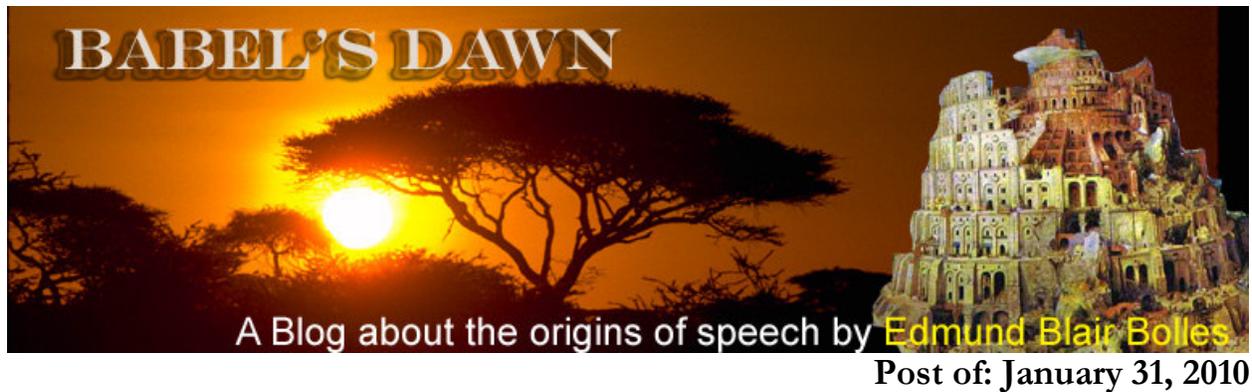
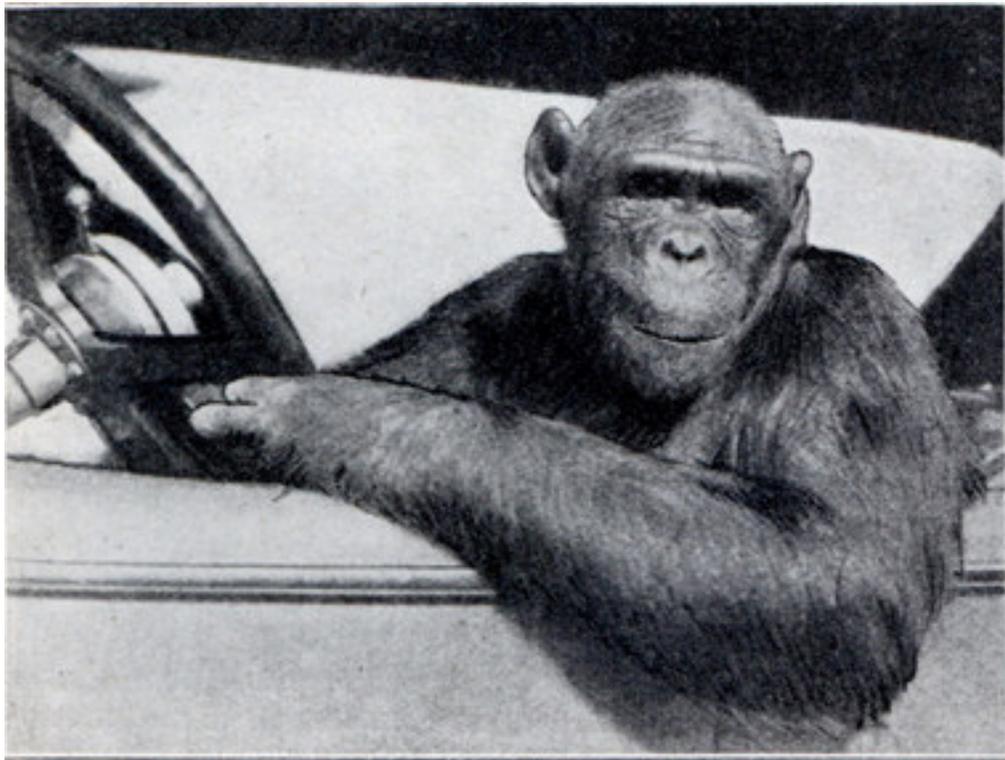


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Apes and Us



James, the Chimpanzee Chauffeur. If a chimpanzee can be taught to drive a car, what can't it learn?

Regulars on this blog will know that I am a big supporter of the notion that what makes language unique is the “speech triangle,” whose corners are (A) speaker, (B) listener, and (C) neutral topic. The speaker and listener engage in joint attention to a neutral topic. So naturally I was quite interested when I learned of a paper published last year that might challenge this claim. [David A. Leavins](#) and [Timothy P. Racine](#) published “Joint Attention in Apes and Humans: Are Humans Unique?” in an issue of the *Journal of Consciousness Studies* devoted largely to narratives and theory of mind. Their paper (abstract [here](#)) was a rebuttal to the proposition that joint attention requires a theory of mind. I have not placed much importance on a theory of mind in this blog, but their points are a serious enough challenge to this blog’s long interest in joint attention that honesty requires I present their case.

Humans communicate before they can speak. As far as we know, all other animals communicate without speech or any communicative system analogous to speech.... Yet... mainstream theory in cognitive developmental psychology interprets the pre-speech communicative behaviour of human infants for the early acquisition, in our species, of a complex, if tacit, story-like understanding of mental processes in others. ... According to these kinds of theoretical perspectives, later linguistic competence simply gives symbolic expression to pre-existing, but previously unspoken, representations of what are taken to be the invisible causes of the behaviour of babies' social partners. [pp. 240-241]

The authors open their paper with this eloquent passage making the point that if we see animals communicating without ever acquiring speech, we cannot assume that communicating infants have any special, innate speech-promoting powers underlying their communications. Frankly, the premise seems so simple that I'm three-quarters sold just by reading it.

Naturally there is the usual caveat about the word *communication*, which is abstract enough to lump different things under one name. Machine and animal communications means controlling the activity of another. Language can be used for controlling, but it is more often used for other purposes. In the current issue of *Mind and Language* [Kristian Tuyen](#) et al conclude, "language can be conceived of as a tool that enables effective and flexible forms of social coordination and interaction." Anybody who knows this blog knows that I'm in agreement with the assertion. So communication can refer to opposites: controlling or cooperating.

But this difference does not matter so much in this case because the issue is pre-linguistic communication. Babies are very good about communicating their wants. Crying is a splendid example of an animal communication as a tool for controlling others. Is all infant communication of the controlling sort?

The authors focus chiefly on joint-attention, which they define as "the intentional co-orientation of two or more organisms to the same locus." [241] Joint attention is critical to the speech triangle. A speaker and a listener are both paying attention to the same topic. The "locus" can be on one of the participants, as in, "Oh, I've got a thorn in my paw," drawing attention to something about the speaker. The locus can also be neutral, drawing attention to something apart from the participants, as in, "Wow, now that's a sunset." It is the latter that interests me in the origin of speech. Where did this willingness to share information about a neutral topic come from? The authors refer to this advanced form of joint attention as "secondary intersubjectivity," The most important form of secondary intersubjectivity without words is pointing. It works like the speech triangle: pointer, observer, neutral object. On that subject, the authors report:

Although other forms of gesturing may be frequent in wild populations, pointing of any form seems almost nonexistent. Nevertheless, pointing is very frequently displayed by captive apes, and occasionally displayed by more distantly related monkeys. [252]

They argue that wild apes don't point because they don't need to. In the wild, they can get it themselves. Left unsaid is the fact that there is no reason to expect other apes to help out. An ape in the wild sees food up a tree and climbs up to help himself. A person, seeing something similar across the room, might say, "Hey, Joe, can you toss me one of those bananas," and Joe will toss it. Apes in captivity also have the company of people willing to provide things.

This blog has argued from its beginning that apes are smart enough to use language, so the fact that apes in the wild don't use even the simplest language has to be explained some other way. The authors seem to agree with that point and they specify several ways that apes and children seem to be at the same level:

- **Joint attention:** The authors conclude that “no element of joint attention in humans is beyond the reach of our nearest living relatives.” [257] I have a few quibbles over this statement, but in the whole, I think they make their case. So we did not have to evolve a new capacity for joint attention in order to use it. It is not the introduction of joint attention that makes the speech triangle possible, but the new uses to which we put joint attention.
- **Theory of mind** (a belief in the mental processes of another): The authors say “it is by no means necessary to attribute a ‘Theory of Mind’ of any kind to great apes in accounting for their joint attentional skills,” [259] so there is no need to attribute a theory of mind to infants either. I have long been skeptical of the insistence on a theory of mind (see: [Caring About Other Minds](#)) but it is nice to see a strong case that we did not have to evolve a theory of mind before we could begin using language.
- **Telementation:** This was a new word for me, but apparently means the transfer of thoughts from one person to another. The argument for its reality seems to be that, “Individuals must infer the meaning of communication.” I have heard that kind of argument before. It is at least as old as [Leibnitz](#). You cannot escape your own head; directly perceiving another person's reality is impossible. Thus, complex cognitive processes are required for babies to start joint attention with their elders. I've always thought the idea was manifest nonsense, which is why I was so immediately taken with the proposal that words pilot attention. It gets rid of the need for all that mysterious nature of meaning. The authors take the position that telementation may or may not be real, but if it is real apes must already have it because they can engage in joint attention. So once again there was no need for humans to evolve a new power in order to start using language.

Despite my general acceptance of these positions, I'm not sure I go along with the overall tone of the paper, which seems to me to be very much a [learning-theory](#) document in which the difference between ape and human behavior is traced to different kinds of sociocultural contexts and the learning they promote. But on the whole I think the paper is a big help. It does away with the need to find a number of speculated evolutionary steps before a speech triangle becomes possible.

Links:

David A. Leavins: <http://www.sussex.ac.uk/psychology/profile114996.html>

Timothy P. Racine: <http://www.isrl.illinois.edu/~amaq/langev/author/tpracine.html>

Abstract:

<http://www.ingentaconnect.com/content/imp/jcs/2009/00000016/F0030006/art00010;jsessionid=2okb4ixnncg1p.alexandra>

Kristian Tylan: <http://www3.interscience.wiley.com/journal/123243929/abstract>

Caring About Other Minds:

http://ebbolles.typepad.com/babels_dawn/2007/01/caring_about_ot.html

Leibnitz: http://www.maths.tcd.ie/pub/HistMath/People/Leibniz/RouseBall/RB_Leibnitz.html

Learning-theory: http://en.wikipedia.org/wiki/Learning_theory_%28education%29