

# An Introduction to the Minimalist Program

Luke Smith

University of Arizona

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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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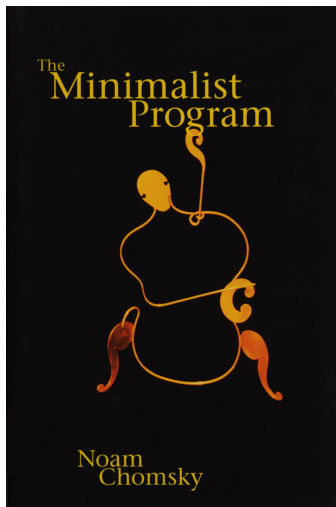
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  - ▶ This should lead us to think its underlying machinery is simple.
- ▶ On one hand generative linguists want to find new modules of grammar to argue for the innateness of the language faculty.
- ▶ But on the other, each new module means a more complicated language faculty.

# The Minimalist Program

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- ▶ Chomsky (1995) suggests totally reformulating syntactic problems.
- ▶ Language must be smaller than we anticipated, but what if it's maximally small? (One operation)
- ▶ But how do we account for the complexity of language with a simple language faculty?



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- ▶ 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.”

# The fingerprints of optimal design

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- ▶ 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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- ▶ 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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- ▶ 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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- ▶ 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.
- ▶ **There is not actually any syntax involved at the core of Minimalist syntax.** Language = Merge + Lexical Entries

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- ▶ Properties like cyclicity and minimality (constraints on long distance movement) can be explain by general economy constraints.
- ▶ And then there’s “movement” so called.



# “Movement” as computational efficiency

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- ▶ 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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  - ▶ **X-bar** – Deep structure → transformations → surface structure
  - ▶ **Minimalism** – “Transformations” occur as soon as the landing spots for transformations are Merged. No DS/SS distinction.

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- ▶ Movement.
- ▶ Minimality and cyclicity as meta-linguistic constraints.
- ▶ Multi-phased generation (deep structure, surface structure)
- ▶ Syntax altogether.

# References

Chomsky, N. (1995). *The Minimalist Program*. MIT Press.

Chomsky, N. (2005). Three factors in language design. *Linguistic Inquiry*, 36:1–11.