An Introduction to the Minimalist Program

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Some findings of traditional syntax

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  - Hierarchical structure and binary branching
  - Dominance relationships (government, c-command, m-command)
  - Same semantic structure (ordering of thematic vPs, adverbs)
  - Minimality and cyclicity (when things move they move little step by little step)
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Need for economy

Especially considering its totally unique properties, the language faculty (LF) evolved in an evolutionary blind-of-the-eye. This should lead us to think its underlying machinery is simple. On one hand generative linguists want to find new modules of grammar to argue for the innateness of the language faculty. But on the other, each new module means a more complicated language faculty.
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The Minimalist Program


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The “Third Factor”

The intricacies of the language faculty defy such petty notions such as the intuitive “nature” and “nurture” dichotomy. Binding/government/syntactic structure could be construed as “natural,” but it would be uneconomical to say that all of the hundreds of constraints posited for natural languages are all biologically real in some way. Binding/government/syntactic structure could be construed as “nurtural,” but that wouldn’t tell us why they are so uniform. Chomsky (2005) instead argues that the complexity of language is emergent from the interaction of nature and nurture based on economical “laws of the universe,” which he calls the “Third Factor.”
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The fingerprints of optimal design

▶ This isn't crazy either. Seemingly complex "laws of the universe," like economy, recursion, etc. are ubiquitous.

▶ See right. Fibonacci spirals are common examples of emergent order in nature.

▶ Hurricanes, plants, etc. aren't "programmed" to have spirals perfectly corresponding to the Golden Mean, but they arise naturally due to common laws of form.
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The Minimalist view of language

What sets humans apart from animals should be a computationally minor cognitive operation. This operation should interface with Third Factor and other constraints to produce some of the idiosyncratic modules of grammar (minimality, movement, hierarchy, etc.). This all defines the Minimalist Program as opposed to the particular instantiation of it in Minimalist Theory.
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What Minimalism means in practice

This all has been the theoretical underpinnings of Minimalist theory, but it's instantiated in mainstream G&B in very particular ways.

To Chomsky, the one cognitive operation that separates humans from animals is “Merge,” which is an operation that conjoins any two lexical items.

Minimalist syntax trees look like X-bar trees, but their theoretical basis is totally distinct.

X-bar trees are top-down. We start at a CP and a sentence is constructed downwards based on syntactic rules of languages (similar to Phrase Structure Rules) which select types of phrases.

Minimalist trees are bottom-up. We start by Merging words into sets, and then Merging the resultant set with another word, etc.
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What drives Merge?

In X-bar and earlier PS Rules, languages have some independent rules that designate how phrases select each other. In Minimalism, Merge is totally free to combine with any linguistic element in theory (no PS Rules, in fact, the reality of the phrase itself is sometimes questioned), but it is lexically driven. For example, a lexical entry like *hit* requires a subject and object, as well as tense (T). These lexical demands drive Merge to add other elements that satisfy these lexical demands.

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“Movement” as computational efficiency

Movement is just a metaphor.

Momentum toward the Copy Theory of "Movement"

"Movement" is just Internal Merge (Merge of a set and a subset of that set).

Underlyingly, the "moved" element is still there, but it is eliminated for what Chomsky calls "computational efficiency."

This is a generalized intuition for inter-language differences. All languages have all "transformations," it's just an issue of whether movement is overt (we pronounce the higher copy) or covert (we pronounce the lower one).
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The Demise of Deep Structure

Internal Merge (movement) happens as soon as it is required.

X-bar → transformations → surface structure

Minimalism – "Transformations" occur as soon as the landing spots for transformations are Merged. No DS/SS distinction.
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- Syntax altogether.
References
