

# Evolution of Human Speech??

---

*Source:* <http://sci.tech-archive.net/Archive/sci.anthropology.paleo/2007-09/msg00496.html>

---

- *From:* Marc Verhaegen <[m\\_verhaegen@xxxxxxxxx](mailto:m_verhaegen@xxxxxxxxx)>
  - *Date:* Fri, 21 Sep 2007 02:55:47 +0200
- 

The Evolution of Human Speech  
Philip Lieberman 2007  
Current Anthropology 48: 39-66

Human speech involves species-specific anatomy deriving from the descent of the tongue into the pharynx. The human tongue's shape and position yields the 1:1 oral-to-pharyngeal proportions of the supralaryngeal vocal tract. Speech also requires a brain that can "reiterate" freely reorder a finite set of motor gestures to form a potentially infinite number of words and sentences. The end points of the evolutionary process are clear. The chimpanzee lacks a supralaryngeal vocal tract capable of producing the "quantal" sounds which facilitate both speech production and perception and a brain that can reiterate the phonetic contrasts apparent in its fixed vocalizations. The traditional Broca-Wernicke brain-language theory is incorrect; neural circuits linking regions of the cortex with the basal ganglia and other subcortical structures regulate motor control, including speech production, as well as cognitive processes including syntax. The dating of the FOXP2 gene, which governs the embryonic development of these subcortical structures, provides an insight on the evolution of speech and language. The starting points for human speech and language were perhaps walking and running. However, fully human speech anatomy first appears in the fossil record in the Upper Paleolithic (about 50,000 years ago) and is absent in both Neanderthals and earlier humans.

DD:

What next??

Running: Origin of sex?

Running: Origin of Life?

Running: Origin of (fill in the blanks)

:-D

--Marc

.