

Chris Knight and Camilla Power (2006)

Words are not costly displays: Shortcomings of a testosterone-fuelled model of language evolution.

Behavioral and Brain Sciences **29**(3): 290-291.

Department of Anthropology, School of Social Sciences, University of East London, London E16 2RD, United Kingdom.
chris.knight@uel.ac.uk c.c.power@uel.ac.uk
<http://homepages.uel.ac.uk/C.Knight/>

Abstract: Only by misconstruing the term performative are the authors able to argue that males surpass females in “performative applications” of language. Linguistic performatives are not costly displays of quality, and syntax cannot be explained as an outcome of behavioural competition between pubertal males. However, there is room for a model in which language co-evolves with the unique human life-history stage of adolescence.

This target article attempts an ambitious synthesis. It is high time that speculations about language evolution were grounded in an adequate understanding of the evolution of human life history. Where the article deals with human growth and development it appears authoritative; however, the specifically linguistic sections are less convincing.

Locke & Bogin (L&B) claim that “performative applications of language . . . consistently favor males” (sect. 5.1, para. 3, emphasis in original). In linguistics, the term performative is subject to precise definition. Austin (1975: 14) stipulates that “there must exist an accepted conventional procedure having a certain conventional effect, that procedure to include the uttering of certain words by certain persons in certain circumstances.” As a “conventional effect,” the performative force of an utterance is abstract and institutional – quite unlike the material impact which an animal signal is designed to produce. Hence, when a bride says “I do” during her wedding ceremony, her metamorphosis into a wife doesn’t depend on how she vocalises those sounds. Provided the circumstances are appropriate and her intention clear, the physical details of her performance – for example, whether she whispers or stridently declaims – are irrelevant. Speakers’ communicative intentions are accomplished by being socially recognised (Grice 1989); they are not judged by reference to physical qualities such as amplitude, stamina, or vigour.

L&B make their sexual selection case by claiming that “important aspects of language cannot appear until sexual maturity” (target article, Abstract). By this they mean that young children lack sufficient “real world knowledge”(sect. 10) – presumably regarding sexual behaviour – to be able to make pragmatic inferences about speakers’ intentions. But the presence or absence of adult content is irrelevant to the presence or absence of key features of language such as performative force, which is wholly within the capability of four-year-olds playing “let’s pretend.” L&B envisage a juvenile phase during which “teasing, joking, and gossip” serve “group-oriented goals” (sect. 9). This is uncontroversial, but how would such processes be reinforced through an adolescent phase of intrasexual, epigamic selection? Can the authors clarify the circumstances in which individualistic male sexual rivalry promotes “group oriented goals”?

The authors’ evolutionary model gives pride of place to youths

fighting with rap as chimpanzees pant-hoot or caribou bulls roar. Suggesting that “testosterone promotes verbal dueling” (sect. 6), the authors invoke shortages of this hormone to explain why female “performative applications” don’t measure up to those of males. However, they then let slip an observation that turns this extraordinary argument on its head. Adolescent females, they concede, gossip against rivals by enlisting “the support of peers, greatly surpassing males in this practice” (sect. 6). Only by systematically conflating linguistic performatives with bodily performances do the authors succeed in obfuscating the awkward truth: namely, that to enlist the support of peers in manipulating collective judgements is precisely to deploy “performative force.” Here, we encounter a gender bias in “performative applications” that contradicts their entire argument.

Gossiping teenage girls, then, compete by enlisting the support of peers in constructing and contesting perspectives on the world. In the case of male-on-male rap, the standards are different. As one informant puts it: “Don’t hafta make whole bunch sense, long sounds pretty” (see target article, sect. 7, para. 4). So, while, according to the authors, females compete with socially relevant information, males compete by making pretty sounds. Accepting this contrast for the sake of argument, whose strategies would have driven the evolution of syntactical and semantic complexity in speech? Gossiping is a distinctively linguistic skill (Dunbar 1996). Singing is not. Male-on-male vocal competition may help explain phonological complexity in the songs of birds, whales, and, arguably, hominin youths; it cannot explain the morphosyntactical or semantic complexities of gossip.

We readily agree that costly performances are valuable as hard-to-fake indices of individual quality. But how is this relevant to the evolution of language? The issue concerns more than narrowly vocal abilities. How and why did distinctively human verbal abilities become so decisive in social competition among our ancestors? Among nonhuman primates, attention paid to vocalisations may be symptomatic of dominance, but it is not causative. The reverse is true of humans. Among hunter-gatherers, social relations are best described in terms of “counterdominance” (Erdal & Whiten 1994). In such egalitarian contexts, physically unimpressive individuals may gain prestige and influence through their verbal fluency. Contrary to L&B, the pressure on speakers is not to show off with spectacular vocal displays. Typically, hunter-gatherers avoid signs of personal ambition or boastful aggression. Most valued are conversationalists skilful at managing conflicts and securing community-wide consensus. Often, older women have the last word. L&B convey the opposite impression by selecting examples of formal oratory typical of horticultural “Big Man” societies – as opposed to egalitarian hunter-gatherers who are more likely to be representative of early human societies.

Unlike animal vocal displays, which are evaluated on an analog scale, linguistic messages are digitally encoded. There is nothing intrinsically costly or reliable about a linguistic sign. The distinctively human language faculty – language in its “narrow” sense – lacks any counterpart in animal social communication (Hauser et al. 2002), where honesty is underwritten by investment reliably demonstrating signal quality (Zahavi & Zahavi 1997). L&B envisage linguistic evolution driven by direct behavioural competition between siblings or adolescent male sexual rivals. But such dynamics could only drive the evolution of signals that are honest because they are costly – exactly what linguistic signs are not.

In short, the authors show little awareness of the scale of challenge facing any theory of language evolution. To quote Chomsky, language is “based on an entirely different principle than any animal communication system” (Chomsky 1988, p. 183). As a milestone in the evolution of communication, “language is off the chart” (Chomsky 2002b, p. 146). Above all, what cries out to be explained is the abstract computational principle of digital infinity (Hauser et al. 2002). Instead of attempting this difficult task, L&B focus on features of vocalization that show continuity with analog animal displays.

Linguistic topics aside, this article offers an important discussion of life history. Even here, however, a critical issue is neglected. Modern Darwinism takes account of costs as well as benefits. What about the costs to hominin mothers in producing larger-brained, larger-bodied offspring? The combination of reduced length of lactation plus extended childhood can bring reproductive advantage only to mothers who have reliable allocare support. But according to these authors, young males are increasingly engaged in rap-style sexual display. By contrast with “show-off” hunting (Hawkes 1991), this offers no material support for mothers. Would hunter-gatherer females prefer reliable producers of meat – or clever rappers?

The idea of the coevolution of adolescence with language and symbolic culture is promising; the emergence of pubertal initiation rituals would be central to any such process (Knight 2002; Power & Aiello 1997). But the selective gender bias towards males needs to be corrected. Among African huntergatherers, it is not pubertal males but females who undergo the most elaborate and costly initiation rituals.