	marginalized after the emergence of speech	
versus hunting debate	393		514
Schaeffner, Andre.....	38, 42	on the trees and on the ground.....	383
Schneider, Marius.....	27, 30, 42, 72, 84, 140, 155,	role in survival of hominids.....	382
166, 188, 200, 201, 211, 214, 222, 223, 257,		together with clapping and stomping	46
259, 265, 349, 520, 521, 522		why chimpanzees do not sing	384
schneizer (yodel)	161	without listeners	373
Schwebungsdiaphonie (roughness diaphony)		singing in dissonances	
.....	199, 265, 405	as a part of AVID system	404
Scotland.....	156	as a survival mechanism.....	404
screaming	161	creates the most robust sound.....	404
at the rock concerts	358	singing in harmony	
evolutionary importance of.....	386	and trance	403
in big groups	387	sky-burial	420
Seeger, Antony	208, 209	Slaviunas, Zenonas.....	143, 144, 145, 291, 295,
Seeger, Charles.....	223	296	
Segrave, Bob	24	Slovakia	22, 158, 530
self-developing cognition		Slovenia	134, 135, 167, 269, 545, 546
origins of.....	523	So, Linda.....	512
semeiskie	66, 188	Social polyphony (singing in groups)	226
Senegal	52	Sokoli, Ramadan	137
Sephardi.....	176	Sokolova, Alla.....	23, 72, 287, 544, 545
Serbia... 130, 131, 232, 278, 530, 531, 542, 546		Somalia	45
Setu.....	149, 311, 527, 530, 532, 545	Sorce Keller, Marcello	167, 168, 169
Shaverzashvili, Alexander.....	22	Sotho	51
Shavsheti	112, 543	sound perception	379, 380, 381
She.....	193	South Africa	40, 46, 49, 50, 52, 481
Sheehy, Daniel	342	South America ...	207, 208, 209, 210, 217, 242,
Sheikin, Yuri	23, 181, 187, 315	328, 330, 331, 343, 345, 346, 347, 348, 350,	
Shetland Islands.....	156	369, 526	
Shields, Hugh	31, 156, 162	South China mountain minorities.....	406
Shilakadze, Manana	22, 536, 537, 538, 540,	South Ossetia	531
543, 545		Southeast Asia.....	54, 195, 197, 200, 202, 223,
Shklovsky, Viktor.....	23, 487, 493, 501	320, 327, 346, 348, 368, 369, 497	
Shop.....	129, 292, 313	conference on vocal polyphony in.....	525
Shugliashvili, David.....	22, 116, 536, 538, 540,	polyphony invented in.....	520
543		stuttering in.....	24
Shvelidze, Nino	22, 538	tone languages in.....	41
Shvets, Natalia.....	8	Southern India	201
Sicily	167, 169, 251, 252, 282, 322	Soviet Union	9, 62, 63, 72, 179, 298, 314, 472,
sign language		487, 519, 521, 526	
in apes.....	430, 432, 455	attempts to create polyphony among the	
replaces speech	434	peoples of	12, 256

before Perestroika	314
difficulty to get information in.....	488
difficulty to travel from.....	325
fall of.....	14
musical styles banned in	515
situation after the brake-up of	547
Spain.....	22, 165, 166, 209, 269, 278, 279, 280, 283, 322, 542, 543, 545
speech ...	41, 299, 370, 378, 424, 425, 427, 437, 438, 439, 440, 447, 448, 453, 456, 465, 471, 472, 478, 479, 480, 486, 487, 488, 489, 490, 493, 494, 495, 496, 497, 498, 500, 501
advantages over gestural communication	432, 433
and hearing in children	381
and language	433
apes understanding human.....	381
asynchronous origins of.....	18, 483, 488
difference between language and... ..	378, 433
evolution of.....	13, 523
fear of (among stutterers).....	490
humans are still in the process of mastering	488
in classic Neanderthals.....	480
in feral children.....	465
in Homo erectus.....	427
in protolanguage	467
infants enjoy hearing with pitch modulations.....	469
intonation as emotional component in ...	441
language, intelligence and.....	14
localization.....	431
localization of music and pitch contour in	432
motherese	469
music and	424
origins of.....	20, 523
pitch language and	434
prosodic elements in	426
question intonation before the syntactic structures in.....	17
sensitive period in acquiring.....	490
sounds in ape vocal signals.....	517
stuttering, dyslexia and origins of.....	509
tone modulations in tone languages.....	41
without tone element in tone languages.....	436
Speech Language and Hearing Association (Singapore)	24, 494, 496
speech pathology	25, 498
Spencer, Herbert.....	424, 440, 522
Spiro, Shituni.....	23
Stasov, Vladimir	63
Stevenson, Robert.....	342
Stockmann, Doris	137, 138
Stockmann, Erich.....	138, 223
Stoin, Vasil	128
stomping.....	46, 358, 373, 376, 389, 390, 391, 394, 396, 408, 438, 516
as a defense	390
as a means of night time security	392
as an element of predator control.....	389
stone hitting	
as a part of AVID system.....	408
stone tool industry	412
origins of.....	19
stone tools.....	387, 392, 471
as a by-product of drumming.....	412
how hominids started making.....	411
Stone, Ruth.....	40
stone-throwing	
advantages of defense	396, 408
Stravinsky, Igor	102, 144, 295, 308, 353
strength	
human and chimpanzee	411
Stumpf, Carl	291, 424, 438
stuttering.....	14, 23, 478, 486, 488, 489, 490, 491, 493, 494, 495, 497, 498, 499, 500, 501, 503
among Ainus.....	501
among Australian Aborigines.....	502
among Chinese	493, 496, 502, 503, 512
among Chinese and Indian populations in Singapore	496
among early humans.....	514
among Japanese	501
among tone language speakers	501
and choral singing.....	487
and dyslexia	505
and polyphony	25, 485, 503, 518
cross-cultural differences.....	523
cross-cultural studies of.....	502
cultures with polyphony have more.....	493
decreasing throughout evolution.....	514
diagnosogenic theory of.....	490
genetic differences in prevalence.....	522
genetic nature of	486, 491
gradually declining	486
highest prevalence of	492, 502
in sub-Saharan African populations.....	491
in the West Indies	492
incidence of	21
late origins of speech and	19
mean figure of prevalence	489
music, speech and.....	485
Native Americans have no.....	489, 490
official attitude towards prevalence.....	498
prevalence among Australian Aborigines	492
prevalence among Polar Eskimos.....	492
studies of European and American populations.....	489
universality of.....	489
very high prevalence in West Africa	491
stuttering and dyslexia (comparison).....	506
sub-Saharan Africa... ..	12, 18, 38, 39, 40, 42, 45, 52, 53, 56, 58, 59, 60, 61, 171, 211, 216, 225, 236, 237, 242, 255, 321, 346, 348, 371, 374, 394, 478, 481, 483, 484, 500
articulated speech in	481
duple meters in	374
inability to drink milk in.....	254
musical influences from.....	55
Sugarman, Jane.....	137, 139
Suliko	120, 121
Sumerian language	21, 340
Sumerians.....	324, 336, 340, 369
invented musical writing	339

- polyphony among 339
- Sun, Chun Yen 539
- survival strategy 420, 454
 - AVID (Audio-Visual Intimidating Display)
 - as 390
 - cannibalism as 420, 421
 - group singing as 413
 - in hominids 516
 - singing and dancing as a part of 377
 - singing as the center of the hominid 385
- sutartines 33, 142, 143, 144, 145, 146, 147, 148, 190, 227, 244, 251, 252, 283, 290, 291, 292, 293, 294, 295, 296, 297, 305, 306, 307, 308, 309, 310, 311, 313, 317, 353, 368, 527, 532
- Sutartines 14
- Suzukei, Valentina 300
- Sweden 156, 526, 537
- Switzerland 22, 161, 183, 269, 281, 538, 540
- Synthesis polyphony 36
- Syria 225, 337
- Tabatadze, Gogi 22
- Tahiti 213, 347
- Taiwan 15, 22, 173, 174, 195, 196, 197, 202, 251, 315, 318, 320, 348, 368, 369, 406, 494, 535, 539, 546, 548
 - polyphonic conference in 538
- Tajikistan 23, 183, 192, 264
- Tajikova, Zoia 23, 183
- Tallmadge, William 224
- Tamerlane 304
- Tampere, Herbert 150, 251
- Taneev, Segrey 43, 73
- Tanzania 45, 46, 526, 543
- tapping 10, 189, 373
- Tatars 62, 77, 81
- Tavlai, Galina 23
- Tbilisi ... 8, 85, 92, 95, 119, 120, 145, 179, 228, 234, 281, 287, 325, 402, 451, 485, 526, 528, 529, 531, 535, 536, 537, 539, 542, 543, 544
- Tbilisi State Conservatory 8, 15, 152, 228, 448, 528, 531, 535, 536, 537, 539, 542, 544
- Tbilisi State University 14, 21, 485, 531
- Tchaikovsky, Petr 10, 43, 73, 359
- Techane, Daniel 24
- teeth 299, 319, 395, 413
 - among ground animals 384
 - contemporary function 409
 - decline as a result of cooking 410
 - decreasing the size and number of 516
 - primates who live on the ground have
 - bigger 409
 - reasons for the decline in evolution 410
 - reasons of decreasing of the size and
 - number in hominids 409
- Temne 54
- Tenore 539
- tetrachordal 70, 123, 275, 276
- teuteu 213
- Thanh, To Ngoc 539
- The Dyslexia Myth (BBC4 documentary) .. 506
- Theory of Mind (TOM) 458, 464
- Thomas, Jacqueline 22, 492
- throwing
 - advantages of defense 391
 - as the last resort of AVID system 412
 - hand gesture of 389
 - hunting versus defense 390
 - objects as defense 386
 - objects at predators 390
 - stone 396, 414, 419
- Tibet 195, 406, 407, 420
- tiger 409, 419
- tiir167
- Timmerman, Robin 23
- Titicaca 209
- Titon, Jeff 414
- Tjahja, Eric 24
- tonality 31, 32, 178, 296, 305, 308, 537
- tone
 - lexical and grammatical functions in Africa 483
 - lexical function in East Asia 483
- tone languages 41, 58, 444, 483, 484
 - and parallel polyphony in Africa 42
 - and polyphony in Africa 41
 - and the importance of pitch in human
 - speech 437
 - as a late development 442
 - as a mix of articulated speech and pitch
 - element 443
 - as majorities of world languages 437
 - differences between East Asian and African 483
 - double-component system of 437
 - in Africa 41
 - in America 436
 - in East Asia 484
 - lateralization 432
 - lexical and grammatical use of tones 437
 - lexical and grammatical use of tones in
 - Africa 483
 - lexical use of tones in East Asian 483
 - remnants of ancient pitch language in 440
 - stuttering in 501
 - use of pitch in referential communication in 441
 - whistle languages in 436
- tones
 - fixed, or registered in sub-Saharan Africa 484
 - gliding, or contour in East Asia 484
- Tonga 212, 213, 214, 252
- Tongerren, Mark van 298, 300
- Toradze, Gulbat 22
- Toroja 198
- Tory Island 156
- Toskeri 137, 139, 540
- Tracey, Hugh 38, 47
- trallalero 167, 542
- trance 394
 - AVID and 414
 - battle 399
 - composing music in 50
 - drumming and 414
 - loud singing in harmony and 403

- predator fear and rhythmic repetition leads
 to 391
 rhythmic repetition and 391
 rhythmically united singing/stomping and
 391
 stone hitting and 412
 Transcaucasia 91, 119, 179, 221
 tree factor
 safer living conditions 384
 tree living species sing, but ground living
 species do not sing 383
 Tserendavaa 300
 Tsitsishvili, Nino ... 26, 94, 106, 108, 110, 117,
 124, 125, 225, 275, 276, 277, 402, 531, 532,
 536, 538, 540, 543
 Tsou 195, 197
 Tsurtsumia, Rusudan ... 22, 535, 536, 537, 539,
 543, 545
 Tuamzashe, Benjamin 52
 Tuaregs 38, 53, 57, 58, 321, 323, 324, 339
 tuilage 162
 Tujia 193
 Turkana 45
 Turkey 174, 181
 Turkic languages 81, 282
 Turnbull, Collin 47
 Tusheti 95, 99
 Tuva 181, 298, 299, 300, 301, 310, 315, 331,
 539
 twisongur 151, 152, 153, 157
 txistu 166
 Tyrol 160
 Udmurts 62, 77, 80, 82, 534
 Uganda 45, 46
 Ukraine 8, 23, 62, 83, 84, 85, 86, 87, 88, 90,
 266, 269, 270, 282, 283, 287, 322, 526, 530,
 533, 536, 540
umngqokolo 51, 303
 UNESCO 126, 273, 537
 Union of Composers of Georgia 531
 Union of Soviet Composers 532
 unison 35, 46, 48, 53, 56, 63, 64, 67, 68, 72,
 78, 80, 81, 89, 90, 92, 93, 94, 97, 100, 126,
 135, 137, 139, 140, 142, 146, 150, 155, 156,
 158, 161, 169, 174, 175, 176, 184, 187, 188,
 196, 203, 204, 207, 215, 216, 241, 256, 285,
 290, 313, 314, 332, 334, 337, 339, 344, 368,
 402, 404, 449, 532
 appearance of 514
 as social polyphony 192, 198
 thick 31
 Universitat fur Musik und darstellende Kunst,
 Vienna 541
 University of Melbourne 24, 41
 Uno, Akira 507
 upopo 189, 190
 Ural Mountains 77, 149
 uzliau 82
 Vainstein, Sevyan 299, 303
 Vakinankaratra 55
 Valencia 165
 Valishvili, Nana 22
 Vallejo, Polo 22, 543, 545
 variant heterophony .. 35, 60, 63, 64, 79, 80, 81,
 172, 239, 240, 284, 533
 Venezuela 207, 209, 251, 526
 Vienna 160, 169, 186, 402
 Viennese Phonogram Archive 24
 Vietnam 13, 22, 62, 174, 198, 199, 202, 216,
 316, 319, 320, 348, 406, 407, 531, 535, 539
 Vinogradov, Viktor 23, 31
 Virgil, as a stutterer 523
 Vizel, Tatiana 23, 487, 493
 vocal grooming 20, 417, 454
 vocal polyphony (see also polyphony)
 and origins of speech 475
 and stuttering 25
 distribution of 27
 origins of 519, 521
 special conferences on 525
 vocalizations
 among Australopithecines 470
 as a defense in chimpanzees 389
 as a precursor of questions 459
 chimpanzee 384
 cortical control over 432
 evolutionary cost of 382
 freedom from limbic control 439
 in evening to make night sleep safe among
 chimpanzees 392
 links with human music 428
 of very young babies 440
 terminology 429
 use of a few consonants among
 chimpanzees 439
 voluntary control of 430, 431
 with rising questioning intonation 462
 voice production 379, 381
 and sound perception 379
 inability to sing in tune as a problem of 380
 outstanding musical talent and the problems
 of singing in tune 380
 sound perception and 380
 Volga-Ural region 62, 69, 77, 78, 81, 82
 Voronezh 64, 65, 66, 527, 532, 534
 Wa 193
 Wachsmann, Klaus 38, 526
 Wagner Ear Phenomenon (inability to sing in
 tune) 380, 486
 Wagner, Richard 380, 440, 443
 Wagogo 46
 Wales 153, 154, 155, 156, 538
 Walker, Alan 411
 Wallaschek, Richard 424
 Wallin, Nils 413, 424, 427
 war cries
 in human military history 390
 Warao 208
 Washoe 456, 457, 464
 Watson, Nigel 22
 Weidenreich, Franz 482
 wennai 193
 Wescott, Roger 426, 436
 West Africa 50, 52, 53, 54, 58, 59, 481
 West Asia 275, 276, 309, 327, 482
 West Georgia 101

West Papua.....	215	Yemenite.....	177
West, Robert.....	486	yodel34, 59, 101, 102, 106, 141, 160, 161, 221,	
western Asia.....	513	274, 375, 540	
Western Europe.....	39, 162, 264, 267, 287	Yoruba.....	53, 54, 526
whistle languages.....	435, 436	Young, Selena.....	24, 494, 496
whistling.....	299, 303, 426, 435, 436	Yu, Jiin Fure.....	539
instead of humming.....	415	Yuhsiu, Lu.....	22
White, Tim.....	420	Zambezi.....	49
Whiten, Andrew.....	395	Zambia.....	45, 49, 52
Why Not.....	24	Zemp, Hugo.....	38, 161, 215, 537
Wiener Konzerthaus.....	541	Zemtsovsky, Izaly 8, 21, 64, 65, 66, 67, 68, 70,	
Wiora, Walter.....	291	80, 82, 228, 230, 243, 251, 288, 426, 449,	
Wolpoff, Milford 470, 472, 476, 477, 478, 479,		521, 528, 529, 531, 533, 537, 539	
480, 481, 482		Zhgenti, Vano.....	22
World Music Choir.....	24	Zhou, Ming Jay.....	539
Wu, Rum Shum.....	539	Zhoukoudian.....	478
Xhosa.....	46, 51, 52, 303	Zhulanova, Nadia.....	23, 79, 531, 533, 534
Xingrong, Zhang.....	194	Zhvania, Tina.....	22, 537, 540
Yakuts.....	187, 288	Ziegler, Johannes.....	507
Yali.....	215	Ziegler, Susanne....	23, 531, 535, 538, 543, 546
Yampolsky, Philip.....	198	Zimbabwe.....	49, 52
Yang, Xiu Zhao.....	539	Zuberbuhler, Klaus.....	23, 387, 388
Yao.....	193	Zubrov, Ezra.....	480
Yaqui.....	205	Zulu.....	51
Yasser, Joseph.....	223	Zumbadze, Natalia22, 530, 532, 536, 537, 538,	
Yavorsky, Boris.....	425, 532	540, 543, 544, 546	
Yemen.....	177		

List of audio tracks

In order to listen to the listed audio tracks from different polyphonic traditions, readers need to go to the internet address of the International Research centre for Traditional Polyphony <polyphony.ge>, chose the English version of the website, and then search for the “Audio tracks for the book “Choral Singing in Human Culture and Evolution.”

Track 1. **Central African Pygmy polyphony**. “Song of rejoicing after returning from a hunt”, recorded by Simha Arom in 1975, near the small city of Nola in western part of Central African Republic. Performed by around 25 person choir, two whistles, and two iron blades for the rhythmic accompaniment. From the CD *Africa: The Babenzele Pygmies* released by “Rounder” [CD5107]. Courtesy of Simha Arom and “Rounder”.

Tracks 2, 3. **Tanzania, Wagogo polyphony**. (2) Repertoire “Msaigwa” (polyphonic songs for making local beer – Ujimbi), and (3) Repertoire “Msunyhuno” (polyphonic songs for bringing the rain). Recorded by Polo Vallejo in village Nzali in March 2007. From the CD *Chants Wagogo, Tanzanie* (Wagogo songs, Tanzania). Ocora/Radio France C560155 (recordings, photos and texts by Polo Vallejo). Courtesy of Polo Vallejo and Ocora/Radio France.

Tracks 4, 5. **Russian polyphony** from Arkhangelsk district, Bashkiria. (4) “Tam gde vo pole kalina stoyala” (“There was a snow-ball tree on a meadow”), and (5) “U vorot, vorot solovey poet” (“There is a nightingale singing at the door”) dancing songs, originally recorded by Maria Roditeleva from the ensemble of village Krasnyi Zilim. This track is from the LP “Polosa moya, polosinka”, Melodia, 1988 (studio recording in 1987). Courtesy of Maria Roditeleva.

Tracks 6, 7. **Tatarstan polyphony** from Russian Federation. (6) Round dance song on Whitsun celebration, example of heterophony. Recorded by Nailia Almeeva in vil. Tavel, Chistopolskii region of Tatarstan in 1981. (7) Wedding song, two-part polyphony, recorded by Nailia Almeeva in vil. Troitsk, Chistopolskii Region of Tatarstan in 1981. Courtesy of Nailia Almeeva.

Tracks 8, 9, 10. **Mordovian polyphony** from Mordva-Moksha, Russian Federation. (8) “Lavagunya”, lyrical song of the ritual where a girl steals an apple – the symbol of fertility. Performed by four women (9); “Iavsema”, lament performed when the corpse of an elderly woman is borne from her

home. Two lamenters; (10) “Kezhen Salune” lyrical song – a beautiful girl does not want to marry a rich guy whom she does not love. Performed by 12 women. All songs were recorded by Mordovian-Finnish ethnographic music fieldwork in different Mordovian villages in October 20-27, 1993. All the tracks are from the CD “Syulgam: Traditional Songs of Mordovia”, GMCD0512, Global Music Centre, Finland. Courtesy of Nikolay Bojarkin, Jaana-Maria Jukkara and Global Music Centre, Finland.

Track 11. **North Caucasia, Adighian polyphony.** “Aidemirkan” (name of Adighian folklore hero from 15-16th century) performed by the ensemble Zhiu. Soloist Madin Stash (also accompanies himself on shechapshina, Adighian violin), basses (“zhiu”) are Zamudin Guchev, Zaur Nagoev, Kaplan Stash. Recorded in 2007 in Maikop. From the CD “Zhiu”, Courtesy of Zamudin Guchev, leader of ensemble “Zhiu”.

Track 12. **North Caucasia, Chechen polyphony** from a Chechen village in north-eastern mountain part of Georgia. “Voi deli Allah vu” (Our God Allah), religious song *Nazmi*, performed in families and religious celebrations (with clapping but no dancing). Performed by a female Ensemble Aznach. From the CD *Songs of Defiance: Music of Chechnya and the North Caucasus*, recorded by Michael Church in Georgia in 2007. Topic Records [TSCD934]. Courtesy of Michael Church and Topic Records.

Track 13. **North Caucasia, Ossetian polyphony.** “Gezdenti efsimerte Zareg” (Song of the seven Gazdenov brothers), performed by the Batu Dzugaev People’s Choir of North Ossetian (Alanian) Heroic Song. From the CD *Songs of Defiance: Music of Chechnya and the North Caucasus*, recorded by Michael Church in 2007. Topic Records. Courtesy of Michael Church and Topic Records.

Tracks 14, 15, 16, 17, 18. **Georgian polyphony.** (14) Svanetian polyphony, the most mountainous region of Georgia. Antiphonal round dance “Tamario” (name of Tamar, Queen of Georgia, ruled 1184-1213), ensemble Basiani; (15) Rachian polyphony, women’s antiphonal round dance “Jamata” (name), ensemble Mzetamze; (16) Kakhetian drone polyphony, ritual wedding-table song “Kakhetian Mravalzhamier”, ensemble Basiani; (17) Gurian contrapuntal polyphony, table song “Vakhtangouri”, antiphon of three solo singers and a big choir, recording by Kirile Pachkoria ensemble in the 1930s; (18) Acharian polyphony, antiphonal round dance “Voisa”, ensemble Basiani. Tracks are from the CDs “Basiani” (Georgian Patriarchate), “Mzetamze” (Face Music Switzerland), and “Georgian Folk Songs: Guria. The 1930s” (International Centre for Georgian Folk Music). Courtesy of Anzor Erkomaishvili, ensembles Basiani and Mzetamze.

Track 19. **Ukrainian polyphony** from Polesie. “Do not shake, the green oak”, Vesnianka (spring song-dance), example of drone polyphony, performed by five women (Maria Palii, Tatiana Matsok, Ganna Matsok, Ganna Korshum, Maria Sira, born between 1926 and 1937). Recorded by Evgeni Efremov in a village Pereliub, Koriukovskii District of Chernigov (Chernihiv) Oblast, on January 20th, 2006. Courtesy of Evgeni Efremov.

Track 20, 21. **Lithuanian polyphonic sutartines** from region Aukštaitia. (20) example of secondal canonic sutartines: “Du dobileliai, trys dobileliai” (two lil cloves, Three lil clovers), Trejines (three singers), recorded on May 11th, 1937 in Deltuva at Ukmerge District Singers: Agota Gričienė, Barbora Stimburienė and Marijona Gričienė (born between 1849 and 1870) from Tatkunai village [from the archive of Lithuanian Folklore and Literature, LTR 611(1)]. (21) Example of drone sutartines: performed by the ethnographic ensemble (four singers, born between 1914 and 1928) of vil. Nibragalis, district Penevezhis. From a CD: *Aukštaitija*. North-Eastern Lithuania. Polyphonic Songs of Aukštaičiai. *Lithuanian Traditional Music*. Compiled by Daiva Vyčiniene. Vilniaus plokštelių studija, 2002. Track 7. Courtesy of Daiva Rachiuonaite-Viciniene.

Track 22, 23. **Latvian polyphony**, (22) "Aiz Daugavas melni meži" ("There is a black forest behind the river Daugava") *rotasanas dziesma* (in Latvian), spring ritual song. Example of Latvian three-part drone singing from Selpils, Central-East Latvia, transcribed by Yurian in 1892. Recorded by the ensemble *Saucejas*. (23) “Nakat, Puisi, Nelepojat”, song from the genre *gavelisanas* from the Nica and Barta regions (south-west Latvia), often sung in the open air during spring and summer evenings, or during the group farm work. Performed by the ensemble *Saucejas*. Courtesy of Gita Lancere and *Saucejas*.

Track 24. **Bulgarian polyphony**. “Walking Song” from village Bistritsa, recreational song performed at breaks during work in the fields. Recorded by Gerald Florian Messner in Bistritsa on 26 September 1973. Courtesy of Gerald Florian Messner.

Track 25. **Bosnia-Herzegovina polyphony**, ženska ganga (female ganga) of the singing mode okavica. Sung by Pezić Tada, Mustapić Radojka and Krvavac Jaka. Recorded by Nerthus and Dieter Christensen on September 25, 1960. From the Collection Christensen Herzegovina 1960: 122. Courtesy of Dieter Christensen.

Track 26. **Albanian polyphony**, traditional polyphonic lament, performed by the group Bilbili (five men and one woman). Recorded by

Michael Church in the local employment office in the port of Vlore, south Albania, in 2000. Courtesy of Michael Church.

Tracks 27, 28, 29. **Corsican polyphony.** (27) Paghjella versu di Tagliu, example of a rare four part singing, (28) Sacred song “Sanctus”, South Corsica, (29) Terzinu di a Gravona. All songs performed by the group Spartimu (leader - Frédéric Vesperini). Courtesy of Frédéric Vesperini and Spartimu.

Tracks 30, 31, 32, 33, 34. **Portugal polyphony.** (30) Jovem Pastorinha, two part male choral song from Alentejo, south Portugal, recorded in 1984, (31) Cântico ao Menino, antiphonal religious song of the Christmas ceremonies, also sung at non liturgical popular events, from Alentejo, recorded in 1982, (32) Moda dos Caretos, four part male song from Trásos Montes, north east Portugal, sung by the boys of the village at their patron’s feast, St. Stephen. Recorded in 1983, (33) Canção do Loureiro, female peasant work song in four parts, from Minho, north west Portugal, recorded in 1980, (34) Eu hei-de ir ao, S. João, two part female song of the St. John’s popular festivities, at Douro region, north Portugal, recorded in 1977. All songs were recorded by José Alberto Sardinha. Courtesy of José Alberto Sardinha.

Track 35. **Persian Gulf, Bahrain**, polyphony of pearl fishers. “Ya mal”, pearl fisher’s work song, performed by the ensemble Dau Mubarak Bin Saad, and recorded by Scheherazade Hassan in Doha, Qatar, on April 21st, 1998. Courtesy of Scheherazade Hassan.

Track 36. **Oman, Bedouin polyphony.** “Lalelalela... razhah qasifiyah” – dance/recitation recorded by Dieter Christensen at a Bedouin wedding, Sohar, on June 25th, 1985. Antiphon of two lines of male dancers/singers. Courtesy of Dieter Christensen.

Tracks 37, 38. **East Afghanistan, Nuristan polyphony**, recorded by Herman M. Pressl in Nuristan (Mandesh, Pech-Tal). (37) group of female singers, accompanied by four string harp (Watj), and drum (Jamba), recorded on September 10th, 1968, archive #B13224; (38) group of male singers, accompanied by handclaps and drum (Daira), recorded on September 13th, 1968, archive #B13268. Courtesy of the Viennese Phonogram-Archive.

Track 39. **Central Asia, Tuva, overtone singing.** “Artyy-Saiyr” (The far side of a dry riverbed), performed by Vasili Chazir (b. 1958), recorded by Theodore Levin. From the book “Where Rivers and Mountains Sing: Sound, Music, and Nomadism in Tuva and beyond” (Indiana University Press, 2006). Courtesy of Theodore Levin.

Track 40. **Yakutian (Sakha) heterophonic singing.** “Ohuokai” – traditional Iakutian ring dance from the river Olemka. Was performed by three Iakutian students (Ustin Nokhsorov, Viktor Savin, and Zakhar Vinokurov), studying that time at different Moscow tertiary institutions. Recorded was made by Nina Mikhailovna Bachinskaia and Klavdia Viacheslavovna Svitova at Moscow Conservatory in 1946. Courtesy of Eduard Alexeev, Iakutian ethnomusicologist, living in Boston, USA.

Tracks 41, 42. **North Japan, Ainu polyphony.** (41) Bear festival song, recorded in 1978, and (42) upopo (sitting song), recorded in 1970 by Kazuyuki Tanimoto, Courtesy of Kazuyuki Tanimoto.

Tracks 43, 44. **Taiwan polyphony.** (43) tribe Tao, “Dawn song form the singing party with handclapping”. Heterophonic singing. Soloist: Syapen Mijakavat (b. 1931) and village Iraraley singers, and (44) tribe Ami. Two-part polyphony, “Song for a loving or married couple”: performed by (male singer) Fe’s (b. 1947), and (female singer) Dataw (b. 1944). Courtesy of Lu Yuhsiu and Paul Knight.

Track 45. **Flores polyphony.** “Berasi” two-part male song from the magico-religious ceremonial music, sung during the construction of houses or during the rice harvest. Recorded on July 7th 1988 in Keka village of Eastern Flores. Courtesy of Gerald Florian Messner.

Track 46. **Melanesian polyphony** from Baluan Island, Manus province, Papua New Guinea. Female ceremonial weii two-part song. Recorded by Gerald Florian Messner on May 14th 1977 on Baluan Island. Courtesy of Gerald Florian Messner.

Track 47. **Polynesian polyphony** from Tuvalu. Dance song “Fakanau” with hand clapping, performed by the group of 18 men on Niutao, Tuvalu. Recorded by Dr. Gerd Koch in September 1960. The song, which refers to a mythical encounter with a spirit boat, is believed to come “from the ancestors”. From the Collection Koch Ellice-Inseln (Tuvalu) 1960/61: 6W at the Berlin Phonogramm-Archiv. (Transcription of the song was published in Christensen & Koch, 1964:67). Courtesy of Dieter Christensen, Dr. L. Koch (head of the Berlin Phonogramm-Archiv), and Dr. M. Melk-Koch.

Track 48. **Aremai Tibetan Polyphony**, recorded in Sichuan, on 2011, by Joseph Jordania. Three Aremai Tibetan women sing a traditional song without words.

Track 49. **Veitnam, minority polyphony**, recorded in Lang Son Province, in October 1996, by Pribislav Pitoeff. “Alternative song,” performed by two women and two men alternatively. From the double CD

“Vietnam: Music of the Montagnards,” Collection du Centre National de la Recherche Scientifique Musée de la L’Homme. Coordinator Zugo Zemp. Song #12 from the CD 2 (Northern Vietnam). Courtesy of the Centre National de la Recherche Scientifique Musée de la L’Homme.