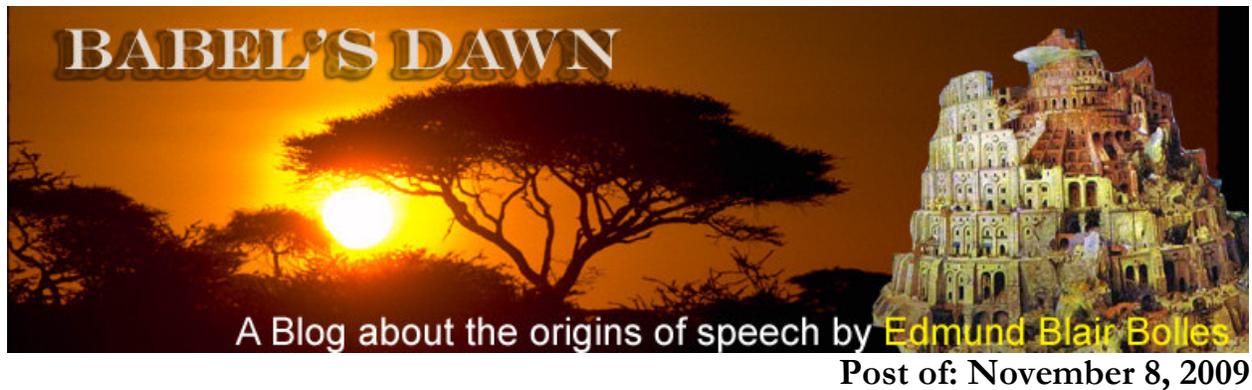


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The Helping Impulse



Human children around the world are put in the care of adults who are not their mothers. It is so common we take it for granted, but it is very unusual among apes.

I've just read an article in the latest journal of *Evolutionary Anthropology* that confirms this blog is not alone in many of the most radical positions that it has taken. The view of human nature emerging from the effort to understand language origins differs dramatically from the classic Western position that reason separates us from the animals, and from the Romantic view of the lone genius who pulls civilization along. Those widespread assumptions have strongly influenced the view

that language arose when we became smart enough to think syntactically and/or recursively, or when we became creatively enough to think symbolically. They are the commonsense assumptions that still dominate popular media discussions of language and human origins, but have now been challenged by strong empirical data.

In a paper titled, “Cognitive Breeding and Human Cognitive Evolution,” (abstract [here](#)) [Judith Burkart](#), [Sara Hrdy](#), and [Carel van Schaik](#) build on findings that

- apes have a strong ability to understand the thoughts and intentions of others but they use that knowledge to compete and control, not cooperate or help, and
- apes are inventive and create useful tools for themselves, but they do not build on one another’s ideas.

Language is the great demonstration of these differences. It requires a willingness to share (cooperate and help) and modify (build on) existing words and phrases. But that observation provokes an obvious question: how did we become so hypersocial? The authors’ answer is via “cooperative breeding.”

To my ears “breeding” means reproducing. A more accurate term for the authors’ thesis might be cooperative child rearing, for they are not talking about some kind of group sexual activity. Instead it refers to “allomaternal care,” care for children by males and females who are not the mother.

The cooperative breeding hypothesis claims that the emergence in the genus *Homo* of allomaternal care and provisioning of young by a range of helpers accounts for many of [*Homo*’s] species-specific traits. [p. 175].

The result of these peculiar traits is “shared intentionality,” a technical phrase meaning *sharing a common purpose*, which the authors declare “as the fundamental source for the majority, if not all, of our unique cognitive achievements.” [177]

One of the paper’s authors (van Schaik) has elsewhere demonstrated a “gray ceiling,” or maximal sustainable brain size in any species. The main cause of the ceiling is the extra length of time required for a juvenile to mature as the brain grows, but cooperative breeding gets around this limitation by the extra energy provided through allomaternal provisioning. The authors report as a general rule, cooperative breeding species have larger brains than their independent breeding kin species. [Based on the start of brain growth, this proposition would put the start of cooperative breeding at about 2.5 million years ago.] But where does the motivation to cooperate come from?

There is some spontaneous behavior among apes that benefits others and that can serve as a platform for evolution to build on, but this generosity is not to be found when food is the issue, “suggesting that chimpanzees lack any strong motivation to help, even if they presumably understand how their targeted actions could benefit others in specific situations.” [183] The paper continues, “Adding a helping impulse would further increase the motivation.” The result would be “targeted helping,” that is help that addresses the recipient’s needs.

There is also some experimental evidence that apes have a sense of fairness as it affects themselves (although this evidence is controversial and ambiguous). If this sense could be expanded to include an aversion to unfairness for others, it along with the targeted helping would produce actions to promote group fairness.

Furthermore, it has been shown that apes have an ability to grasp another’s mental state. By combining that ability with targeted helping and a demand for group fairness, we get a species whose members can target and act on a shared purpose.

The authors do not spell out this next point, but I will: if you have a species with an ape’s inherent potential for using words and add the ability to act on a shared purpose, you get a species that will use language.

It is all very neat nice, but, to go back to the start, why would a helping impulse be added to the mix? The author's answer is *to promote cooperative breeding*. But why would evolution favor cooperative breeding? Because it results in lower infant mortality, faster reproduction rates, and longer lives... in other words, cooperative breeders will spread their genes at a much higher rate than independent breeders.

But if there is so strong a Darwinian advantage to cooperative breeding, why don't all apes breed cooperatively? The authors do not hint at an answer to that one, but the rise of a helping impulse must reflect something more unusual than a random mutation. Some kind of unusual niche and/or behavior seems needed to support the impulse.

Whatever the process behind the evolution, I think the authors do a good job of showing that the basic cognitive support for language and social understanding is already common to apes. What is missing is the hypersocial motivation that permits sharing in a common purpose. When I think of the large number of accounts of language origins—ranging from Samuel Johnson to Hauser-Chomsky-Fitch and beyond—that have assumed the explanation lies in human rationality, I have to shake my head. Those Greek men and their pride in reason... their wives could have told them, only some people are rational but everybody will help a child.

P.S.: Although the paper is not a review article, it has a very complete bibliography (128 entries) of cooperation-related research.

Links:

“Cooperative Breeding...” abstract:

<http://www3.interscience.wiley.com/journal/122662508/abstract?CRETRY=1&SRETRY=0>

Judith Burkart: <http://www.aim.uzh.ch/Members/Burkart.html>

Sara Hrdy: http://www.mnsu.edu/emuseum/information/biography/fghij/hrdy_sarah.html

Carel van Schaik: <http://www.aim.uzh.ch/Members/vanschaik.html>