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RR: The Gift of Gab

Language and our ability to communicate with each other is one of the reasons why humans have been such a successful species on this planet. Language not only gives meaning to every day actions and feelings, it can be the deciding factor between successful teamwork and ultimate failure. Anthropologists have found that humans have been able to speak to one another as far back as 30,000 years ago and attribute this feature of communication to the positioning of the larynx in our throats. As Matt Cartmill, an American anthropologist explains, at some point in human evolution the larynx must have descended from its previous heights. In chimpanzees, the larynx sits high in the throat; while in humans, its lower position permits complex sounds. Scientists think that the benefits of this lower larynx outweighed the risks as natural selection kept this feature.

In addition to the lower larynx, another feature of the human body that allows us to communicate effectively is the specific features of our tongues. As Cartmill illustrates, “The tongue’s movements are controlled almost solely by a nerve called the hypoglossal. In its course from the brain to the tongue, this nerve passes through a hole in the skull...” Cartmill further adds that, “...this boney canal is relatively big in modern humans--about twice as big in cross section in that of a like-size chimpanzee. Our larger canal presumably reflects a bigger hypoglossal

nerve, giving us the precise control over tongue movements that we need for speech" (Cartmill 141-42).

What I've learned from this article was that because the origins of the traits that allow us to vocalize don't fossilize, scientists look for similar but simpler versions of it in other creatures living today. With luck, they have found a series of forms that suggest how simple, primitive makeshifts could have evolved into more complex versions. This article provided me with a deeper understanding as to what biological factors allow us to communicate effectively and how they evolved over time. Research suggests that brain enlargement in our ancestry was the result of evolutionary pressures that favored intelligence and motor coordination for making tools and throwing weapons. As a side effect of these selection pressures, human evolution crossed a threshold at which language became possible.