

One leap or many steps: Can the Minimalist Program be reconciled with gradual evolution?
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“[T]he Minimalist Program...is...a research program concerned with...determining the answers to...the question “How ‘perfect’ is language?”” (Chomsky 1995:221)

The business of the language evolutionist is to provide theories which will constrain the set of possible models of language to those that point to plausible evolutionary origins of the faculty. Yet theories of language which are difficult to integrate into an evolutionary account nonetheless have been adopted by linguists without question. The Minimalist Program (MP) engenders such theories. This paper aims to address the question of the compatibility of the theory of language promoted by the MP with conceivable evolutionary processes giving rise to the capacity. The following issues will be considered:

- Does the minimalist notion of ‘perfection’ equate to the evolutionary notion of ‘adaptation’?
- Are saltational stories the only possibility for evolution of a minimalist language faculty?
- Is the assumption of a MP for language methodologically sound?

The MP - the most recent incarnation of Chomskyan generative theory - is an attempt to reduce preceding approaches to a more elegant and parsimonious formalism. It aims to seek out and illustrate ‘perfection’ in the design of language, and eliminate the computational complexities previous generative theories of the system entailed. At first blush, this approach might seem to fit well with an adaptationist evolutionary story. However, deeper investigation establishes that this is not the position from which Chomsky’s advocacy of minimalist ideas is derived. In fact, in moving from the complexity of Government and Binding theory, which assumed language to be underpinned by various interacting modules, to the simplicity of minimalism, the whole thrust of the Generative Enterprise has diverged from the adaptationist perspective.

By advancing an adaptationist story for language, the predictions we make are incongruous with the tenets of minimalism. Such predictions include: (1) adaptation must be the result (at least in large part) of natural selection; (2) natural selection must work in a gradual fashion; (3) a gradual evolution will be complicated by accidents of history; (4) gradual evolution by natural selection never finds the ‘perfect’ solution to a problem; merely the best one it can uncover given many conflicting constraints.

The language faculty as proposed in the MP does not resemble a system that has evolved in this way. The simplicity implied by reducing the computational system proves difficult to harmonise with our understanding of adaptationism. Berwick (1998) endeavours to overcome this difficulty by proposing a saltational explanation; simply introducing Merge into the evolutionary picture provides many of the unique features of human language. However, if this scenario were accurate, the language faculty would be anomalous in the biological world. Further, the ‘perfection’ that Chomsky discusses is fundamentally different to the optimality suggested by adaptationism. The latter will never reach the global maximum that the former implies.

The MP arose out of a wish to “...shift...to the...question: does the thing that we are studying have a certain kind of optimal character?” (Chomsky 2002:97). An adaptationist gradualist view, à la Pinker & Bloom (1990), follows Darwinian principles of reasoning in assuming language to be a complex biological system. Chomsky, following Galilean principles of reasoning, does not consider language from the biological angle, but begins from the methodological perspective of understanding how well ‘designed’ the system is. Ignoring the insights of biology can lead to miscalculated theories of language. The question that we therefore need to answer is whether seeking perfection in the computational system is the right way forward for linguistics.

References

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