

Section 1 – The Foragers

What Makes Us Human

Chattering

The complex anatomy required for sophisticated language, as opposed to grunts and shrieks, developed over a million years ago in hominids. These physical structures did not evolve before we decided to speak; they evolved because we *were* speaking. Language gave us an evolutionary advantage. Human culture, the product of all that chattering and storytelling and the incessant posing and answering of questions, is not only innate to us, but essential to our survival.

Homo sapiens' vocalising structures are markedly more sophisticated than those of earlier hominids, such as *Homo erectus*. We have a hyoid bone, which is what allows us to modulate the pitch of our voices by stretching vocal cords anchored to it. *H. erectus* and modern chimps and other primates have hyoid bones, but we go further and add a space behind the hyoid called a 'dropped larynx'. This development, like other human evolutionary adaptations, is fascinating because it is dangerous. It is possible for a human to choke to death on her tongue; other hominids have no space into which it could fall. So the advantage of speech – and its consequence, culture – must be much greater than the risk of accidental death. The adaptation is like our upright postures, which allowed us to use our hands while moving but at the same time forced skeletal changes that made childbirth difficult and dangerous.

It is likely that the anatomical ability to speak, the neurological ability to form complex languages, and the more complicated and successful techniques of cooperation that these afforded, progressed hand in hand.

Dr Michael Tomasello has collated peer-reviewed research that shows how cooperation is not only innate to humans, but an intrinsic part of our character, and essential to our success.¹ His studies suggest that when the first *Homo habilis* left the African jungles and began to populate the savannahs, they were at a disadvantage to the large carnivores that were already present. However, rather than competing directly with these predators, they developed a strategy of scavenging from their kills.

¹ Tomasello is co-director of the Max Planck Institute for Evolutionary Anthropology in Leipzig in Germany.

He concludes:

‘The result was a new kind of interdependence and group-mindedness...at the level of the entire society.’²

Being able to talk to each other made us more successful. Once we could express complicated plans clearly and give quick commands and instructions, we could progress from scavenging to hunting.

This increased dependence on sophisticated levels of cooperation would have been facilitated by verbal communication and this in turn would have led to an evolutionary impetus towards increasingly complex cooperation and language.

This combination of factors makes an early date for the development of sophisticated language more probable. The first *Homo sapiens* communicated in ways that we could understand although we might not know their language. Not only were the people in the single group that left Africa to populate the world talking, they also would have spoken the same language and shared the same culture.³

² Johnson, Eric Michael. *Survival of the ... Nicest? Check Out the Other Theory of Evolution*.

<http://www.yesmagazine.org/issues/how-cooperatives-are-driving-the-new-economy/survival-of-the-nicest-the-other-theory-of-evolution> Retrieved 26/06/14.

³ It has been established that only one small group of related humans, numbering under 200, left Africa to colonise the rest of the world. (University Of Cambridge. *New Research Confirms ‘Out Of Africa’ Theory Of Human Evolution*. *Science Daily*. 10 May 2007. www.sciencedaily.com/releases/2007/05/070509161829.html)