the terms of the descriptive theory employed, functionalists often appeal to psycholinguistic mechanisms and processes as an important source of constraints on language structure i.e., explanation is external to the linguistic theory.

All in all, in his endeavour to adopt a unified position, Hall retains the descriptive dimension of the formal approach but claims that psycholinguistic principles of lexical access and organization ultimately explain the preponderance of suffixes over prefixes in the languages of the world.

The author examines several models of language processing and de cides on the so-called Cohort Model, which claims, among other things, that the recognition of a lexical item by the hearer occurs before the whole word is heard and the point of recognition depends on the extent to which the phonological form of the word is shared by other entries. For example, on hearing the word *trespass*, a pool of competing candidates which share initial acoustic properties (i.e., a "cohort") becomes activated. Thus, on reception of the first *s*, the cohort made up of the words *trespass, trestle* and *tress*, may be generated, and when the *p* is received, the last two will drop out so that a unique item is isolated in the cohort and recognition takes place.

The crucial point is that, as regards complex words, prefixation entails more complexity than suffixation both for representation and recognition, in the case of prefixed words two different processes of generation of possible candidates and subsequent selection are involved, one for the prefix and one for the stem, whereas in the case of suffixation a single process for the stem is enough, since, according to Hall, the suffix does not provoke the generation of a new cohort because the forms responding would be reduced to the suffix itself, and a single member cohort makes no sense. In short, the combination prefix + stem involves a greater cost to the lexical processor and this is why it decides on suffixes rather than prefixes.

On the whole, this book deserves the careful attention of all those whose interests include morphology and mind. It offers an interesting and contentful psycholinguistic program for addressing morphological problems.

References

HAWKINS, J. A. and G. GILLIGAN (1988). "Left-right asymmetries in morphological universals". Hawkins, J. A. and H. Holmback (eds.) *Papers in Universal Grammar,* special issue *Lingua.*

Benilde Graña López
Universidad de Oviedo

R. P. BOTHA, *Challenging Chomsky.* Oxford: Basil Blackwell. 1990. XII + 268 pages.

The title of this book will undoubtedly arouse the interest of two types of readers: those who practising -or simply admiring- Chomskyan linguistics would be eager to see what sort of challenge there might be, wil-ling to confront it as if it were directly aimed at them; and those who being involved in different linguistic frame-works would be delighted to find in a book something they have at some time or other reflected upon. Obviously, the first group will anticipate the evident superiority of the *Master's* theories (to use Botha's own term) and the others will be willing to applaud the critics' comments as clearly more convincing. The two groups will get their part, it must be said, because this book achieves an admirable balance in presenting the strongest and the weakest aspects of Chomsky's viewpoint. Moreover, the style which Botha has chosen -presenting a confrontation in the context of a game being played in different fields- makes his work both amusing and appealing, without hiding

the intrincate and far reaching character of some of the arguments at stake.

The book is organized in five chapters, each referring to one of the aspects on which Chomsky's theories can be challenged (notice the alliteration): The lie of the *land*, locating Chomsky's grammar within the field of linguistics; *The maze of mentalism*, on the nature, origins and use of language; *The terrain of the theory*, about the main theoretical aspects which frame Chomsky's ideas on language; *The marshes of method*, exploring the philosophical principles behind Chomsky's theories and the methodological practices used to attain his goals; and finally *The locus in the landscape of learning*, which locates Chomskyan linguistics in the general scientific scene.

No foreword is found or, to be more precise, the classical foreword has been converted into a *forewarning* where the author offers to take the reader on a guided tour of the maze of lanes and paths so cleverly laid out in dense New England intellectual growths. The style in which this forewarning is written, witty and image-provoking, is the best possible introduction to the book. One cannot help but smiling on recognizing some of the types which are currently found in the academic world embodied in the *Fiery Fighter* (those approaching the game with a self confident and daring attitude which frequently only youth and inexperience give), the *Fickle Friends* (former admirers turned into fierce foes) or the *Flock of Frenzied Fans* (any need to say who they are?), among others.

This presentation also advances what may be considered one of the greatest successes of this book; the fact that the confrontations are always based on copious quotes from both Chomsky and his adversaries. In this way the reader is faced with first-hand arguments masterly organized and *dramatized* by Botha. It must be noted that taking passages out of context may give rise not only to oversimplification but also to the misunderstanding of important issues; for this reason Botha quite frequently includes the complete quotation in a footnote or clarifies the context in which those ideas were initially devised.

The first chapter, *The lie of the land*, is devoted to providing the setting for Chomsky's grammar within the field of linguistics. The following oppositions are used for this task: generative grammar vs non-generative grammar, Chomskyan vs non-Chomskyan generative grammar, Chomskyan linguistics vs Chomsky's linguistics, Chomsky's linguistics vs radical Chomsky-like linguistics, and generative grammar vs transformational grammar. If you have ever thought of any of these pairs as expressing equivalent notions, you definitely have to read this book.

This organization in terms of distinctions (conceptual forks, in Botha's words) which serve to clarify Chomsky's proposals on different issues, is common to all the five chapters. The second of these, *The maze of mentalism*, dealing with the crucial question of how language is to be understood, has a much more detailed treatment, one which to some extent is reflected in the labyrinth the author uses to represent this point. Up to fifty three conceptual distinctions are made, organized around the three fundamental questions about knowledge of language that a linguist must pose: its origin, its nature and its use. Chomsky's ideas about the nature of mind in general (the mentalistic character of the theory, the modularity of the mind, the autonomy of the grammar...) are also reviewed, confrontation-like, at the end of the chapter.

From the quotes presented in this book against Chomsky's viewpoint we are able to draw a general picture of the dialectical confrontation between Chomsky and his critics, and if we do so we get the impression that we could clearly form two groups of arguments: those which are due to simple misunderstanding of the points at play (something which was quite frequent at least during the first years in the development of generative grammar), and those which represent a genuine opposition by people with a different intellectual background:

linguists, philosophers, psychologists... In this chapter the first type is reflected in the common debate about the role played by the *poverty of stimulus* (Plato's problem) when this concept was being mistaken for *degradation of the stimulus*; or in the criticism which followed Chomsky's notion of the *ideal speaker hearer*, a methodological tool which has sometimes been taken for an actual claim. On the other hand, more well-founded criticism can be found on the side of Piaget, Putman, Skinner...(constructivists and empiricists) against Chomsky's proposal of an initial state of a Language Faculty with genetically encoded linguistic principles; or Katz's claims that language should be characterized as an abstract entity in the Platonic sense, and not as a mental object. As regards the use of language, Chomsky himself has often confronted his own ideas (this use being rule following) with the Cartesian philosophical tradition and also with Wittgensteinian ideas about the issue.

Curiously enough in the third chapter, where the organization of Chomsky's theory is discussed, we mainly find the testimony of critics who, not having thoroughly understood Chomsky's ideas on language, have also clearly mis--interpreted his model(s) of grammar. Nevertheless, these misconceptions serve the purpose of making the reader go deeper into distinctions such as theory of grammar vs theory of language, linguistic universals vs universal grammar, weak generation vs strong generation etc., which are basic to the understanding of the organization of the different models throughout the history of generative grammar. This chapter also presents a good, but not detailed, description of the latest stage in Chomsky's theory: *the Principles and Parameters* approach. We clearly see that Botha is much more interested in discussing the ideas and presuppositions behind Chomsky's theories than the theoretical proposals themselves.

Having gone through a labyrinth and then rested a while in a nonetheless unsteady terrain, in chapter four we penetrate the *marshes of method*, where the Master is at his barely beatable best. Botha is also at his best here since the topic of the philosophical principles and the methodological practices which conform generative grammar is not outside his interests as a researcher, and a simple look at the bibliographic references at the end shows that he himself has frequently fought against Chomsky in this field. The issues handled in this chapter are so rich conceptually, and the controversies they raise so broad in scope, that it is really difficult to sum them up in a few lines. Suffice it to say that the ontological status of the theory (moderate sophisticated realism), and the philosophical perspective behind (rationalism) are discussed in detail here, together with the methodological consequences which follow from the options taken in those respects.

Finally, the last chapter explores the connections, present and past, between Chomskyan linguistics and other scientific disciplines such as mathematics, brain sciences or natural sciences. The strongest relation of all is, of course, that established with psychology, to the extent of considering -as Chomsky has explicitly stated- that linguistics is a part of psychology, that is, a psychological science.

In sum, this is an excellent book for those who wish to approach Chomskyan generative grammar, for those who want to contrast their own ideas or frameworks to the ones defended by Chomsky and his followers, and for those who work in any of the present forms of generative grammar and have some time to spare on a critical but amusing review of their postulates. It is a book, then, suitable for all those who are interested in linguistics, and although it is not difficult to see which side Botha is taking, it must be emphasized, to his credit, that Chomsky is neither attacked nor praised gratuitously here, the reader her/himself having the last word on the failure or success of the challenge.

Ana I. Ojea
Universidad de Oviedo