

REVIEWS

The minimalist program: The nature and plausibility of Chomsky's biolinguistics.
By FAHAD RASHED AL-MUTAIRI. Cambridge: Cambridge University Press, 2014.
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Al-Mutairi offers an informed, philosophical appraisal of the foundations of current generative theory as pursued under the guise of the minimalist program (MP). The volume is offered as a neutral assessment, although A happily describes some pro-minimalist work as marked by 'erroneous conclusions and pretentious proclamations' (5). Indeed, the cumulative effect of the volume is so negative as to make A's exhortations of disinterest seem faux, even if well intentioned. Furthermore, the volume too often reads as if A is trying to figure out what Chomsky means; thus, there is a surfeit of quotations, and too little charitable insight. The book, then, is not an introduction to first-order minimalist work—nary a tree graces its pages, and no linguistic phenomena are discussed, save to exemplify a certain line of reasoning. This might make for a not-so-easy read for those unversed in the technical discussions. The absence of syntax also casts a shadow over much of A's reasoning, for it is difficult to talk about the MP at such length while so assiduously avoiding any actual linguistics—all of which is unfortunate, for A clearly knows his Chomsky, and does make many interesting points along the way.

I shall, of necessity, be selective in my discussion; in particular, I have nothing to say on the evolution of language. It seems to me that A is correct in thinking that the issue is ultimately extraneous to the understanding of the MP, even if the MP does offer an intriguing perspective on the topic.

After an introduction, Ch. 2 presents a historical sketch of generative linguistics from its inception and offers a general characterization of the development of the MP as a shift from conceiving of universal grammar (UG) as an *explanans* to an *explanandum*, where what does the explaining now is interface conditions independent of language narrowly conceived and general conditions on optimal computation of the kind one may expect to find in natural systems (what is now often referred to as 'third factors'). The foil for much of this discussion is pro-minimalist work from Cedric Boeckx, Norbert Hornstein, and others, who, at least in some publications, view the history of the field as one of changing goals, with apparent breaks between the early work, the middle period, and later MP work. A is correct to reject such a punctate picture: (i) at no stage was the goal of a grammar mere extensional adequacy as would at best be delivered by a combinatorial conception of a grammar sans any evaluation measure or, crucially, its satisfying the kind of explanatory desiderata that transformations were designed to capture (the latter point A curiously neglects); (ii) cognitive concerns were animating goals from the beginning; and (iii) the MP is not premised on the goal of explanatory adequacy somehow being achieved in the so-called government-and-binding period. Still, A's conception of the MP only really became explicit some ten years or so after the first MP-oriented work. In the earliest MP work, the clear motivation on offer is that theory-internal levels are (apparently) explanatorily redundant, and so related technology is called into question, such as indexes and X-bar theory as a stipulated remnant of the phrase structure base of earlier approaches. Movement and phrase structure combination (called Merge) become aspects of a unitary cycle, with movement applying before any designated structure of a 'level' is complete. One can, clearly, appreciate such reasoning—say, in regard to *tough*-constructions—without having any general picture in mind of UG or 'third factor' issues, which A considers to be the principle motivation for the MP. A sketch of the architecture of an MP grammar is presented in line with the general view of UG as an explanandum, which is okay as far as it goes (phase theory and the issue of labels or projection are neglected, though), but again, the account presented suffers from not offering any kind of purely syntactic motivation for the MP, which is, after all, not merely a matter of philosophical orientation.

The following three chapters are concerned with the proper articulation and construal of the strong minimalist thesis (SMT) around which the MP pivots. Ch. 3 seeks to disambiguate and assess the SMT and the associated notion of ‘virtual conceptual necessity’. Unfortunately, A makes heavy weather of the task, conflating programmatic principles and motivating suggestions with empirical claims. In essence, the SMT amounts to the idea that the language faculty is explicable in terms of general principles of computation and interface conditions—equivalently, that an adequate theory will make no use of language-specific notions or ad hoc principles. Thus, the theory will deal in ‘virtual conceptual necessities’ alone, understood as those notions built into the very conception of language as a combinatorial system that matches ‘sound’ with ‘meaning’. The idea behind the SMT is that, if construed as a straightforward empirical claim, the thesis is certainly false, but it has great therapeutic value as a regulative principle insofar as explanation across a range of phenomena appears to approximate the kind of perfection the SMT suggests. All of the authors discussed by A as evidence of confusion agree on that much, but simply present the ideas in somewhat different ways for expository reasons. For example, in various places, Chomsky has suggested that the differences between invented formal languages and natural languages are a good indicator of apparent ‘imperfections’, departures from the SMT. A takes this suggestion to mean that an imperfection amounts to a property that is dispensable to the very concept of a language, precisely because the property is absent from a formal language, which is one kind of conceivable language (63–65). On the contrary, the point of reflecting on formal languages is that they are designed to encode certain concepts or structural properties (as in model theory) without excrescence, and so serve as a paradigm for how a combinatorial system could be perfect in one sense relative to its semantic interpretation. It does not follow from the SMT that a natural language should, in any sense, mirror such properties as are common in formal languages; indeed, for present purposes, they are not languages at all.

A’s argumentation here would have greatly benefited from discussion of actual phenomena, such as, say, quantification via displacement, and the lack of vacuous quantification in natural language, or the ready appeal to indexation in formal languages in contrast to its eschewal in the MP.

A goes on to allege that the SMT, on the perfect design construal, is unfalsifiable, because any imperfect property would immediately be considered unreal, since the criterion for what is to count as a real property is just for it to contribute to the overall perfection of the language faculty (71–72). The accusation is awry. The import of the SMT is intended to be programmatic in the sense of enjoining a theorist to seek a minimal computational and/or interface account of any given range of phenomena; the extent to which that is successful is the extent that the SMT holds. Thus, one cannot hold the SMT to be falsifiable or not independent of an assessment of the kind of explanations it licenses. A notes that, to the best of his knowledge, there are no specifications by minimalists of phenomena that, were they to obtain, would falsify the SMT, that is, real imperfections (72). This is simply false. The interdiction against free variable interpretations and vacuous quantification are examples Chomsky has often cited; indeed, practically any phenomena would do to the degree to which one thinks current explanations founder (island constraints, for example).

As it is, A considers the SMT to find a proper formulation in Chomsky’s more recent work (77–78), where it amounts to the equation of Merge + efficient computation + interfaces = language, free of notions of virtual conceptual necessity and im/perfection. I cannot see such recent formulations, however, as more than suggested improvements on essentially the same ideas.

Ch. 4 is dedicated to the relation of Merge to the ‘recursion-only hypothesis’ with regard to what is unique to the narrow language faculty. A argues that Merge cannot amount to recursion as such, for recursion is witnessed outside of language, or, at any rate, the two hypotheses diverge in empirical content; further, the apparent minimalist claim that the uniqueness of language reduces to Merge is another unfalsifiable hypothesis. A is certainly correct that the notion of recursion has engendered much befuddlement, but he unfortunately adds to it. First, it is trivial that recursion cannot amount to Merge, for the former notion, at least as used in mathematics, includes many different kinds of systems poorer or richer than Merge (effectively, recursion characterizes the Chomsky hierarchy, and so includes all recursively enumerable, or semi-decidable, languages). For instance, Merge is stipulated to be binary, but there is nothing essentially binary about recur-

sion. Second, although such formulations are rife, Merge/recursion-only hypotheses are misbegotten. The general intent of uniqueness claims, I take it, is to identify unique configurations of cognitive systems. Thus, what might be special to humans is not so much a principle of combination as such, but rather its integration in mapping from some lexical organization to independent systems of ‘sound’ and ‘meaning’. On such a view, nonhuman animals might possess something akin to Merge, or some device falling under the Chomsky hierarchy, which fails to be integrated with other systems so as to be unused for general cognition or communication, or is restricted in some fashion. A (based on personal correspondence with Chomsky) considers such an approach to be ‘circular’, as it amounts to the claim that Merge is language-specific because it applies in language (105–6). This accusation is premised on an unwarranted insistence that language uniqueness must reduce to some given property rather than a certain kind of configuration that gives rise to the hierarchically unbounded structures witnessed in language. Pace A, such a position is perfectly falsifiable. It would be false, for instance, if certain structures necessitated n -ary branching for their interpretation, or operated via principles that counted string length.

Ch. 5 considers the nature of the interfaces and optimal computation. The most interesting aspect of the discussion is A’s various criticisms of the appeal to physics common in some minimalist literature. The basic idea here is that the notion of optimal or efficient computation as enshrined in the SMT might be spelled out in physical terms given analogous optimality principles in physics. For A, ‘a Pandora’s box of misconceptions’ is opened (126); in particular, teleology is often smuggled in, whereas teleology is precisely absent in modern physics. A’s judgments hereabouts strike me as well founded, but the matter is not of any pressing concern; first-order work in minimalism is hardly animated by principles operative in physics, regardless of whatever impressionist connections there might be between the two fields.

The last chapter proper deals with a number of broad issues concerning naturalization, functionalism, mind-body dualism, and the plausibility of finding a physical explanation for apparent optimal properties of language. The discussion raises many interesting issues, but is philosophically jejune. Chomsky, for instance, is presented as an anti-functionalism, but there are many different ways of being a functionalist, and A does not shed much light on the matter. The views of Jerry Fodor are discussed at length, but nothing is made of the tremendous contribution Chomsky made, via Fodor and otherwise, to the wide endorsement of functionalism and the rejection of behaviorism in the philosophy of mind in the late 1960s and early 1970s. Similarly, on the basis of a simple misunderstanding, A rejects Chomsky’s oft-repeated claim that Newton dispensed with the notion of the body, leaving the mind intact, thus rendering the mind-body problem unformulatable (165–67). Chomsky’s point does not turn on delicate matters concerning Newton’s philosophy, still less that Newton endorsed a Cartesian conception, but on the general point that the notion of a body became, post-Newton, a matter of changing theoretical determination, making doctrines of physicalism/materialism essentially empty as metaphysical theses (there is a broad and growing philosophical literature on this topic).

The volume concludes with a short summary, the chief point of which is, again, to voice the worry that too much of the MP is unfalsifiable, and that minimalists are guilty of willfully avoiding such a serious concern (181–82). The worry, however, is misplaced. There are many ways of being a minimalist; the MP is not a determinate set of empirical theses, but an agenda for motivating theories animated by certain general explanatory concerns. The MP will prove fruitful or not, rather than true or false *tout court*. That said, as already indicated, there are indefinitely many putative phenomena that would refute the MP, if identified with Chomsky’s particular proposals.

A insists that the MP remains fascinating and worthy of inquiry. If he is right in his judgments throughout the volume, it is difficult to see why, for according to A the MP is an unfalsifiable doctrine, illicitly supported by spurious analogies from physics, beset with confusions over recursion, and so on. Fortunately, A is wrong about most of this.

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