

Not philology by other means

By Jan Koster

Reviewing Adriana Belletti and Luigi Rizzi's (eds) *Noam Chomsky, On Nature and Language. With an Essay on "The Secular Priesthood and the Perils of Democracy."*

If you can't resist the call of Grammar, even during your summer vacation, this is the ideal book to take along in your suitcase. It is an informal introduction to both the Minimalist Program and Chomsky's current views on the place of language in nature (and, therefore, the place of linguistics among the natural sciences). The book consists of a substantial, but non-technical, overview of the Minimalist Program and the developments leading up to it (written by the editors, Adriana Belletti and Luigi Rizzi). The core of the book is formed by two lectures and a long interview, both given in Italy during Chomsky's stay in Siena and Pisa in the fall of 1999. The book ends with a lecture on politics, also given in Siena, in November 1999. Altogether, this attractive little book is a kind of mini-Chomsky reader.

Chapter 1, the long editors' introduction ("Some concepts and issues in linguistic theory") is written in the lucid style for which Belletti and Rizzi are known. Although the focus is on the Minimalist Program, this overview gives a very good account of how we got there. Naturally, the account is somewhat biased in favor of the authors' own interests, for instance with respect to Romance or the "cartographic" projects familiar from the work of Cinque and others. Such preferences are hard to avoid and other authors would no doubt have given an account reflecting their particular interests. Nevertheless, it can be said that not much attention is paid, for instance, to the rather fruitful recent developments in the study of Germanic. All in all, however, this is a fair and good introduction to the current state of generative syntax. If you want to know what minimalism is all about, this chapter could be the place to begin.

Chomsky's lectures on language, the mind and biology form chapters 2 and 3. There is considerable overlap between the two lectures, but since the material is so essential and interesting, seeing things from slightly different perspectives and phrased in slightly different ways, does not disturb the reader all

that much. On the contrary, the overlap has a certain didactic value and contributes to the overall understanding of the material covered.

Chapter 2 ("Perspectives on language and mind") expounds Chomsky's original views on the Scientific Revolution and its consequences for the mind-body problem. As Chomsky has said for years, the mind-body problem cannot be formulated in a coherent way because the notion of "body" is open and evolving. Until Descartes, the mechanistic philosophy sought to explain physical phenomena in terms of a notion of matter that was thought to be intuitively intelligible. It is often thought that this intuitive concept of matter was destroyed by quantum mechanics but Chomsky rightly points out that the intuitive concept of matter was already destroyed by Newton with his idea of action-at-a-distance. Newton's contemporaries often rejected this notion as a return to occult forces and Newton himself accepted it only reluctantly.

In short, Chomsky concludes that "mind-body dualism is no longer tenable, because there is no notion of body." Descartes should not be ridiculed because of his "ghost in the machine." Descartes was wrong for a rather different reason: "Newton exorcised the machine; he left the ghost intact" (p. 53).

This conclusion has interesting consequences for how we can see language in relation to the natural world. We no longer have an intelligible, basic theory of materialism but only different theories "to the best explanation" of different aspects of a world of unknown ultimate substance. Sometimes such theories can be unified. Reductionism, in contrast, almost never plays a role in the history of science. What we usually see is unification, which involves modification of all theories involved. Until the 1930s, for instance, chemistry was successful but could not be understood in terms of physics. This was only possible after substantial changes in physics, thanks to the development of quantum mechanics.

The same could happen to linguistics: if it will ever be integrated with the physical sciences, that unification could only occur after considerable changes in

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physical theory itself. According to ch. 3, Chomsky is not too optimistic for the near future since "fundamental insights may be missing altogether" (p. 62).

In both chapters 2 and 3, Chomsky discusses language in relation to biology. Like Darwin himself, Chomsky rejects "hyperselectionism" and emphasizes that natural language operates within a "channel" provided by the physical nature of the world. Too often, Darwinian biology focuses on adaptation and external factors shaping the nature of organisms, while the more mathematical properties of organisms are perhaps more important from an explanatory point of view and are better seen as the result of the physical channel than of adaptation to the external world. Relevant examples are "the polyhedral shells of viruses, cell-division into spheres, the appearance of the Fibonacci series in many phenomena of nature, and other aspects of the biological world" (p. 58). Attention to such aspects of our biological world is connected with the classical work of D'Arcy Thompson and Alan Turing.

According to Chomsky, his current minimalist vision of "optimal design" in language can be seen as a continuation of this fascinating tradition. In ch. 3, these ideas are further worked out and discussed in relation to Mark Hauser's comprehensive study *Evolution of Communication*. In Chomsky's view, this comparative study confirms the idea of the uniqueness of human language, in which the idea of a recursive syntax as a "perfect" interface between our conceptual-intentional world and our sensorimotor systems (producing the "sound" of language, among others) plays an important role. Ch. 3 also discusses the ideas of the neuroscientist Terence Deacon, which, like all mind-external approaches to language, are rejected by Chomsky.

The most delightful part of the book is ch. 4, "An interview on minimalism" with Adriana Belletti and Luigi Rizzi. Since the interviewers are at the forefront of current linguistic research themselves, they are able to ask highly pertinent questions and the result is one of the most interesting Chomsky interviews in recent years. We read again about biology and –very stimulating– the lessons from the history of science for linguistics. I think this interview is a must-read for all linguists who want to develop their ideas beyond mere empirical description. Many linguists immerse themselves in technical detail, which is necessary but always runs the risk that the field degenerates into a continuation of philology by other means. Chomsky's work in recent years has not had a very outspoken empirical focus, but as for conceptual considerations about explanation and the goals of the field, Chomsky is still in a class of his own. This interview is perhaps the most readable introduction to Chomsky's current thinking.

The core of these views is discussed in section II ("Perfection and imperfections"). The other discussions about biology and the brain have set the stage and in this section it is explained how the overall philosophical view applies to current syntactic theorizing. As before, Chomsky rejects "external" functionalism according to which language is an adaptation to the contingencies of communication. Instead, he adopts a kind of "internal" functionalism and sees our recursive syntax as an optimal design for its intermediary function between the interfaces of, roughly, sound and meaning. Imperfections are deviations from optimal design for the job that the syntax is supposed to do. One immediate problem with this approach is that little is known about the interfaces, particularly on the conceptual side of the system.

A further problem is formed by what should be seen as "imperfection." To this end, Chomsky compares natural languages with invented symbolic languages and suggests that deviations from such artificially designed languages could give a clue as to what might be seen as imperfection. I do not immediately see why invented languages are perfect, but the comparison leads to the idea that phonology and morphology are largely imperfections, at least at first sight.

Upon further scrutiny, imperfections can turn out to be only apparent. This point is illustrated in a fascinating discussion about "dislocation" (what is usually seen as the result of movement operations in generative syntax). Normal cases, like Dative or Ablative, have a meaning and are therefore functional as to the internal workings of the system. Structural cases, like Nominative and Accusative, in contrast, do not have a fixed meaning or obvious function, but Chomsky speculates that they are perhaps perfections after all because they are part of the optimal implementation of dislocation.

Dislocation itself is functional. It often moves categories to the "edges" of the structure, causing semantic effects like definiteness. However, the relation to semantic interpretation is far from straightforward and many mysteries about the function of displacement (for instance with respect to verb movements) remain. In short, working out the minimalist ideas is still in its initial stages and it is far from clear if the endeavor will be successful in the long run. But fascinating it certainly is.

This collection is concluded with a cogent article on politics, as we are used to from Chomsky (ch. 5, "The secular priesthood and the perils of democracy"). All in all, I can highly recommend this volume.