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## THE ROLE OF THE HUMAN POLITICAL SINGULARITY IN THE EMERGENCE OF LANGUAGE

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Human beings are the only primate species in which individuals systematically communicate about current or past events. They speak some 16 000 words a day on average and are involved in language interactions during six hours a day (Mehl *et al.*, 2007). From 25% up to 40% of this time is devoted to talking about past experiences (Dessalles, 2008; Eggins & Slade, 1997).

Only a tiny portion of all our experiences are communicated during this form of verbal interaction. To qualify as narratable, an event must be out of the ordinary, or more generally *unexpected* (Labov and Waletzky 1967; Polanyi 1979). The notion of unexpectedness can be formally defined within the algorithmic information theory (see [www.simplicitytheory.org](http://www.simplicitytheory.org)).

What selective advantage can *speakers* derive from communicating about unexpected events so systematically? Few studies have addressed these issues (*e.g.* Breithaupt, 2012; Victorri, 2002). I submit that this narrative behaviour is a consequence of a radical shift in the political organization of our species.

In primate societies, reproductive success strongly correlates with the ability to enforce supremacy through physical coercion and political alliance. There is therefore a huge Darwinian incentive to climb up the dominance hierarchy (Reynolds 2005). This political order based on strict hierarchy became instantaneously obsolete after what we call *the human political singularity*. This abrupt event occurred when lethal weapons such as sticks or stones were used for intra-group killing. For an unknown reason, despite their ability to use tools and to throw stones (Osvath, 2009), chimpanzees are not known to kill using weapons. They rather kill using bare teeth (Reynolds 2005: 154).

The advent of weapons, whenever that occurred, may not have increased the overall level of violence. But it would have had a dramatic impact on the pre-existing social order, leading to the emergence of an inverted hierarchy, as it is widely

observed in hunters-gatherers (Boehm 2000; Knight, *to appear*): individuals submit to the group and avoid showing any desire for dominance.

In the context of easy killing and in the absence of deterring forces such as police or justice, the only valid life insurance for individuals of both sexes is to rely on friends. This is where the communication about events comes into play.

By communicating about unexpected events, individuals *advertise* their ability to detect abnormal states of affairs. Daily narratives that fill up about one third of human conversation time are the far and continuing consequence of the general insecurity created by the easy-killing context in which our species has been thrown into by the advent of lethal weapon use. Since then, *information has replaced muscle as the main criterion for selecting friends*. Computer simulations show that this situation leads to a stable state in which costly information displays evolve in conjunction with social networking (Dessalles, 2014).

## References

- Boehm, C. H. (2000). *Hierarchy in the forest: The evolution of egalitarian behavior*. Harvard, MA: Harvard University Press.
- Breithaupt, F. (2012). *Kultur der Ausrede*. Berlin: Suhrkamp.
- Dessalles, J-L. (2008). [Spontaneous narrative behaviour in homo sapiens: how does it benefit to speakers?](#). In A.D.M. Smith, K. Smith & R. Ferrer i Cancho (Eds.), *7th International Conference*, 91-98. Singapore: World Scientific.
- Dessalles, J-L. (2014). [Optimal Investment in Social Signals](#). *Evolution*, 68 (6), 1640-1650.
- Donath, J. (2007). Signals in social supernets. *The Journal of Computer-Mediated Communication*, 13 (1).
- Eggins, S. & Slade, D. (1997). *Analysing casual conversation*. Equinox.
- Knight, C. (2014). Language and symbolic culture: an outcome of hunter-gatherer reverse dominance. In D. Dor, C. Knight & J. Lewis (Eds.), *The social origins of language*, 228-246. Oxford, UK: Oxford University Press.
- Labov, W. & Waletzky, J. (1967). Narrative analysis: Oral versions of personal experience. In J. Helm (Ed.), *Essays on the verbal and visual arts*, 12-44. Seattle, WA: University of Washington Press.
- Mehl, M. R., Vazire, S., Ramírez-Esparza, N., Slatcher, R. B. & Pennebaker, J. W. (2007). Are women really more talkative than men?. *Science*, 317, 82.
- Osvath, M. (2009). Spontaneous planning for future stone throwing by a male chimpanzee. *Current Biology*, 19 (5), R190-R191.
- Polanyi, L. (1979). So What's the point?. *Semiotica*, 25 (3), 207-241.
- Reynolds, V. (2005). *The chimpanzees of the Budongo forest*. Oxford, UK: Oxford University Press.
- Victorri, B. (2002). Homo narrans : le rôle de la narration dans l'émergence du langage. *Langages*, 146, 112-125.