

**Toward a Minimalist Morphology: Squaring the Circle**  
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Chomsky's conception of human cognition posits that the brain is characterized not only by general cognitive abilities, but also by one or more specialized subsystem(s) dedicated to language production and perception (and perhaps use). The properties of such subsystems are the result of both contingent and selected evolutionary properties of the species. The Minimalist Program has not altered this picture per se, but promotes as a hypothesis that species-specific properties play a minor role, perhaps being limited to recursion. Thus, the language faculty is overwhelmingly characterized by those properties representing 'bare conceptual necessity', or the minimum required to perform the function of language. More specifically, the language faculty is a cognitive system with two external interfaces, one corresponding roughly to 'sound' and the other -- to 'meaning'. These interfaces necessarily impose the requirement that the language faculty generate representations which are interpretable at each. Language is claimed to approximate the perfect solution to the interface requirements.

Of course there are many aspects of language which cannot be reduced to 'bare conceptual necessity'. Among these aspects is morphology, which we understand broadly as the structure of words. (The very fact that words HAVE internal structure hardly follows from conceptual necessity). It would seem, then, that the notion of a Minimalist Morphology is a non sequitur.

The resolution of this paradox, we submit, lies in leveraging the spare computational component of the grammar along with the overall architecture of the language faculty to permit the contingent facts of word structure found in human language to be rendered in as spare, 'minimal', form as possible. To this end, we take inflectional morphology to be goal-driven in that its function is to convert grammatical information (e.g., gender, number, case, tense) into phonological information. That is, it is designed to satisfy its interface requirements.

The theory of inflectional morphology to be presented can be outlined as follows:

- Grammatical information is associated with heads (functional and lexical) as formal features of the form [*category:value*].
- In the event that grammatical information expressed on one lexeme is provided elsewhere in the sentence, the feature initially has a null value, to be assigned in the computational syntactic component.
- The architecture of the grammar is leveraged as follows:
  - The syntax has a generalized feature copying/harmony operation called *Agree*. Locality constraints on feature spread are imposed by the constraints on syntactic operations generally (cf. *phases*, or spell-out cycles).
  - Functional categories such as D and T house referential properties, while associated lexical categories N and V are the locus of lexical properties.
  - Interface conditions apply, so that all features must have or receive a value and there must be a corresponding spell-out rule which replaces these features with phonological material; the features in their original form are illegible at the PF interface.

A language with no inflectional morphology is conceivable (Chinese might approximate one), so there is no 'conceptual necessity' for this aspect of human language. Taking the form of minimal formal features necessarily eliminated by spell-out rules to satisfy interface conditions, inflectional morphology presumably represents historical detritus or reinterpretation, for which human cognition provides ample precedents.