

**Noam Chomsky.** *What Kind of Creatures Are We?* Columbia University Press 2015. 200 pp. \$19.95 USD (Hardcover ISBN 9780231175968).

*Revised December 9, 2016*

The goals of Noam Chomsky's latest book, as stated on page one, are to offer some insights into 'our cognitive nature' and to clear away some of the obstacles that in his view stand in the way of further inquiry into these matters. Although the tone is modest, there are claims, in both paragraphs of this first page, to the effect that the said obstacles are 'widely accepted doctrines,' 'regarded as fundamental in the relevant disciplines,' which suggest that the book carries revolutionary potential. 'Revolutionary' needn't entail that the points to be made are unheard of, though the book is something of a brief compendium of Chomsky's key ideas on language, mind, human nature and politics, developed throughout the decades and presented in various guises in many places. In four chapters, entitled 'What is Language?,' 'What Can We Understand?,' 'What Is the Common Good?,' and 'The Mysteries of Nature: How Deeply Hidden?,' Chomsky reiterates his fundamental claims, drawing on a rich background of philosophy (mostly Hume, Locke, and Descartes) and history of science (Newton and Priestley), viewing these claims as 'virtual truisms, but of an odd kind,' namely such that 'they are generally rejected' (2). What Chomsky is going for, then, is an overturning of some very influential views in cognitive science and the philosophy of mind and language, making one more attempt at yanking the paradigm back from what he perceives as the wrong track.

In chapter one, Chomsky addresses the question what language is, claiming that 'only to the extent that there is an answer to this question, at least tacit, is it possible to proceed to investigate serious questions about language ...' Also, that 'there are much more fundamental reasons to try to determine clearly what language is, reasons that bear directly on the question of what kind of creatures we are' (2). He replies by identifying what he sees as the most basic property of language, which he calls simply 'the Basic Property': 'each language provides an unbounded array of hierarchically structured expressions that receive interpretations at two interfaces, sensorimotor for externalization and conceptual-intentional for mental processes.' Further, 'each language incorporates a computational procedure satisfying the Basic Property. Therefore a theory of the language is by definition a generative grammar, and each language is what is called in technical terms an I-language—'I' standing for internal, individual, and intensional ...' (4). The citations outline succinctly the fundamentals of the approach to language that Chomsky founded and that became the leading paradigm of contemporary linguistics, namely Generative Grammar. It is, as the erstwhile proponent and later critic, the linguist Ray Jackendoff, would say, 'syntactocentric': it is clear that at the center of such a view of language stand sentences, abstract syntactic objects ('hierarchically structures expressions'), which then on the one hand get 'clothed' in sound-relevant properties in order to enable them to be pronounced, and on the other are 'semantically interpreted' (they 'receive interpretations' at these two 'interfaces'). Such an architecture of the grammar is far from a truism, one could claim, and is indeed probably not the most realistic one (Jackendoff's Parallel Architecture, with conceptual thought being structurally equal to syntax rather than subordinated to it, seems more so). On the other hand, the individualistic-internalistic approach to language and mind is something that Chomsky and Jackendoff both espouse and that puts them at odds with much contemporary philosophy of language and mind; however, the general computational view of the mind is rejected by few.

Chomsky then goes on to outline the staples of generative grammar: I-language is 'an organ of the mind-brain' ('a biological property of humans' (5)), language has a 'creative character: it is typically innovative without bounds, appropriate to circumstances but not caused by them ...' (7),

(encapsulating Chomsky's criticism of behaviorism), and is based on a universal grammar (UG), 'the genetic endowment that yields the unique human language capacity and its specific instantiations in I-languages' (9). The point that Chomsky particularly stresses, however, is that the design of language is *structure-dependent*, always ignoring linear distance in favor of hierarchy, of 'structural distance.' This means that the computations underlying (or embodying) language never have linear distance (or linear order) as their input, but rather structural positions on the syntactic tree. 'Linear order, then, is a peripheral part of language, a reflex of properties of the sensorimotor system, which requires it: we cannot speak in parallel ...' (12). This leads to the second main point of the chapter: language is primarily an internal affair, 'an instrument of thought,' with externalization being 'an ancillary process' (14). Here Chomsky famously sides with the Cartesian (and Humboldtian) tradition against contemporary orthodoxy, which sees language primarily as an instrument of communication. The orthodoxy sees the pressure for effective communication as being crucial in the evolution of language, while Chomsky is skeptical with regard to this account. Again, it is hard to see any truisms here, but rather an exciting and perhaps unsolvable debate.

Unsolvability, not just of the said debate but generally, is the topic of chapter two of the book (and also of chapter four). Chomsky claims that 'the theory of evolution places humans firmly within the natural world, taking humans to be biological organisms, much like others, hence with capacities that have scope and limits, including the cognitive domain' (56). Drawing on his distinction between mysteries and problems, Chomsky argues that it is only plausible that for beings such as us, as for any biological beings, the answers to some questions are destined to forever remain mysteries (not necessarily the same ones for all beings: 'some differently structured intelligence might regard human mysteries as simple problems' (56)). Indeed, some questions we may even be unable to formulate. However, Chomsky sees this limitation as a sort of (transcendental, but he doesn't use the word) necessity for there to be any kind of knowledge: 'with no limits ... our cognitive capacities would also have no scope' (56). Yet, it is possible to wonder here if it isn't idle to speculate about our cognitive limitations, since we are not in a position to outline them from within. If the totality of our modes of reasoning and conceptualization is unsurveyable, as Hilary Putnam would have put it (cf. his *Representation and Reality*), then it isn't possible, at any point, to specify the location of the limits—and so it forever remains a mystery whether there are any real mysteries. Of course, some philosophers, such as Kant, have indeed tried to outline our conceptual system from within, but these efforts are mostly seen as unsuccessful.

Kant stressed innate forms of understanding, and Chomsky's second main theme in chapter Two, namely the acquisition and nature of 'atomic concepts,' is rather Kantian. Indeed, Chomsky's whole paradigm of thinking about language and mind, with an innate endowment channeling development prompted by external stimuli, always seemed to me to fit much better into a Kantian mold (innate concepts structuring experience based on external stimuli) than the Cartesian one that Chomsky professes—but put that aside for reasons of space. Atomic concepts, 'the atoms of computation,' are, Chomsky claims, such that 'innate properties of the mind play a critical role in their acquisition and use' (47). The argument for this is Chomsky's well-known 'poverty of the stimulus argument,' according to which ostension, instruction, and habit formation cannot account for our learning the rules of our language, or, in this case, the basic concepts we operate with. A large part of chapter two (and a part of chapter four) are devoted to rehearsing Chomsky's well-known arguments that these atomic concepts are non-referential, indeed that referential semantics is ill-conceived.

Chapter three switches the subject to politics, arguing in favor of anarcho-syndicalism over standard parliamentary democracy, which is seen as a ‘plutocracy’ and an ‘instrument of class rule’ (68). Anarcho-syndicalism seeks to dismantle structures of authority in favor of bottom-up social organizing. These are views about which Chomsky has written widely. The doubt is always whether the structures of conflict and power-struggle might reappear even in such a reconstructed society—because it's just human nature, perhaps.

The rather meandering and long-winded chapter four is mostly an exercise in the history of the rise of modern science (centering on Newton), with this reasonable main point: we should try to come up with the best theory of the mental that we can, even if we probably can't solve the mind-body problem, perhaps because the reduction base is at present misconceived. Along the way, influential views of the problem are discussed, among them Jackson's and Stoljar's.

Whether any of the main points of the book is a truism is rather controversial. As is even the envisioned basic theme, namely, ‘our cognitive nature’—for, as Putnam might claim, the ‘open texture of reason’ calls into question that there even is such a thing as our cognitive nature. Nevertheless, although many of his points depend in their persuasiveness on whether the reader is already inclined to agree with them, there is no denying the discreet charm of Chomsky's writing, or the allure of the path he proposes.

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