

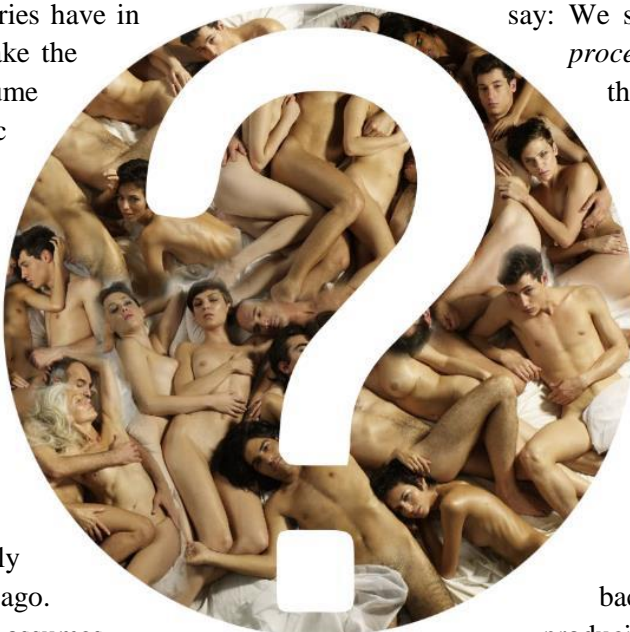
# A NEW FRAMEWORK FOR THE EVOLUTION OF LANGUAGE

By Till Nikolaus von Heiseler, photo: Iris Brosch.

Language is what makes us human. Despite its importance, however, the evolution of language remains a mystery, and is considered the most challenging question in science today. Interest in this question has increased tremendously within recent years. Dozens of books and hundreds of articles have been published and hundreds of different theories on language evolution that contradict one another have been developed.

What all of these theories have in common is that they make the same mistake: They assume that the genetic divergence between humans and their closest of kin, the chimpanzees, are rather slight. This assumption was based on the fact that the respective predecessors of chimpanzees and of humans diverged only about 6 million years ago.

The disastrous mistake assumes that evolution always occurs at a constant pace. Recent studies indicate, however, that the development of the cognitive abilities in our ancestors accelerates at a rate some 16 times compared to other primates (Lahn, et al., 2004). If the predecessors of present-day human beings had developed at the same rate as other primates, it would have taken approximately 96 million years in order for existing differences to come about, which is as far back in time as the dinosaur era, there being no primates at all at that time. Therefore, the theory that human beings diverge only slightly from chimpanzees can thus be seen as a popular myth, and a new framework is set: No theory of human evolution that cannot explain the accelerated evolution of our ancestors needs to be taken into serious consideration anymore.



In other words, the unique characteristics of human beings are the result of their unique form of evolution. This is the new and only framework in which we can answer the question of how language capacity evolved; and in this new framework, we propose the following hypothesis in the form of a cybernetic model: A completely new system developed, one that created its own elements in the form of human beings, language, culture, and the like. This is to

say: We suggest a *discontinuity in the evolutionary process itself* (one to be compared perhaps with

the emergence of sexual reproduction, or in the development of the cell nucleus), a major transition in evolution (Maynard Smith & Szathmáry, 1995). We think of human beings and language not as the cause of this development but its result. It has been shown that language is adapted to the narrative function, to express a displaced event or action (von Heiseler, 2014). Our hypothesis is that human beings evolved within a unique evolutionary system consisting of two feedback loops, there being a

backchannel between them; the lower loop producing the variations needed for selection in the upper loop to take place. What is meant by the “backchannel” here is a structure enabling the selection of the lower loop to “anticipate” the selection of the upper one. The content of this backchannel is displaced action encoded in *narration*. We show that not only the human brain and language but also most of the particular human faculties (including theory of mind, episodic memory, and the unique human altruism) are adapted almost exclusively to developing the functioning of the backchannel (narration) at a super-fast evolutionary pace. What that means exactly will be explained in our paper, “How Language Evolved as a Backchannel between Two Feedback Loops,” published in *Theoria et Historia Scientiarum*, an international scientific journal for interdisciplinary studies, in February 2015.

# References

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