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Why We Talk: The Evolutionary Origin of Language
By Jean-Louis Dessalles
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The film and book *2001, A Space Odyssey* were based on a theory about human evolution which for my money is no worse than some on the market. The premise was that some benevolent aliens, incomparably more advanced than us, left a black monolith in the African savannah that transformed the minds of our ancestors from grunting apes to intelligent humans. The story focused on the new ability to use weapons, captured by the stunning transition in the film from a bone held violently aloft to a waltzing spaceship; but it could just as well have taken language as the key advantage bestowed by the visitors from across the galaxy. A clever monkey could use a weapon, bur it takes a good communication system as well as brains to build a spaceship.

In the decades since the fictional monolith, linguistics and evolutionary biology have made enormous strides. This fascinating book by Jean-Louis Dessalles not only gives a survey of recent work on language evolution but also puts forward an original theory to add to the many that compete in this growing field. As a basis for armchair-theorising it is hard to imagine a better area: the evidence is fragmentary, guesswork is rife and controversies rage. Some of the linguists know little about evolution, and the biologists, archaeologists and others in the fray are often equally ignorant about language. Dessalles, to his credit, seems to be knowledgeable about both subjects, although his theory is open to serious criticism.
To get a sense of how difficult the issues are, consider the main ape in the book *2001* – Moon-Watcher. He is fascinated by the moon and would like to touch it but works out that first he will need to find a high tree to climb. This was excellent thinking for its time but, without language, could Moon-Watcher actually have thought it? A proposition of the form “If I want to touch the Moon, I need to find a tall tree" is probably inconceivable without syntax, semantics and a vocabulary, even in simplified form such as "touch Moon implies tall tree". So did language evolve first and pave the way for intelligence, or was it the other way round? Did they evolve together? We do not know, so we can only speculate.

Informed guesswork is the best sort, of course, and Dessalles is particularly informative on animal communication systems: from bee dances to monkey calls and birdsongs he reviews a large body of work that looks for similarities with human language. He says that every supposedly distinctive feature of human language is present in a rudimentary form elsewhere in the animal kingdom. I accept this, but I'm not sure what it tells us: it is the unique overall combination of sound patterns, syntax and recursiveness, combined with human intelligence, that distinguishes language from animal communication. It is a huge jump from macaques using a special cry that warns about predators to the poems of Shelley in their complex splendour.

An evolutionary account of language has to tell a plausible story about the selective advantage of each stage on the way. Linguists, who have a professional interest in stressing the complexity of language, have often found this implausible: it is not obvious, for example, how the ability to form relative clauses could lead to hominids living longer or producing more offspring. Accounting for the development of symbols is hard enough, but accounting for syntax in this way looks unlikely. In other words, it seems to many linguists that the computational side of language (grammar) is a uniquely human characteristics, and that a theory of linguistic evolution that ignores or de-emphasises it misses the point.

Undaunted, Dessalles proposes just such a theory. Recent work that downplays syntax has proposed that talking grew out of the common primate pastime of mutual grooming. Another line of work refers to "social intelligence',. the ability to understand the intentions and motives of others. Dessalles dismisses these approaches, arguing that each newly evolved feature of language must have been "locally optimal", in the sense of benefiting our forebears within their microenvironment. He also claims the features had to have a biological function and goes on to conjecture what that might have been. He suggests that some of our ancestors began to form sizeable coalitions as a survival strategy. In this context, it was crucial to find trustworthy collaborators. Individuals who could notice and communicate salient things about their surroundings would have been valuable allies. In the early stages, when communication related to the immediate environment, it was easy to check whether, say, information about a food source was true. What language added was the ability to share information about objects displaced in space and time. We began to talk, he claims, as a way of showing off our useful qualities.

The theory is more sophisticated than this crude summary, with an interesting emphasis on semantic roles and relations as the basis for the evolution of syntax. Even so, it rests on assumptions about hominid society

that can only be called crass. Remember that the biological evolution of humans has not progressed significantly since we gained language: our linguistic ancestors were no less intelligent than us and presumably had the same range of personalities (shy, brave, crude, sensitive, selfish. loving and so on) as we do.

Granted, life in prehistoric times was often nasty, brutish and short, but even in the worst slums and refugee camps today we see huge differences in how individuals behave, despite a shared cruel environment. Some people are selfish, others generous. Parents of small children try to lavish as much affection on them as the circumstances allow, often making enormous sacrifices. In most societies, people whose sole preoccupations are power, wealth and sex are regarded with emotions ranging from admiration to contempt. Yet Dessalles would have us accept that in hominid societies everyone was motivated predominantly by a cut-throat struggle to survive, as individuals and in larger competing groups.

He includes a discussion of what biologists like to call the problem of altruism. Given the supposedly Darwinian picture of a ruthless struggle for survival, it is hard to explain unselfish behaviour in living organisms. The question is normally posed in this form: why use language to share information if it does not confer evolutionary advantage? In fact, we do not have to pose the question in this form. More sophisticated Darwinians concede that genes may be selfish, but it does not follow that all humans are too. It is conceivable that generosity is simply an ingredient of intelligence, along with a desire to learn, cheerfulness and other positive qualities. In short, I see no reason to accept that hominid social interactions can be reduced to the model of rival mafia clans. None of this detracts from the value of the book, which has a rare level of interdisciplinary expertise and a careful quality of argumentation to which a short review cannot do justice. Something that does detract is its age: first published in 2000 as *Aux Origines du Langage*, it was not updated to take account of more recent work in the field. An article by Marc Hauser, Noam Chomsky and Tecumseh Fitch in *Science* in 2002 caused waves of controversy by arguing that the narrow capacity for syntax is the only feature of language that is distinctively human. A special issue of the journal *Lingua* for 2007, available online since *2005.* also contains important new material, including a masterly survey piece by Derek Bickerton spelling out why approaches to language evolution of the type adopted in this volume are almost certainly wrong. To sum up, this is a provocative, erudite and enjoyable book written to stimulate debate - and I hope it does.

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