

The Merge Hypothesis

The Merge Hypothesis is the central empirical theoretical contribution of the Minimalist Program (MP) to syntactic theory. This book offers an accessible overview of the MP, debunking common misunderstandings about its aims and goals, and demonstrating the profound insights it has made. Hornstein shows how the Merge Hypothesis can be extended to cover the generalizations discovered in the past sixty years of Generative research, culminating in GB theory. He introduces the Fundamental Principle of Grammar, which advocates including labels as part of the Merge operation and centering the notion of the constituent as the key domain of syntactic commerce. The early chapters identify the goals of the MP, how they arose from earlier descriptive and explanatory successes of the mentalist tradition within Generative Grammar, and how to develop them in future work to expand its descriptive and explanatory range. It is essential reading for anyone interested in contemporary syntactic theory.

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The Merge Hypothesis

A Theory of Aspects of Syntax

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Preface

Research monographs are not detective stories or magic tricks. Nothing is gained by coyly hinting at one's main points and slowly sneaking up on them after various twists, turns and mis-directions. Without doubt such maneuvers enhance magic tricks and Scandinavian noir detective novels, but setting things up so that the rabbit pulled from your hat generates delight comes at the high cost of making the reader work harder than s/he should to receive what is often a meager reward. Better to state the conclusions upfront so that the reader can more easily follow the argument's thread, and more importantly, so that the reader can more efficiently decide whether the destination is worth the bother at all. With this in mind, let me tell you the main point for which this book argues.

The proposal is the following: I argue for an extended version of the Merge Hypothesis that I dub the Extended Merge Hypothesis (EMH). It incorporates as an axiom a principle I modestly dub the "Fundamental Principle of Grammar" (FPG). The EMH adopts a generic conception of Merge and, importantly, incorporates a linguistically bespoke conception of labels. The EMH plus the FPG deliver a conception of the faculty of language (FL) that outputs grammars with many of the properties Generativists have discovered to be characteristic of grammars we find in natural language. That's the central claim. Here is a little elaboration.

I first outline and show the virtues of the EMH. The EMH showcases a particular conception of Merge and makes it the primary (actually, for my money, the sole) grammatical operation. The central conjecture is that all grammatical dependencies are licensed under Merge. So, for example, if α and β are in a theta dependency as α theta marks β then for α to do its business requires that α and β merge. Same thing for α controlling β or α binding β or α case marking β or α checking features of β or You get the point, right? The EMH insists that *all* grammatical commerce be conducted under Merge. There is no other way to grammatically couple two syntactic expressions in order to establish a grammatical dependency. I dub this requirement the Fundamental Principle of Grammar. The FPG considerably extends the reach of Merge. Contemporary Minimalism is comfortable analyzing structure building and

movement as instances of Merge. The FPG extends Merge's purview to all other grammatical dependencies, most especially construal relations. So, just as θ -marking is discharged under Merge and *Wh*-movement is a product of Merge, so too are control, binding, case and every other grammatical dependency.

That is the core idea. For the proposal to go from slogan to content requires specifying the Merge operation and then demonstrating how this conception of Merge (guided by the FPG) applies so as to derive the properties of grammar that Generativists have discovered over the last sixty years of inquiry. The book doesn't entirely succeed in deriving *all* these properties, but it gets quite far, or so I will argue.

Two important details to fix ideas. First, the FPG requires a classical conception of Merge, one where the operation combines two expressions *and* labels the result. In other words, Merge is here understood as syntactically generating classical constituents. In this specific sense, then, the proposal offered below treats the classical constituent as the fundamental syntactic object and the operation that forms constituents (i.e. Merge) as the fundamental syntactic operation. This is not how many currently understand Merge, but it is required, as we shall see, to operationalize the FPG.

Second, EMH adopts a *very strong* conception of Merge's role in grammar. If EMH is even roughly correct, the modular complexity of standard Generative models of the Principles and Parameters variety is merely apparent. In fact, if this is on the right track, there is no internal modularity as *all* dependencies are surface realizations of a single generative procedure, Merge. Part of this should not surprise a thoroughly modern Minimalist. Most well-educated syntacticians are now ready to accept that phrase structure building and movement are flip sides of the same Mergish coin, the former the result of E-merging two expressions, the latter the product of I-merging two ('E' and 'I' acting as useful mnemonics rather than signaling ontological difference). The 'E' that the EMH prefixes to 'MH' signals that the project of unification extends beyond phrase structure rules and movement transformations to include every grammatical dependency. "Extended" indeed!

This is the core of the book. However, it is not all. I add some dessert at the end to round off the main meal. At the end I return to the combine+label conception of Merge adopted to do the heavy lifting for the EMH and ask the quintessentially minimalist question: Which part of the operation is linguistically bespoke and which part cognitively/computationally general? I will suggest that labels are linguistically special in the sense that the labeling operation is responsible for giving us the unbounded hierarchical recursive structures characteristic of natural language grammars. More to the point: If we add labels to the soup of a-linguistic cognitive operations, a soup that includes a simple combination operation, and insist that grammatical dependencies all be

subject to the FPG, then out pop grammars like those we find in natural language. In fact, once we add labels we create sets whose hierarchically structured members can be recursively generated.

So that's the main claim of what follows: The EMH incorporating the FPG based on a generic conception of Merge incorporating a linguistically bespoke conception of labels suffices to deliver natural language grammars with very many of the properties Generativists have discovered to be characteristics of those we find in natural language.

Before proceeding, a few thanks are in order. My field work mainly consists in having lunch with friends and talking over stuff I and/or they are thinking of. So, first off, I would like to thank my consultants Elan Dresher, Bill Idsardi and Paul Pietroski for endless discussions on the topics covered below and for their reading and commenting on earlier drafts. Without them as sounding boards, sources of inspiration, and general critical kibbitzing, none of this would have seen the light of day. Now you know who to blame.

Second, the line of inquiry that ends here started with a question posed by Roz Thornton about why Government Binding (GB) theory doesn't allow movement into θ -positions. Much to my surprise, I was unable to find many even halfway decent reasons for adopting this central feature of GB (and indeed, earlier (and many current) theories of grammar). Thinking through the consequences of Roz's question led me to what is outlined below after a couple of decades of rumination.

My third intellectual debt is to Noam Chomsky (as the subtitle of the book should make clear). I am quite sure that he would not endorse the final product. However, I would not have gotten to the end of *my* intellectual road without having read and thought a lot about his.

My fourth debt is actually less a debt than an outright theft. Principles very like the FPG (if not identical) were proposed by at least two earlier authors, Sam Epstein (1999) and John Collins (2007). Let me make my confession stronger still; the idea pursued here as the Extended Merge Hypothesis was first conceived by Epstein, and a version thereof has been developed in collaboration with Kitahara and Seely (see Epstein 1999, Epstein et al. 2015, 2022).¹ The only words I can offer in mitigation of my crime is that I was not consciously aware of my malfeasance. I had not read Collins' paper when I first developed the FPG. I had read Epstein's (indeed, it appears in a volume I co-edited with him) but clearly did not understand its importance. Both of these are hanging offenses and I offer my neck (and my apologies) in penance.

¹ I thank reviewer #4 for making this crystal clear to me on every other page of the generous review. I really am grateful.

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While confessing to the unpardonable let me add that Epstein's (1999) discussion can be anachronistically understood as tying (his version of) the FPG to the strong minimalist thesis in the way that I do below. That his paper does so made me very happy, for if Sam had already scoped out a version of the FPG and urged its centrality to the Minimalist Program then I could be much more confident in my decision to do the same. Shoulders and giants and all that. At any rate, if you like the work the FPG does here in the context of the EMH, know that Sam and John got there first.

I have yet more intellectual debts. I have worked with many very talented collaborators on previous projects related to this one. Let me especially thank Cedric Boeckx, Kleanthes Grohmann, Jairo Nunes, Paul Pietroski and Masha Polinsky. As the reader will see below, this work, as well as the non-collaborative research of the aforementioned, has greatly influenced the final product presented here.

Three more thank-yous before delving in. There were four reviewers who made useful comments buried in sufficient praise. I thank all four, including the notorious reviewer #2. Thanks as well to the team at Cambridge University Press, who considerably reduced the bother of getting an eager but disheveled manuscript gussied up enough to get to the printer. In particular, thanks to Helen Barton and Isabel Collins for all their help, and a very special thanks to Sue Browning (who, I am sure, is a senior member of the copy-editing Olympus), who edited the prose provided and allowed me to say more clearly what I wanted to say. Last, I would also like to thank Maša Bešlin for very useful comments, constructing the index, and helping with final editorial processes.

Abbreviations

| | |
|-----|------------------------------------|
| AP | articulatory–phonetic (interface) |
| BC | backwards control |
| CI | conceptual–intentional (interface) |
| CTM | Copy Theory of Movement |
| DoI | Duality of Interpretation |
| EC | Extension Condition |
| ECP | Empty Category Principle |
| EMH | Extended Merge Hypothesis |
| FL | faculty of language |
| FPG | Fundamental Principle of Grammar |
| G | grammar |
| GB | Government Binding (theory) |
| IC | Inclusiveness Condition |
| LAD | language acquisition device |
| LC | linguistic creativity |
| LDA | long-distance anaphor |
| LF | logical form |
| LFL | linguistic flexibility |
| LH | Labeling Hypothesis |
| LI | lexical insertion |
| MH | Merge Hypothesis |
| MoM | Merge over Move |
| MP | Minimalist Program |
| NTC | No Tampering Condition |
| OC | obligatory control |
| PF | phonological form |
| PLD | primary linguistic data |
| PM | phrase marker |
| PS | phrase structure |

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|---------|-----------------------|
| xii | List of Abbreviations |
| RP | resumptive pronoun |
| SCO | strong crossover |
| T-rules | transformation rules |
| UG | Universal Grammar |
| WCO | weak crossover |