

The Gestural Theory of Language Origin: Philosophical Implications?

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While researching this topic, I came across a paper by Robert Allott (2003) discussing the issues that I intended to cover. His paper goes into greater technical detail in both the philosophical and scientific sections, and is more wide-ranging in covering developments in philosophy, linguistics, psychology and neurology. The ideas in Allott's paper may interest a wider readership, and I have taken the liberty of writing this short non-technical piece foregrounding what I believe to be a key theme in his paper, philosophical implications of the gestural theory of language origin. The theory presents an opportunity for mutually fruitful collaboration between language origin research and the philosophy of language.

Language Origin Research (LOR) is a multi-disciplinary enterprise, drawing on anthropology, archaeology, linguistics, psychology and the biological sciences. Despite sharing a preoccupation with the necessary and sufficient conditions for language, philosophy and LOR rarely cross paths. The central question in LOR is: If language is merely a stage in the gradual evolution of animal communication, why are humans the only known language-using species? The apparent uniqueness of language to humans suggests that it developed at a point in time when the human species branched off from the evolutionary tree and took on unique characteristics leading to language-use. To identify this take-off point, the Gestural Theory of language origin (GT) posits that language began as sign-language (perhaps accompanied by marginal vocalization). According to GT, language developed quickly in the evolutionary time frame, after humans gained sufficient brain size, full bipedalism and manual dexterity. In the GT hypothesis, the 'trigger event' for human language was bipedalism, which freed the hands not only for tool-making but also signing. GT would account for the discrepancy between the time-span apparently needed for language to evolve, and the fossil evidence that seems to show a relatively late development of the vocal apparatus for articulate speech in our hominid ancestors.

If language began as gestures, the reasons for the switch to verbal communication are unclear. Speech has distinct advantages over signing, such as the ability to communicate out of sight, over distances and at night, with both hands free. These advantages may have played a role in the transition. Sign-language allows silent communication, which would have better suited the day-time activities of early humans; hunting, warfare and the avoidance of predators. Given their mutually contrasting roles, it is plausible that sign-language and speech co-existed for some time, and the shift to a more settled and secure human environment played a role in the marginalization of gesture. Attempts to posit speech as the original medium of language run into problems in explaining the origin of semantics and grammar (both apparently missing from non-human animal 'communication'). Sign-language is inherently iconic, and naturally takes on the key semantic and syntactical attributes of language. If speaking developed much later in evolutionary time than signing, it is likely that a neural correlate of signing occurs in the brain when we speak. This hypothesis is consistent with the recent discovery of 'mirror neurons' in the Broca's area of the human brain that is believed to play a major role in both speech and the execution, imagination and imitation of hand-arm movements. Mirror neurons are activated when the subject either performs an action, or sees someone else doing it, and may underlie the inter-subjectivity that is integral to human communication. If the underlying mechanism of language remains iconic, then linguistic sense or 'meaning' today still bears an analogical relationship to reality, the visible gesture now superseded by the invisible 'concept' which exists in logical rather than spatio-temporal space. The GT hypothesis presents an elegant and powerful explanation of the origin of language as a uniquely human phenomenon, as well as a biological basis for the analogical structure of both language and thought.

GT may have philosophical implications, since the theory suggests that the 'deep structure' of language, the 'picturing' or analogical relationship to reality, may be hard-wired into the human brain. This claim runs counter to a familiar (sometimes labelled 'postmodernist') view of meaning as 'use', in which 'semantics' (what words mean) is claimed to be secondary to and parasitic upon 'pragmatics' (the ways that words function beyond simply conveying linguistic 'sense', for example in establishing hierarchies or creating distinctions, thereby rendering alternative hierarchies or distinctions 'invisible'). On such a theory, the distinction between semantics and pragmatics (and related distinctions such as denotation-connotation and objective-subjective) may be arbitrary, unstable and illusory, the accretion of social habits or 'uses' concealing the primary function of language, the legitimization of prevailing structures of power as 'true' and 'objective'. There are, no doubt, many historical and contemporary instances of 'linguistic tyranny' (for example, in the Ancient Greek word for 'slave', which carried connotations of inherent inferiority to, and thereby legitimized the dominance of, free Greeks). But does linguistic tyranny exploit necessary (albeit perhaps, unstable and misleading) distinctions between semantics and pragmatics, denotation and connotation, subjective and objective, or are the distinctions themselves a repressive ideological construct or at best, a 'folk-myth'?

The 'meaning as use' theory raises a major difficulty. How did the semantics-pragmatics distinction get off the ground in the first place, and if it really is just an illusion, why do we keep falling for it? This problem is echoed in Wittgenstein's *Philosophical Investigations*, most memorably in his remark that "Philosophy is a battle against the bewitchment of our intelligence by means of language" (1953, aphorism 109). Wittgenstein repeatedly alludes to the tendency of language to mislead through superficial analogical resemblances (for example, between 'I have a beetle in a box' and 'I have a thought in mind'), and the seeming impossibility of ever freeing ourselves from this kind of linguistic confusion. If, as GT suggests, the iconic and analogical structure of language is 'hard-wired' into the brain, then the source of the confusion and its intractability is easily explained along the following lines:

The semantics-pragmatics distinction was never 'invented', nor can it be 'dis-invented' by politics or a philosophical theory such as 'meaning-as-use'. The distinction between semantics and pragmatics, and the related ones of denotation-connotation and objective-subjective are inherent in the structure of our brains and thereby, in human thought and language. Even the most radical postmodernists cannot think any other way, even if they can (at least in the ivory tower) talk as if they do. Analogies only work because they simplify reality and provide an organizing schema ('a is to b' in the analogue as 'x is to y' in the target) which has a built-in tendency to mislead (is 'y to z' in the target as 'b is to c' in the analogue?). We climb out of one analogical trap, only to fall into another. We cannot, however, remove the spectacles that cause us to fall into these traps. We cannot stop thinking that language has to describe something 'objective' (the target, as distinct from the analogue), that some beliefs and belief-systems are more 'true' than others (as some analogies are more 'true' than others), that there is a substantive difference between semantics and pragmatics, denotation and connotation (as between an analogy and the circumstances of its use). There can be no future 'utopia' (barring mass neural re-wiring) in which things will be otherwise. Language is misleading and we must be constantly wary of its limitations and abuses, but its basic structural assumptions can never be anything other than what they are.

It isn't clear what would count as empirical proof of the gestural origin of language, let alone for the philosophical thesis sketched out above. If GT was demonstrated to be true beyond reasonable doubt, scientists would still face the daunting task of tracing its impact on the human cognitive apparatus and drawing out any implications for the 'deep structure' of thought and language. There is also the possibility that even if the GT hypothesis is false, the same philosophical implications may follow from mental structures that are the result of some other evolutionary process. What is clear is that if it is to have methodological validity, a scientific program that seeks to map the origin of language to cognitive and

linguistic processes cannot exclude the participation of philosophers. Philosophers have questioned the 'inside-out' paradigm that dominates LOR, the idea that language is simply a by-product of complex thought (and can therefore occur in any sufficiently complex non-human species). Wittgensteinian philosophers have cogently argued for an 'outside-in' approach, that language is a semi-autonomous system that shapes mental structures. GT fits the 'outside-in' model extremely well (particularly in accounting for semantics and syntax), yet remains a minority view in LOR. Conversely, philosophy cannot afford to ignore the scientific findings that language may have a 'deep structure' that sets concrete limits to what, and how, we can think and communicate. Both sides need to work together to ensure a proper 'fit' between theory and evidence.

On a bibliographical note, for readers wishing to explore this topic further, Robin Allott's (2003) 'Language as a Mirror of the World: Reconciling Picture Theory and Language Games' (available online at <http://cogprints.org/3110/>) discusses the relevance of recent research in linguistics, psychology and neurology to the project of reconciling Wittgenstein's Tractarian and post-Tractarian approaches to language. For those who find the scientific sections too technical or would like more details specifically on GT, a good place to start would be Michael Corballis's (1999) 'The Gestural Origins of Language', in *American Scientist*, 87(2), 138 (available online at <http://www.americanscientist.org/>). Corballis has also written a highly readable book, *From Hand to Mouth: The Origins of Language* (Princeton University Press, 2002). A more recent work is David Armstrong and Sherman Wilcox's *The Gestural Origin of Language* (Oxford University Press, 2007). A seminal paper on 'mirror neurons' and their possible role in language is that of Giacomo Rizzolatti and Michael Arbib (1998) 'Language within our grasp', *Trends in Neurosciences*, 21(5): 188. A general survey of language origin research may be found in William Fitch's 'The Evolution of Language: A Comparative Review', *Biology and Philosophy* (2005) 20, 193.

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About the Author: Ben is the editor of *Ordinary Language Philosophy on the WWW* (www.biggerliving.com), a leading Internet resource on the 'Ordinary Language', 'Linguistic' or 'Oxford' School of philosophy, practiced by Gilbert Ryle, J. L. Austin and 'Later' Wittgenstein among others. Ordinary Language Philosophy (OLP) was a leading Anglo-American school of philosophy from 1930 to 1970, but was pronounced 'dead' in the late 60s. The website aims to revive interest in OLP, by facilitating research and discussion on its principles, objectives, scope and significance. *OLP on the WWW* is featured in *Les Signets de la Bibliothèque nationale de France* ('Bookmarks of the National Library of France') at http://signets.bnf.fr/html/categories/c_109philo_eng.html. Ben is also a writer and researcher in Media and Communications, and his work has been published in the *Journal of Publishing*, *Publishing Research Quarterly* and *The Philosopher* (Journal of the Philosophical Society of England).