Chapter 11
The Origins of Music and of Tonal Languages

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ABSTRACT

This chapter offers the author's theory of the origins of music in ancient primates a million years ago, and what music would have sounded like. Origins of nasal and tone languages and the anatomy of larynx is discussed, and then a hypothesis is presented that these creatures would fashioned a tone language. They had absolute pitch that allowed them to recognize other voices, to read each other's emotions from the sounds they made with their voices, and to convey over long distances specific information about strategies, meeting places, etc. Having an acute sense of pitch, they would have sung, essentially using tonal language for aesthetic and subjective purposes. Thus, they would have invented music. Then the physicality of the human (or hominid) voice is discussed and the way an absolute pitch can be acquired, as the musicality still lies in the vocalisms it expresses. The reason for this is that music is actually contained in the way the brain works, and the ear and the voice are parts of this system. The final part discusses the origins of musical emotion as the case for imprinting in the perinatal period.

NASAL AND TONE LANGUAGES AND THEIR RELATION TO MUSIC

Introduction

The great ice age lasted from about 100 thousand years ago until about 11 thousand years ago, when the ice was gone in North America, Northern Europe, and Northern Asia. This was only the latest of ice ages, of course, and it isn't the last. The ice will be back and we are actually living in an interglacial era today called by German earth scientists a Würm glaciation (Whittow, 1984). In my backyard in Colorado are millions of rocks, large and small, that are rounded like footballs, making it obvious that they had been rolled and ground down by giant ice sheets.

During the great ice age, there were primates living in Africa. Their bones have been discovered mainly in the sub Saharan part of the African continent. They have been dated to a million years ago

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and even earlier. These ancient hominids looked like apes but they had bipedal locomotion, meaning that they could walk on the ground and did not live in trees. They might have walked along the southern shores of Asia, too, but did not travel north because the ice (and the cold) blocked their passage.

The questions I am entertaining are simple ones. How did these ancient beings make sounds? Did they have music? In other words, did they sing, and, if so, what would it have sounded like? I have collected some available evidence from the bones, the rocks, and from modern humans and animals, and have come up with a picture of what might have happened. This evidence comes from anthropology, physiology, psychoacoustics, ethnomusicology, psycholinguistics, and other fields. As we will see, it is just a theory, but there is a lot of evidence supporting the theory of the origins of music in ancient primates about a million years ago.

The Origins of Tone Language and Music

Music is the remnant of an ancient nasal, and tone language in which variations in pitch distinguish different words (Merriam Webster's Dictionary, 2017). A tone language is a language in which the pitch of a syllable carries substantial linguistic meaning. The Wikipedia article on tone languages says that there are over 200 tone languages in the world today and that around 70% of the world's people speak a tone language. Yet tone languages are largely unknown in the United States and Europe. There is still much research to be done in this area.

Tone language was spoken by our hominid ancestors in Africa, who had very high larynxes. A high larynx connects directly to the nose, bypassing the mouth, making it possible for its possessor to drink, breathe, and communicate simultaneously, a very valuable ability when you must drink from crocodile-infested rivers and lakes. A very high larynx makes articulate oral speech and singing impossible, however. They would have had to speak and sing primarily through their noses. This is not as far-fetched as it sounds, as we will see.

The tones of the nasal tone language are in three ranges within the harmonic structure of the larynx. Low tones create perfect tones, and major intervals are happy, contented and powerful. Tones of medium pitch height create minor intervals and are sad or melancholy. High pitches create dissonant intervals and represent fear and terror. Within each range, detail is added by pitch inflections (direction and speed). Imagine communicating by humming and then try to do it. It works.

Absolute pitch (the ability to remember and identify specific pitches) gives the nasal tone language much greater specificity. This is helpful because a nasal language does not have access to the specificity of oral, articulate speech like vowels and consonants.

A universal grammar of nasal speech is genetically transmitted (in the Chomskyian sense) and is available to us today in varying degrees. It is this what makes music the universal language of emotions that is understood by everyone. We acquire the connections between tones and emotions from our mother's voice in our earliest days, even prenatally.

The Structure of Larynx and Survival of Hominids

In Africa it is often said that the most dangerous time in the life of an animal is when it is drinking from rivers or lakes. Going up to the edge of a body of water, the animal is often captured, drowned, and eaten by a crocodile lurking in the mud and reeds at the water's edge. An animal that could drink and breathe simultaneously would be able to reduce its exposure to the danger and thus live longer. An animal that