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MULTIDISCIPLINARY APPROACH TO THE PROBLEM OF THE ORIGINS OF VOCAL POLYPHONY

The resurrection of an interest in comparativist studies, as well as in the problems of the origins of musical phenomenon has become evident during the last couple of years. The appearance of the impressive volume "The Origins of Music" published by the Massachusetts Institute of Technology in 2000, with contributions by leading scholars from different disciplines, sets a new standards in this sphere (Wallin at al., 2000). The 36th World Conference of ICTM in Rio de Janeiro, Brazil, was also marked by an attempt to revive comparativist studies from contemporary perspectives. Although, as was noted by participants at the informal "comparativist dinner" in Rio de Janeiro, the comparativist component was quite modestly represented at the conference, the re-introduction of the long-forgotten theme as the main theme of the conference was an important statement. The aim of my paper, as it is clear from the title, is to outline the perspectives and problems of multidisciplinary study of the origins of vocal polyphony.

Today, at the beginning of the 21st century, we know much more about the regional styles of traditional polyphony then our colleagues a century ago. For Marius Schnaider and his contemporaries polyphony was simply a more advanced cultural trait which was developed from the initial monophonic singing (Schnaider, 1969). The search for the origins of polyphony was merely a search for the time, place and the mechanisms of when, where and how this change occurred before it spread in different regions of the world (see the review in Jordania, 1989:238-246). Interestingly, the idea of the later cultural transformation of monophonic singing into polyphonic singing has never been put in a form of a theory or a hypotheses. This was a kind of a common belief, or an instinctive desire to build an evolutionary scale from the ostensibly simpler (monophony) towards a more complex (Polyphony) phenomenon.

The new model of the origins of polyphony should look at polyphony primarily as a social phenomenon, intimately connected to the evolution of human society and language (Jordania, 1988, 1988a, 1989, 1997, 2000, 2001, 2002). A multidisciplinary approach to the problem of the origins of vocal polyphony is becoming vitally important.

The expansion of our knowledge in other spheres gave us new ways to approach the beginnings of human vocal polyphony. For example, advances in ethology provided important facts about the origins of the coordinated group singing in the natural World. Today we know that different forms of choruses, and particularly, coordinated duet singing are common among some non-human species (Geissmann, 2000; Merker, 2000; Marler, 2000; see also Brown, this volume). Research results of ethologists suggest that duet singing is common among the primates and the birds who have a MONOGAMOUS family structure (Geissmann, 2000; Marler, 2000). Duet singing of male and female partners serves an important means of bonding between the family members (In some species even offspring join in to complement

the family ensemble. Gittens, 1978; Geissmann, 2000). This important fact stresses once more the importance of the SOCIAL FACTOR in the origins of initial forms of vocal polyphony. On the other hand, ethologists note that in some species (for example, among whales) only males sing (Payne, 2000). In this case singing usually represents a competition between males and elaborate vocal compositions are designed to attract females. If we consider these findings from the natural world in the context of human singing and social behaviour (where both sexes are involved in singing), we may conclude that a co-operative model of group singing in mixed groups was the basis for the initial forms of human multiphony.

According to my model, the origins of coordinated group singing of our ancestors was connected to the origin of co-operative behaviour between the members of the social groups. On the other hand, co-ordination within the social group was (and still is) a principal selection factor in the evolution of primate intelligence (Whiten & Byrne, 1988; Ujhelyi, 2000).

One of the strongest musical universals across the world musical cultures are different forms of dialogical singing (antiphonal and responsorial singing). Dialogical forms of singing are directly connected to the origins of polyphony (Jordania, 1989. See also Zemtsovsky, 1986). The responsorial form of singing is particularly important in the cognitive development of our ancestors. Responsorial singing must have given rise to the phenomenon of question. In my earlier publications I suggested that the emergence of the ability to ask questions was probably the most revolutionary cognitive change in the history of our species (Jordania, 2000, 2002). The crucial importance of the new ability to ask questions was not only an increased cognitive ability of *each* hominid individual, but a revolutionary enhancement of the cognitive ability of a whole group of individuals, by *coordinating* their cognitive abilities. Thus, this new ability to formulate and ask questions created new phenomena — *group cognition* and *mental cooperation*, milestones of human intelligence.

Another important consequence is that the emergence of the question phenomenon turned hominid brain into an *open, self-developing system.* We develop cognitively by asking questions and looking for the answers from early childhood.

The emergence of the question phenomenon had revolutionary consequences for the evolution of language as well. Only the question turns communication into a *real dialogue*. Communication without questions consists of statements and orders only.

So, according to my model, cognitive and language revolution in human prehistory was connected to the first forms of duet and group singing, particularly - responsorial singing. One of the strongest language universals, the intonation of question, is actually a musical universal, a heritage of the primordial “musilanguage” form of communication (term of Steven Brown, 2000). The intonation of question exists in every language of the world (including tone languages) and has universally accepted meaning across the cultures (Cruttenden, 1986).

I will not go into the further details of the importance of the uniquely human ability of asking questions. The important point for our topic is that the origin of the question phenomenon seems to be intimately connected to the origins of the initial forms of polyphonic singing (particularly - responsorial singing).

Another important topic in the search of the origins of polyphony that must be taken into consideration is the uneven distribution of polyphony all over the world. Contrary to the statement of Francois-Bernard Mache (Mache, 2000:475), pentatonic polyphony on the drone is not a worldwide universal. In fact, about half of the world musical cultures have no traces (or very little elements) of vocal polyphony. Let me indicate the general picture of distribution of traditional polyphony (for more detailed picture see Jordania, 1989:162-236):

The biggest region of distribution of live traditions of vocal polyphony today is SUB-SAHARAN AFRICA.

The second most important region of distribution of traditional vocal polyphony is EUROPE. Unlike sub-Saharan Africa, polyphony does not represent a geographical continuum in Europe. Polyphony in Europe is mostly concentrated in the mountainous regions, islands, the northern periphery of the continent and other geographical isolates (eg., the swamps of Polesiye).

Monophonic singing (solo and unison) is generally dominant in most of the regions of ASIA, although some West, South, South-East and Central Asian cultures contain very interesting polyphonic traditions (eg., in the Persian Gulf, some regions of India, some mountain regions of South-East Asia, or the unique overtone singing in Central Asia). East Asia represents one of the most monophonic regions of the World. The polyphony of the Ainu people from north Japan is one the most isolated polyphonic traditions of the World.

Both AMERICAS represent mostly monophonic cultures, with interesting exceptions among British Columbia Indians, and a few cultures from the South American mountainous regions.

AUSTRALIA is another region with mostly monophonic singing traditions, although some elements of polyphony are present in the northern tip of the continent. Rich polyphonic traditions of most of the OCEANIA islands (particularly of Polynesia) are in sharp contrast to the mostly monophonic traditions of the continents surrounding the region (Americas, East Asia and Australia).

Different ideas circulated among musicologists and ethnomusicologists to explain the uneven distribution of vocal polyphony in different regions of the world (review see in: Jordania, 1989:239-246). To explain the uneven distribution of the polyphonic cultures, I suggest we turn to the history of evolution of our species and to take into account the emergence of the latest element of the communication system - SPEECH. The gradual replacement of the initial “musilanguage” by the new communication medium (speech) pushed the musical means out of the mainstream of human communication. Group singing started losing ground. This process is still in force. Importantly, there are few documented instances of the vanishing of traditional forms of part-singing in different parts of the world (eg., in Northern European countries during the last millennium).

Taking into consideration (1) the ancient roots of vocal multiphony, (2) the general tendency of its decline since the introduction of speech in human prehistory, and (3) the uneven distribution of vocal polyphony in different parts of the world, I suggested the ASYNCHRONOUS MODEL of the origins of articulated speech. According to this model different human populations from different regions of the World

shifted to articulated speech in different epochs (Jordania, 1988, 1988a, 1989; 2000, 2002). According to our current knowledge of the process of anthropogenesis, the initial human groups at the moment of their dispersal from Africa most likely did NOT have speech. So, there is at least a good theoretical possibility that the shift to the articulated speech could have occurred among different human groups, populating different regions of Africa, Asia and Europe in different times. Although theoretically plausible, the possibility of shifting to articulated speech in different human populations in different epochs has never been discussed (Jordania, 2001). The asynchronous model of the origins of vocal polyphony suggests that in the regions where there was no (or very little) vocal polyphony, the shift to articulated speech must have occurred earlier.

According to the existing picture of the distribution of polyphonic traditions, the shift to articulated speech must have happened first among the ancestors of East Asian populations, native Americans, and native Australians (mostly monophonic regions). Regions with vocal polyphonic traditions (Europe and particularly - sub-Saharan Africa) must have shifted to speech later.

Following the idea of the asynchronous shift to speech in different human populations, I found myself interested in studies of the different forms of speech pathologies (particularly stuttering and dyslexia). According to the general consensus between speech pathologists, the late acquisition of speech in our evolution is one of the main reasons for the onset of stuttering in human populations (see: West at al., 1939; Van Riper, 1971; Bloodstain, 1993:179). I found a startling correlation between the regions of distribution of vocal polyphony and the higher incidence of stuttering on one hand (the highest incidence of stuttering comes from the populations of sub-Saharan Africa, the biggest and most polyphonic region of the World. Bloodstain, 1993:65-66; Cooper & Cooper, 1993:194-197; Nwokah, 1988), and the regions of distribution of monophonic singing traditions and a much lower incidence of stuttering on the other hand (the lowest known incidence of stuttering comes from North American Indians, Polar Eskimos and Australian aborigines, regions with predominantly monophonic singing traditions. Snidekor, 1947; Stewart, 1959; Bloodstain, 1995:132). The actual incidence of stuttering among the Chinese would be the most important piece of data to check, but, quite amazingly, the incidence of stuttering in the biggest population of the world has never been studied (Reese & Jordania, 2001).

I am approaching the final part of my paper. Sometimes I ask myself the question: am I still an ethnomusicologist? This question came to me quite a few times when I was writing an article on stuttering among Chinese for the Singapore Speech, Language and Hearing Association, or when I was working (together with Sheree Reese, Associate Professor in the Department of Communication disorders and Deafness at Kean University, New Jersey) on the first major article on a same subject. The answer I found is that my field of research is the origins of vocal polyphony.

There is a century-old dilemma between guarding the borders of our discipline and the search for answers to the research questions we are facing. The controversy between the desire to stay within the borders of ethnomusicology and the desire to understand the real reasons that brought to us polyphonic singing, can

not be resolved easily. If we want to search for the origins of human vocal polyphony, a multidisciplinary approach is the only realistic way to do this. The old belief of musicologists and ethnomusicologists in the late development of vocal polyphony as a cultural phenomenon is definitely outdated. There is no easy answer to the problem of the origins of vocal polyphony. I invite my colleagues who are (or will be) interested in this fascinating subject, to leave the formal borders of ethnomusicology and musicology and look at the problems of the origins of human singing abilities (and group singing as well) in the light of the latest developments in the evolution of human cognition, language and speech.

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