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Biolinguistics and the Foundations of a Natural Science of Language*

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The Science of Language, Interviews with James McGilvray, by NOAM CHOMSKY, CAMBRIDGE, CAMBRIDGE UNIVERSITY PRESS, 2012, pp. vi+321, £ 15.99.

Over the years some of the clearest expositions of Noam Chomsky's views on language and vision for linguistics have taken the form of interviews/discussions with experts on language and mind. I have in mind the conversations with Mitsou Ronat that led to *Language and Responsibility* (1979), or the set of interviews conducted by Henk van Riemsdijk and Riny Huybregts that made *The generative enterprise* (1982) possible, or the more recent exchange with Adriana Belletti and Luigi Rizzi at the heart of *On Nature and language* (2002). All of these are, in my opinion, core documents to understand Chomsky's take on language.

The science of language, where Noam Chomsky converses with McGill University philosopher of language James McGilvray, is likely to find its niche among the distinguished set of interviews mentioned above, although I should point out right away that I don't think it reaches the level of its predecessors, for reasons I will detail below.

The core of the volume is a transcript of "four discussion/interview sessions" [p. 3] that took place in 2004, complemented with a follow-up interview carried out in January 2009. The interviews are divided into two parts ("The science of language and mind" and "Human nature and its study"), with each one further divided into themes ('chapters'), although many of the same themes are addressed in multiple chapters.

As McGilvray indicates in his Introduction [p. 4], "the topics taken up in the discussions range widely and include human nature, morality, and universality, science and common sense, the nature of language and its study, and evolution and Chomsky's views of it". In fact, I think it's fair to say that the interviews manage to bring up most of what one might call Chomsky's 'greatest hits', familiar from seminal publications such as *Rules and Repre-*

sentations (1980): the idea that human language is not 'for' communication, the biological nature of language, the focus on innateness and Universal Grammar, the Galilean style and the necessity of abstraction, the importance of simplicity, the limited explanatory scope of neo-Darwinism, the specificity of human concepts, the scope and limits of scientific inquiry into the nature of the human mind, and more. Chomsky's views on these issues are controversial, but so clearly formulated (perhaps nowhere as clearly as when they arise in the context of interviews) that I can only urge the reader to turn to the text itself for succinct formulations of what amounts to a comprehensive, compelling theory of human nature, with language at its center. I will not detail them here, and instead will focus on some of the less-known points that in my opinion deserve further discussion, and perhaps revision.

The book should be of particular interest to philosophers, for several reasons. One is given by Chomsky himself [p. 129], when he says

> I suspect that John Austin was right when he said that philosophy should be the mother of the sciences. It's clearing away the thickets and the underbrush and trying to set things up in such a way that the sciences can take over.

Most of Chomsky's papers, even the most technical ones, tend to start with 'philosophical concerns' that indeed 'set things up' for more challenging discussion. Another reason for the central role of philosophical matters in *The Science of Language* is probably due to the fact that this is the main area of expertise of the interviewer, although McGilvray is clear on this point [p. 4]:

> Readers might wonder why I sometimes contrast Chomsky's views with those of philosophers, rather than linguists or (given the current emphasis on biolinguistics) biologists. The primary reason is that Chomsky often does so himself.

But although philosophy comes up often in the discussion, by far the topic that occupies center stage for both Chomsky and McGilvray is biology. It does so in different guises and contexts: in discussions on the origins of current 'biolinguistics', on the role biological concerns played in shifting the balance away from behaviorism and externalism, and on the issue of specificity and uniqueness of human language.

On the origin of Chomsky's vision for linguistics, Chomsky says [p. 21]:

> Ever since this business began in the early fifties – two or three students, Eric Lenneberg, me, Morris Halle, apparently nobody else – the topic we were interested in was, how could you work this into biology?

To a question about what his greatest contribution to the field may be, Chomsky replies [p. 76]:

> I think that the idea of studying language in all its variety as a biological object ought to become a part of future science – and the recognition that something very similar has to be true of every other aspect of human capacity.

(Indeed, a fair amount of space in Part II of the book under review is devoted to the moral instinct and the parallelism between Humboldt's 'infinite use of finite means' and Hume's reflections concerning the capacity underlying moral judgments [on this, see also Mikhail (2011) and Hauser (2006)]).

Throughout the book Chomsky is at pains to point out that studying language as a biological object requires taking three factors into account: the genetic endowment, the environment, and a third factor that includes laws and principles that are not specific to language or mind and may even transcend the limits of the organic world, "properties of language that do not have to be attributed to genetic endowment" [p. 62].

This focus on the third factor in the interviews was perhaps due to the fact that at the time (end of 2004), Chomsky had just finished preparing his (2005) paper "Three Factors on Language Design" for publication, but it is important to bear in mind that the recognition of the role of the three factors was already present in *Aspects of the Theory of Syntax* (1965), where Chomsky wrote [p. 59]:

> ... there is surely no reason today for taking seriously a position that attributes a complex human achievement [acquisition of language] entirely to months (or at most years) of experience, rather than to millions of years of evolution or to principles of neural organization that may be even more deeply grounded in physical law ...

Experience, evolution, and principles that may be even more deeply grounded in physical law are nothing but the second, first, and third factors of Chomsky (2005). Indeed Chomsky stresses the conceptual continuity between the early days of generative grammar and current biolinguistic investigations:

> These questions were coming up all along; that's why I brought up that 1974 biolinguistics conference [mentioned in Chomsky (2005)]. When you read through the transcript, the questions kept coming up [p. 77].

The questions kept coming up, but no sustained inquiry into the third factor was really feasible at the time, because the third factor really touches on properties that by definition would not be specific to language, but as Chomsky remarks [p. 108], "[i]f you look at a system you don't understand, everything looks special":

> It was pretty obvious to a few of us who were interested in this in the fifties that there were going to be these three factors, and the great battle at the time was to show that the first factor – genetic endowment – actually was a factor. We had to struggle against the belief that everything was the result of generalizations from behavior, and so forth. So there wasn't much talk about the third factor – it might be mentioned, but nothing was done with it [p.148].

Discussing the third factor in the interviews allows Chomsky to bring up three themes that have figured prominently in his work of the last decade or so: (i) the specificity of language (cf. "the Faculty of Language in the Narrow Sense [FLN]" of Hauser, Chomsky, and Fitch (2002)), (ii) the role of physical laws and the limits of adaptationism in biology (a central issue in the minimalist program and the attempt to go "Beyond explanatory adequacy" [Chomsky (2004)], and (iii) the importance of the Principles-and-Parameters model in making all of this possible.

Regarding the pivotal role of Principles-and-Parameters, Chomsky is most explicit in this book than in any other publication that I know of. He clearly sees the inquiry into the third factor as progress. As he states [p. 77]:

> … In recent work, I've been trying to compare what now seems plausible with what seemed plausible ten years ago. And a good deal of machinery that was thought to be needed has in fact been cut away. How far you can go with that; who can tell? That's like asking what really is specific to language. These questions were coming up all along; that's why I brought up that 1974 biolinguistics conference [mentioned in my (2005) paper]. When you read through the transcript, the questions kept coming up – what could it be that is specific to language? How could it be so remote from everything else in the biological world? It didn't make biological sense. But you were stuck with it. Well, by now you're less stuck with it, and you can begin to ask more seriously the basic questions of biology of language – some of them, answer even.

This was made possible by the advent of the Principles-and-Parameters model at the very beginning of the 1980s [Chomsky (1981); see also Baker (2001) for an accessible overview]:

> Well, this framework – format, instantiation, simplicity measure, evaluation – [the 'standard theory' of Chomsky (1965)] that framework lasted pretty much through the seventies, and it did raise serious conceptual barriers to trying to find out what's distinctive about language – what's the third factor, so that we can assign it to something else, and the residue will be what's distinctive about language [p. 82].

> That's where the principles and parameters approach was important; it separated the question of language acquisition from the question of the format. Language acquisition for Universal Grammar no longer has to meet the condition

> that it is so restrictive and so highly articulated that it leads to a small number of choices only and therefore makes the computational task tractable. It could [now] turn out that Universal Grammar is very unrestricted. If you have a format-instantiation framework, it's necessary that the format be highly restricted and highly articulated, or you'll never be able to choose an instantiation, or pick one over another [pp. 82-3].

Put slightly differently, at the beginning of generative grammar,

> it was necessary for the format to be highly restricted and highly articulated, with lots of special mechanisms, and so on and so forth – and therefore very little contribution of the third factor, and lots of highly specific components of language. It also made the problem of studying the evolution of language completely hopeless.
>
> The principles and parameters approach broke that impasse by separating the problem of acquisition entirely from the problem: "what's the format?" It leaves all the questions open. But at least the conceptual barrier to studying the third factor is removed. It is then not impossible – and you can try to show that it is true – that the format for grammar actually does involve, to a high degree, principles of computational efficiency, and so on – which may be not only extra-linguistic, but extra-organic ["third factor"]– and the acquisition problem is then shunted aside. It's a matter of fixing the parameters.
>
> Of course, that raises another question, "why does language have principles and parameters, and why these parameters?" That becomes another interesting empirical question which maybe you can answer on third factor grounds, and maybe not. [p. 83].

Put yet another way,

> Because I was writing about it, I recently went through some of the records of the biolinguistics conferences in the sixties and seventies, and it's always schema, plan, position – which is what's wrong. It's just impossible. Language just has highly specific, highly articulated format, and that's the only way you can account for language acquisition. That looked to me, and to everybody, like a convincing argument. Well, when the principles and parameters framework came along, it undercut that argument. It didn't answer the questions, but it undercut the argument, by looking at everything in a different way. Acquisition was disassociated from the format for grammar. Acquisition is fixing the parameters, and the grammar is whatever it is. It is no longer part of the acquisition process, so it is at least conceivable that it's a best possible solution to other conditions. Then you can start worrying about the third factor [p. 149].

Chomsky sees inquiries into third factors as part of the effort to pursue an internalist program for biology that he connects to the work on morpho-

genesis by Alan Turing (1952), where a conception of biology is put forth that is quite distinct from the currently still popular, neo-Darwinian emphasis on adaptations:

> At some point – sort of like in the 50s when you begin to try to reframe the methodological studies of language into a biological perspective – sometimes you can reframe the methodological conditions into empirical hypotheses about how organic systems, or maybe all systems, are formed. It becomes an empirical problem of biology; and it's on a par with others – actually, the kind that Turing was interested in [p. 80].

> Skinner's observation is correct that the logic of behaviorism and the logic of evolution are very similar – that observation is correct. But I think his conclusion – and the conclusion of others – is wrong. Namely, that that shows that they're both correct. Rather, it shows that they're both incorrect, because the logic of behaviorism doesn't work for growth and development, and for the same reason, the notion of natural selection is only going to work in a limited way for evolution. So there are other factors. As I said in *Aspects*, there's certainly no possibility of thinking that what a child knows is based on a general procedure applied to experience, and there's also no reason to assume that the genetic endowment is just the result of various different things that happen to have happened in evolutionary history. There must be further factors involved – the kind that Turing was looking for, and others were and are looking for. And the idea that maybe you can do something with that notion is potentially important. It's now more or less agreed that you can do something with that notion for, say, bacteria. If you can also do something with it for the most recent – and by some dimension most complex – outcomes of evolutionary history like language, that would suggest that maybe it holds all the way through [p. 76].

But for all the progress that has already been made, Chomsky is well aware that "There are still huge gaps. Take the first point you mentioned, about the nature of the concepts. We have nothing to say about how they evolved" [p. 77]. Lexical semantics, and indeed the lexicon more generally, appear to lie (at least for now) outside of what we can understand. To McGilvray's question's concerning the role of the lexicon ("does the lexicon still have the important role that it used to have?" p. 62), Chomsky answers:

> … The lexicon is a complicated notion; you're fudging lots of issues. (…) 'lexicon' is kind of a cover for a big mass of problems. But if there's one aspect of language which is unavoidable, it's that in any language, there's some assembly of the possible properties of the language – features, which just means linguistic properties. So there's some process of assembly of the features and, then, no more access to the features, except for what has already been assembled. That seems like an overwhelmingly and massively supported property of language, and an extremely natural one from the point of view of computation, or use. So you're going to have to have some kind of lexicon, but what it will be, what it's

> internal structure will be, how morphology fits into it, how compounding fits in, where idioms come in – all of those problems are still sitting there.

Here Chomsky is explicitly answering another question of McGilvray's ("Merge – the basic computational principle: how far down does it go?") by saying that the internal content of lexical units manipulated by syntax is off limits, and (therefore), at present at least, a mystery.

The nature of human concepts is the focus of most of the appendices written by McGilvray (which constitute more than half of the entire book!). There McGilvray re-emphasizes some of the well-known aspects of Chomsky's discussions on concepts: that "a mutation that allowed a human to construct complex thoughts" [p. 176], and that although "with language we can produce novel cognitive "perspectives" [p. 177], "perhaps a mechanism that 'manufactures' distinctive human concepts was in place before the introduction of language" [p. 268]. Here McGilvray defends a view (that he also attributes to Chomsky) where "[i]f there are differences [between us and other species regarding concepts], the differences are in the natures of the concepts, not the uses to which they are put" [p. 197)]. McGilvray departs from views (such as Pietroski's (forthcoming)), according to which "the difference between our concepts and those available to animals is entirely due to contributions of the language faculty" [p. 198], arguing that such approaches "[do] not really touch the issue of what a concept 'is' – of what its 'intrinsic content' or inner nature is" [p. 109]. McGilvray sides with Chomsky in concluding that "human conceptual resources are indeed unique" [p. 205] and require something other than a specific mechanism for recursion such as Merge to come about (except for a limited range of concepts such as those involved in arithmetic, p. 204).

As a whole, the book offers renewed appreciation for a central line in Chomskyan thought: that "one reason to be interested in the science of language is because it tells us what natural languages are, what gives us, but no other creatures, language, and what explains the introduction of language and the beginnings of our remarkable cognitive capacities" [p. 2], and also for "the idea that the evolutionary introduction of language may have made us the distinctive species we are" [p. 2].

It contains in some form or another all the core ingredients for the core conceptual/philosophical foundations of a naturalistic study of language, as well as a few unique gems, such as Chomsky's remark that "most of the parameters, maybe all, have to do with the mappings [to the sensory-motor interface]. It might even turn out that there isn't a finite number of parameters, if there are lots of ways of solving this mapping problem" [pp. 54-55], or the following outline of a 'project for the future':

> I think it's a project for the future. In the work that I've done since *The Logical Structure of Linguistic Theory* – which just assumes set theory – I would think

> that in a biolinguistic framework you have to explain what that means. We don't have sets in our heads. So you have to know that when we develop a theory about our thinking, about our computation, internal processing and so on in terms of sets, that it's going to have to be translated into some terms that are neurologically realizable. I don't know how helpful pure nominalism will be, but there is a gap there that the nominalistic enterprise is focused on. It's a gap that has to be overcome. There are a lot of promissory notes there when you talk about a generative grammar as being based on an operation of Merge that forms sets, and so on and so forth. That's something metaphorical, and the metaphor has to be spelled out someday [p. 91].

But I would like to conclude this review by pointing out two unfortunate aspects of *The science of language* that led me to state at the beginning of this article that the book does not reach the level of its predecessors. One aspect is editorial, the other more substantive, having to do with the nature of biolinguistics.

Regarding the editorial aspect, I am sorry to say that the book suffers from poor editing. McGilvray starts the book by stating that "[w]hile this book will be of interest to the specialist, it is intended for a general audience" [p. 1], and shortly after writes that "[w]ith an occasional exception when discussing a technical issue, Chomsky's remarks are accessible to a general audience. .. I tried to make my contributions accessible too, aiming to make them understandable to the non-specialist undergraduate" [p. 4]. It is hard for me to imagine which non-specialist undergraduate McGilvray had in mind, given that many central concepts such as merge are the focus of the early parts of the interview without having been properly introduced. The glossary at the end of the book does not help, being made up of what seems to me to be a random selection of terms: terms like FOXP2 are in the glossary but not in the index — and don't even come up in the interviews! Other terms included in the glossary, such as Condition C (of the binding theory), only appear once in the discussion and could have been omitted. Another unfortunate aspect of the glossary is that some entries offers definitions, while others offer something more like further discussions of the issue.

Perhaps the most annoying aspect for the reader (certainly for the present one) is the numerous repetitions of passages across the interviews (a fact that is not helped by the artificial division of the book into chapters).

Almost equally irritating is the fact that McGilvray, both in the appendices and in the glossary, does not appear to take into account many of the valid points made by Chomsky during the interviews. For instance, in the glossary, McGilvray starts his definition of "third factor" as follows: "in recent work Chomsky has distinguished three factors involved in the way a child's language faculty develops" [p. 301], whereas, as I indicated above, Chomsky has been at pains to point out that the three factors have been there since the beginning of the biolinguistic enterprise. Likewise, McGilvray's illustration of parameters

(both in the appendixes and in the glossary) relies either on outdated examples (discarded by Chomsky in the interviews), or is so opaque as to leave this reader at least completely baffled. Consider the glossary entry [p. 299]:

> As originally conceived at the advent of the "Principles and Parameters" research program early in the 1980s, a parameter was an option provided for in a universal principle (q.v.) that explained structural differences between languages (in syntax, phonology, and perhaps semantics). Parameters are set in language growth/development, leading to a child developing (say) Miskito as opposed to French. In more recent work, the original conception of a parameter has come into question and many "microparameters" have been introduced. Moreover, these new are traced not to options on principles, but to the contribution of "third factor" considerations.

Aside from the fact that the term 'microparameters' is mentioned but left undefined (poor non-specialist undergraduate reader!), I cannot imagine what a remark like "these are now traced not to options on principles, but to the contributions of "third factor" considerations" is supposed to mean, even if I can say with some confidence that I know the specialized literature on parameters rather well.

Finally, I should note that readers are likely to find some of McGilvray's introductory statements puzzling. For instance, on p. 2, he writes that the introduction of language "perhaps by itself – explains what is human about human nature" but almost half of the book is devoted to showing the uniquely human aspects of conceptual resources that are said not to be reducible to language. McGilvray is also likely to cause eyebrows to be raised as he keeps talking about inquiry into third facto principles going "beyond explanation" [e.g., p. 246] when he should write "beyond explanatory adequacy" (which is a well defined notion; see Chomsky (2004)). (What could "going beyond explanation" possibly mean?).

The final line of the last appendix perhaps best illustrates the poor editing I am taking issue with. There [p. 261], McGilvray writes "This bears on what follows in the discussion of the main text", but nothing follows this line, nor does it refer to any specific portion of the main text!

My concluding comments will bear on biolinguistics. I understand biolinguistics to be the comprehensive search for the biological foundations of the language faculty. While this has an undeniable Chomskyan ring to it, I know that numerous linguists and scientists from other fields committed to uncovering the biological basis of human language find it inaccurate to reduce biolinguistics to generative grammar. And I agree with them. The one thing that characterizes modern biology is its methodological and conceptual pluralism [see Gould (2002), Pigliucci and Müller (2010)], and this ought to be the case for biolinguistics as well. It is therefore very unfortunate, especially in a series of interviews that mentions the term biology so often, that

McGilvray defines biolinguistics in the glossary as "the current name for the internalist and naturalistic study of language undertaken by Chomsky and others" [p. 292], and elsewhere [p. 5] writes "[the] traditional rationalist study of the language and its growth has come to be called "biolinguistics".

It is sad that McGilvray does not engage (or force Chomsky to engage) with the thoughtful reflections on internalism and externalism in biology found in, for instance, Lewontin (2000).

McGilvray keeps talking about "accommodation to other sciences (here, primarily biology" [p. 7] as a goal for linguistics, but it seems to me that such a goal is not served by writing that "[b]iology, a science of particular interest in the study of language, seems still in transition" [p. 157] (Is (bio)linguistics more advanced?) It is also not served by the mere mention of "evo-devo", such as the following:

> But the explanatory role of 'history' in biology is likely to diminish. "Evo-devo", discoveries of a massive degree of conservation in genetic materials across all species, recognition of the crucial role of gene placement and of their timing mechanisms in explaining structure and its development, plus other work in biology – including Chomsky's contributions to the biology of language – … [p. 158].

McGilvray here sweeps under the rug the well-known fact that evo-devo means many things to many researchers and that some of references to evo-devo found in Chomsky's works may not refer to those aspects of evo-devo that mesh best with core aspects of the developing biolinguistics program [see especially Benitez-Burraco and Longa (2010) and Linde Medina (2010)]. As a matter of fact, the list of references to evo-devo offered by McGilvray on p. 279 offer a mix bag of quite distinct evo-devo programs that should have been unpacked.

Having said this, it is also true that Chomsky's own reflections on biology are not likely to help integration. Consider the following passage [p. 150]:

> NC: OK, but biology didn't help at all. You didn't get anything. The most that biology provided was comparative ethology – which amounted to little more than saying that all these guys who were saying that everything is stimulus-response are wrong. What could you find in biology?
>
> (…)
>
> NC: I just don't think you can count much on borrowing from other sources. It's just never worked. If you can get some hints from something else, well, then, ok: but you're lucky.
>
> JM: But it did at least look like linguistics should be seen as a branch of biology.
>
> NC: …that it could be *incorporated in* biology; but that might require a change in biology.

Perhaps biology has to change, but linguistics may have to change as well. After all, Chomsky himself points out at one point in the interview [p. 38] that "[f]or years, when I thought I was doing generative grammar, I was actually taking stuff over from traditional grammar." It may well be that we have yet to extend the Galilean style that Chomsky describes in the following quotes:

> abstracting away from the whole mass of data that interests the linguist who wants to work on a particular language [p. 84].
>
> Physics does not study what goes on in the world – it studies what goes on under the highly controlled conditions of extremely artificial experiments. That's the Galilean revolution [p. 100].

What this deepening of the Galilean style may mean for biolinguistics is not clear at present, but I am reminded of a comment of Carlos Otero (pers. comm.) to the effect that "we may not have (yet?) been Chomskyan enough." This is certainly the impression I am left with after reading *The science of language* – the impression of a disconnect between the attempt to go beyond explanatory adequacy and reach for third factor principles and the insistence on certain traditional modes of technical description, highly specific to language, a disconnect that at the moment acts as a wall in interdisciplinary discussions at the heart of biolinguistics.

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NOTES

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REFERENCES

BAKER, M. (2001), *The Atoms of Language*, New York, Basic Books.
BENITEZ-BURRACO, A., and V. LONGA, (2010), "Evo-Devo. Of Course, But Which One? , *Biolinguistics* 4, pp. 308-323.
CHOMSKY, N. (1965), *Aspects of the Theory of Syntax*, Cambridge, Mass.: MIT Press.

— (1979), *Language and Freedom*, New York: Pantheon.
— (1980), *Rules and Representations*, New York: Columbia University Press.
— (1981), *Lectures on Government and Binding*, Foris: Dordrecht.
— (1982), *The Generative Enterprise*, Foris: Dordrecht.
— (2002), *On Nature and Language*, Cambridge: Cambridge University Press.
— (2004) "Beyond Explanatory Adequacy."; in *Structures and beyond*, Belletti, A. (ed.), New York: Oxford University Press, pp. 104-131.
— (2005), "Three Factors in the Language Design", *Linguistic Inquiry* 36, pp. 1-22.
GOULD, S. J. (2002), *The Structure of Evolutionary Theory*, Cambridge, Mass.: Harvard University Press.
HAUSER, M. D. (2006), *Moral Minds*, New York: Ecco.
HAUSER, M. D., CHOMSKY, N. and FITCH, W. T. (2002) "The Faculty of Language: What Is It, Who Has It, and How Did It Evolve?", *Science* 298, pp. 1569-1579.
LEWONTIN, R.C. (2000) *The Triple Helix: Gene, Organism, and Environment*, Cambridge, Mass.: Harvard University Press.
LINDE MEDINA, M. (2010), "Two 'Evo-Devos'", *Biological Theory* 5, pp. 7-11.
MIKHAIL, J. (2011), *Elements of Moral Cognition*, Cambridge: Cambridge University Press.
PIGLIUCCI, M., and MÜLLER, G. (eds.) (2010), *Evolution—The Extended Synthesis*, Cambridge, Mass.: MIT Press.
TURING, A. M. (1952), "The Chemical Basis of Morphogenesis", *Philosophical Transactions of the Royal Society of London* Series B 237, pp. 37-72.

RESUMEN

Este ensayo revisa *The Science of Language* y da cuenta de algunas de las tesis más controvertidas de Noam Chomsky sobre el lenguaje. En la primera parte, se discuten la mayor parte de los temas del libro, mientras que en la segunda se concentra sobre alguno de los puntos menos conocidos que, en mi opinión, merecen una discusión adicional y quizás una revisión.

PALABRAS CLAVE: *biolingüística, adquisición del lenguaje, evolución del lenguaje, mente, cerebro*.

ABSTRACT

This essay reviews *The Science of Language*, and surveys some of Noam Chomsky's most controversial themes about language. In the first part of the essay, the major topics of the book are discussed, while the second part focus on some of the less-known points that in my opinion deserve further discussion, and perhaps revision.

KEYWORDS: *Biolinguistics, Language Acquisition, Language Evolution, Mind, Brain*.