Joseph Jordania (2011). "Choral Singing and Dyslexia" In: *Why do People Sing? Music in Human Evolution*. The publishing programm Logos.

Choral Singing and Dyslexia

Stuttering is not the only evolutionary disorder that could be affected by the chronology of the origins of articulated speech. Another 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. 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. About 10% of the European and North American populations suffer from dyslexia.

Most scholars agree on the genetic character of dyslexia, and there is an increasing number of studies which link dyslexia to genetic markers. The region on chromosome 6, DCDC2 has been linked to dyslexia as a result of a recent major study. On the other hand, some dispute even the existence of dyslexia. Also unlike stuttering, which is often a transient developmental phase in children's development, dyslexia is a persistent, chronic condition.

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.

According to Akira Uno, an expert in cognitive neuroscience and psychology associate professor at Tsukuba University, Japans two phonetic scripts correspond more exactly to sounds than the English alphabet does. In other words, they are simply easier. Earlier the same preposition was made by Kiyoshi Makita in 1968. Most other scholars also agree on the importance of the writing system, although another scholar, Flores d'Arcais, wrote: 'if for Japanese children, as Makita 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' (1992). I can also add that the Georgian writing

system coincides exactly with the pronunciation, but dyslexia is quite a serious problem in Georgia.

Despite the controversies in establishing the reasons for the lower rate of dyslexia among the populations of 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 levels of prevalence in dyslexia.

Information on dyslexia from many cultures is not gathered (for example, from sub-Saharan Africa). It seems to me that the percentage of dyslexic people in sub-Saharan Africa will be higher than in Europe, and particularly higher than that of East Asia.

Therefore, if we rely only on the data currently available, we can assume that the principle 'cultures with more polyphony have more speech related problems' 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 issue 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 (See also the box: 'Why Are Singaporean Students Better at Reading Than Australian Students?')[1].

[1] **Why Are Singaporean Students Better at Reading Than Australian Students?**
Most civilized countries pay attention to the problem of literacy in the primary and secondary schools. Sometimes countries do comparative research as well, and come to the conclusion that their teaching methods are deficient in comparison to the teaching methods of other countries. I remember, there was an issue, widely discussed in the Australian Mass Media, as to why Australian school students have much worse literacy achievements than Singaporean students. During the discussion of expert educators this fact was examined and looked at from very different possible angles, but during the whole discussion there was never a suggestion made that this difference in literacy achievements can have genetic basis. I can imagine the reaction of many educators to my suggestion (I want to remind readers that I am a teacher myself, and as a mater of fact, going to an international educational congress in a couple of weeks), however I still would like to suggest that we do not discount the possibility of the genetic factor. Excluding this possibility, we might also be excluding an important lead to the solution of this problem. Let us remember, we make our biggest mistakes not when we are hesitating, but when we are absolutely sure in something. Let us also remember, that I am not suggesting that if some population has a higher genetic inclination towards dyslexia, then we can not help this. On the contrary: I am suggesting that educators, after taking into account the possible importance of the genetic factor, should search for the optimal educational solutions to the problem of dyslexia for a given population. Some methods that are good in one population might not give the same results in another population.

Joseph Jordania (2011). "Choral Singing and Dyslexia" In: *Why do People Sing? Music in Human Evolution*. The publishing programm Logos.

PS. I was adding some final touches to the text of this book (which will be published almost the same time as the Japanese version of this book), when a new report on the educational system state in the World, the so called 'Pisa Report', came out. After studying almost half a million 15 year old students in 65 developed countries of the World, experts of The Organization for Economic Cooperation and Development came to the conclusion that China, South Korea, Hong Kong, Singapore, Taiwan and Japan all did extremely well, mostly well ahead of their European counterparts in literacy and a few other fields. In the report this was attributed solely to the superior educational system of Asian countries. Before generalizing this conclusion, I would strongly suggest the experts of The Organization for Economic Cooperation and Development to look at the achievements of Chinese, Korean and other Asian students in other, non-Asian countries, where they are taught in local, non-Asian schools (say, in the USA or Australia). They might find that despite the fact that Asian kids went to 'not so efficient' western schools, they are still performing much better in literacy (and some other fields) than local students. For example, at the exclusive Mac Robertson Girls High School, where vigorous test are conducted to accept students, as far as I know most of the students are from Asian countries. So, before making generalizations that the success of Chinese (and other Asian) students is a result of their 'educational values that favor equality as well as quality,' education experts need to make sure that the reason of the existing misbalance in Asian and European countries is solely the merits of educational system.