

DISCUSSION

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Something old, something new

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MacWhinney's list of proposed mechanisms for language acquisition seems so all-encompassing that it might appear churlish to dwell on a mechanism that's left out, but on his ultimate list of critical mechanisms there is an indeed an important (and intended) omission: innate, linguistically-specialized constraints. Such constraints are indeed mentioned, but if I understand the point of the article correctly, it is to argue that seven cognitive mechanisms, ranging from competition to cue construction, indirect negative evidence and monitoring, collectively obviate the need for any innate machinery that it specialized for language. Why not include room for innate, domain-specific constraints, too?

I have little doubt that many of MacWhinney's Big 7 play a real role in language acquisition. Although there was once a long tradition of treating the mechanisms for language as largely or even wholly separate from other cognitive faculties, there is growing recognition that the language acquisition faculty likely owes something to the rest of cognition. Language, for example, depends on memory, and in many ways the mechanisms of memory that underlie language seem to at the very least resemble mechanisms of memory that are found in cognition more generally (R. Lewis, in preparation; McElree, Foraker & Dyer, 2003) But does overlap in mechanism truly mean that the long-lived logical problem of language acquisition has finally come to an end?

Hardly. Saying, for example, that memory matters for language (implicit in MacWhinney's endorsement of the competition principle) is not the same thing as saying that memory SUFFICES for language. Indirect negative evidence is of use only to an organism that knows which of an infinite number of possible omissions to care about, competition of value only if there is advance constraint on what counts as competitors. As Gibson (1992) argued in a review of earlier work on the Competition Model, as a scientific theory, competition verges on unfalsifiable. As a mechanism for language acquisition, it is only of value in specific cases where a prior constraint suggests to the child that which competes; that's where

linguistically-specialized machinery (in the form of constraints) comes in, just as it always has.

As researchers in developmental neuroscience increasingly discover the extent to which the development of the brain parallels the development of the rest of the body (Grove & Fukuchi-Shimogori, 2003; Marcus, 2004), a phrase of Nobel laureate François Jacob becomes increasingly relevant: ‘evolution is like a tinkerer’ who fiddles with whatever is available in order to create something new. A bird’s wing, for example, is not a structure designed from scratch to support flight, but an adaptation of a pre-existing plan for building vertebrate forelimbs; the hallmarks of a forelimb (such as the profusion of digits) can be seen underneath all the feathers, a vestige of the wing’s evolutionary origins. In the case of the uniquely human machinery for acquiring language, as in the case of any other intriguing evolutionary novelty, it seems most plausible to assume that the relevant circuitry is a combination of the old and the new (Marcus, 2004).

If mechanisms like the competition principle are domain-general strategies with a long evolutionary heritage, what exactly are the innovations that give language to humans alone? In our present state of knowledge, there is still ample room for researchers to disagree. Hauser, Chomsky & Fitch (2002), for example, suggest that perhaps the only critical addition to the cognitive faculties we inherited from our primate ancestors is a special facility for recursion, while Pinker & Jackendoff (in preparation) suggest that the hallmarks of linguistic specialization may be seen in every domain of language, from the machinery for detecting speech from an auditory stream to the machinery for parsing and interpreting sentences.

To date, too little has been done to relate that which is specialized and evolutionarily novel to whatever relevant cognitive mechanisms we may have inherited from our ancestors. MacWhinney should be commended for returning our attention to pan-cognitive mechanisms that may be critical for language acquisition, but let’s not forget to work equally hard to discover whatever may be special about language acquisition.

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