EVOLUTION AND PRAGMATICS

For at least 100 000 years, human beings have been talking the way we do. Language is universally used by most individuals in every culture several hours each day, primarily during conversational chatter (Dunbar 1998). How did our species come to adopt such a strange behavior in the course of its evolution? The question has been considered in turn as obvious and baffling. A proper approach to the reasons why we talk requires that the biological function of language be understood, and pragmatics is the right place to seek out that function.

If we adopt the perspective of an ethologist, then language appears as a distinctive feature of our species that, like any other finely designed characteristic, must have a definite function to have been selected through the repeated effect of differential reproduction (Pinker and Bloom 1990). For decades, language was thought to be essentially a means for organizing, responding to, and manipulating the behavior of others (Brown 1991, 130) or a tool for sharing knowledge (Pinker 1994, 367), and it was considered obvious that it had been selected for these purposes. This traditional view has now lost most of its obviousness for two reasons: (1) its logic contradicts Darwinian principles, and (2) what people spontaneously do with language corresponds to a quite different picture. We will examine these two issues in turn, before considering more plausible alternatives.

Any evolutionary account of the existence of language must make clear what biological advantage both speakers and listeners get out of speaking. In many traditional accounts, the fact that *listeners* take advantage from receiving information is taken as sufficient explanation for the existence of language; but language cannot evolve if there is no direct or indirect advantage on the speaker's side. If language is a way of influencing others' behavior, the speaker's advantage is now obvious, but Darwinian selection should have led to resistance on the listener's side: there is an advantage in ignoring signals aiming at bringing you to serve the interest of others.

One of the most striking and most incomprehensible facts about human language is that it relies on a positive attitude from speakers. Speakers bear all the burden of designing appropriate (Grice 1975) or even optimal (Sperber and Wilson 1986) messages to convey intentional meaning. If they do so spontaneously and often quite profusely, it must be because they gain some benefit from it. Listeners, on the other hand, show much trust in what they hear. Knowing that language is "cheap", the fact that listeners give credence to most of what they hear is hard to explain in a Darwinian world in which creatures are designed to favor their own success, not the success of others (Knight 2002). The absence of trust is what explains the repetitiveness, the cost and the poverty of most animal communication (Zahavi and Zahavi 1997).

These concerns about the speakers' willingness to speak and the listeners' to trust have no known solution within frameworks in which language acts are supposed to provide immediate benefit to either party. It has been suggested that information exchange through language could be based on reciprocity (Pinker 2003, 28; Nowak & Sigmund 2005, 1293). The reciprocation model, however, functions under strict limits: good benefit-to-cost ratio and strict control of reciprocity. It is at odds with several observations about spontaneous

language, such as the fact that many conversational utterances are about futile topics, or the fact that talkative behavior is far from being an exception: on average, individuals typically talk to two persons simultaneously (Dunbar, Duncan and Nettle 1995).

The utilitarian conceptions of language that inspired most traditional ideas about its biological role are dictated mainly by theoretical considerations. Some theories emphasize the role of language in performing actions; it is thus natural to imagine language as having emerged from simple directives (Holdcroft 2004). Other theories see in language a process through which individuals actively try to influence the beliefs of others (Sperber and Origgi 2005). A natural strategy, to decide which aspect of language use is most likely to have given a biological advantage both to speakers and listeners, is to observe how current human beings spontaneously talk.

Conversation constitutes by far and universally the main occasion in which language is used. Conversational activity, however, is not monolithic. When chatting, individuals show essentially two forms of behavior: they tell stories and they pursue argumentative discussions. Even if both are often intertwined, it is important to distinguish narration and argumentation, as they involve quite different cognitive processes and might have arisen successively during evolution. Conversational *NARRATIVE ANALYSIS* shows that narratives fill up to one half of our speaking time (Eggins and Slade 1997, 265) and may represent some 10% of our awake time. Speakers take time, sometimes several minutes, to recount some past situation in minute detail (Norrick 2000). Not all situations are likely to be reported: only those which can elicit specific *emotions*, especially *surprise*, are recounted (Dessalles 2006). The following example, adapted from (Norrick 2000, 55-56), is about an unexpected encounter.

Brianne: *it was just about two weeks ago. And then we did some figure drawing. Everyone was kind of like, "oh my God, we can't believe it." We- y'know, Midwest College, y'know,*
[...]
Brianne: *like a ... nude models and stuff. And it was really weird, because then, like, just last week, we went downtown one night to see a movie, and we were sitting in [a restaurant], like downtown, waiting for our movie, and we saw her in the [restaurant], and it was like, "that's our model" (laughing) in clothes*
Addie: *(laughs) Oh my God.*
Brianne: *we were like "oh wow." It was really weird. But it was her. (laughs)*
Addie: *Oh no. Weird.*
Brianne: *I mean, that's weird when you run into somebody in Chicago.*
Addie: *yeah.*

Stories come in chunks, the so-called story rounds (Tannen 1984, 100), which may last for tens of minutes. The biological significance of this systematic and universal tendency to report emotional and unexpected events lies quite far away from any immediate utilitarian effect like behavioral influence or vital knowledge transfer.

During argumentation, in contrast with narration, individuals are not bound to mention fully instantiated states of affairs. They may even utter quite general statements to make a point. Argumentation can be described, at the cognitive level, as an oscillation between problems and tentative solutions (Dessalles 2006). During conversation, any inconsistency between beliefs or between beliefs and desires is likely to be signaled, and it triggers a collective search for solutions. In the following example, adapted from (Tannen 1984, 62), two participants wonder how the third one came to know about the sociologist Erving Goffman.

Deborah: But anyway. ...How do you happen to know his stuff?
Chad: Cause I read it.
Peter: What do you do?
Deborah: Are you in ...sociology or anything?
[…]
Chad: No.
Deborah: You just heard about it, huh?
Chad: Yeah. No. I heard about it from a friend who was a sociologist, and he said read
*   this book, it's a good book and I read that book 'n*
Deborah: I had never heard about him before I started studying linguistics.
Chad: Really?

    The argumentative process is the same, with its characteristic alternation between problems and solutions, regardless of the social situation in which it occurs: a discussion about a famous sociologist's work, the planning of some forthcoming travel or a harsh dispute. The biological significance of this systematic and universal propensity to mention inconsistencies and then to make every attempt to solve them cannot be reduced to the pursuit of some immediate practical benefit. Quite often, casual discussions are about futile matters which are unlikely to change the interlocutors' fate.

    Why do human beings devote most of their speaking time telling stories and dealing with apparent inconsistencies? What utilitarian models fall short of explaining is directly addressed by models, like the *GROOMING* hypothesis, that emphasize the role of language in the establishment of social bonds (Dunbar 1996; Dessalles 2006). Language acts would not be biologically motivated by their immediate benefit, but because they are reliable indicators of some speaker quality which is valued in the establishment of solidarity networks. In these models, *language is display*. In the political niche of our species, individuals that are aware of their physical and social environment make better coalition partners. Hence, individuals demonstrate that they are able to witness unusual situations by reporting facts that elicit surprise and emotion. By recounting the "weird" encounter with the nude model, Brianne obeys this urge to show her ability to surprise others.

    From this perspective, *language is a competition for interest*. On the friendship marketplace, where solidarity bonds are established and dissolved, individuals who report the most interesting events are, all other things being equal, the most appreciated. Now, the biological role of argumentation becomes clear. Without the ability to detect inconsistencies, individuals would easily shine by reporting incredible events that never occurred. Argumentation presumably emerged as an anti-liar device, besides checking for oneself (Dessalles 1998). As it is preferable to have non-gullible members in one's coalition, argumentation became a way to demonstrate this quality. Hence Deborah and Peter's reflex to show that they could spot an apparent inconsistency during their conversation with Chad.

    Recently, there have been various attempts to account for the existence of language (Johansson 2005). The one emphasized here highlights the "political" importance of talking. Language performance is indirectly vital: those who recount in boring fashion or who are unable to build sensible arguments are rapidly left aside. In the world of our hominin ancestors, lonely individuals were defenseless and likely to be exploited. Language emerged as a way for human beings to show to their conspecifics that they have the required qualities to be valuable friends.

--Jean-Louis Dessalles

Works Cited and Suggestions for Further Reading

Brown, Donald E. 1991. *Human Universals*. Philadelphia: Temple University Press.

Dessalles, Jean-Louis. 1998. "Altruism, status, and the origin of relevance". In *Approaches to the Evolution of Language: Social and Cognitive Bases*, ed. J. R. Hurford, M. Studdert-Kennedy and C. Knight, 130-147. Cambridge: Cambridge University Press.

Dessalles, Jean-Louis. 2006. *Why We Talk - The Evolutionary Origins of Language*. Oxford: Oxford University Press (to appear).

Dunbar, Robin I. M., N. D. C. Duncan and Daniel Nettle. 1995. "Size and structure of freely forming conversational groups". *Human Nature* 6 (1): 67-78.

Dunbar, Robin I. M. 1996. *Grooming, Gossip, and the Evolution of Language*. Cambridge: Harvard University Press.

Dunbar, Robin I. M. 1998. "Theory of mind and the evolution of language". In *Approaches to the Evolution of Language: Social and Cognitive Bases*, ed. J. R. Hurford, M. Studdert-Kennedy and C. Knight, 92-110. Cambridge: Cambridge University Press.

Eggins, Suzanne and Diana Slade. 1997. *Analysing Casual Conversation*. London: Equinox.

Grice, H. Paul. 1975. "Logic and conversation". In *Syntax and Semantics, vol. III, Speech Acts*, ed. P. Cole and J. L. Morgan, 41-58. New York: Academic Press.

Holdcroft, David. 2004. "Pragmatics and evolution". *Pragmatics and Beyond* 127, 117-127.

Johansson, Sverker. 2005. *Origins of Language - Constraints on Hypotheses*. Amsterdam: John Benjamins Publishing Company.

Knight, Chris. 2002. "Language and revolutionary consciousness". In: *The Transition to Language*, ed. A. Wray, 138-160. Oxford: Oxford University Press.

Norrick, Neal R. 2000. *Conversational Narrative: Storytelling in Everyday Talk*. Amsterdam: John Benjamins Publishing Company.

Nowak, Martin A. & Karl Sigmund. 2005. Evolution of indirect reciprocity. *Nature*, *437* (27), 1291-1298.

Pinker, Steven and Paul Bloom. 1990. "Natural language and natural selection". *Behavioral and Brain Sciences* 13 (4), 707-784.

Pinker, Steven. 1994. *The Language Instinct*. New York: Harper Perennial.

Pinker, Steven. 2003. "Language as an adaptation to the cognitive niche". In *Language Evolution*, ed. M. H. Christiansen and S. Kirby, 16-37. Oxford: Oxford University Press.

Sperber, Dan and Deirdre Wilson. 1986. *Relevance: Communication and Cognition*. Oxford: Blackwell.

Sperber, Dan and Gloria Origgi. 2005. "A pragmatic perspective on the evolution of language". In: *Alice V. and David H. Morris International Symposium on Language and Cognition*. New York: Stony Brook University.

Tannen, Deborah. 1984. *Conversational Style - Analyzing Talk Among Friends*. Norwood: Ablex Publishing Corporation.

Zahavi, Amotz and Avishag Zahavi. 1997. *The Handicap Principle*. New York: Oxford University Press.