REVIEWS

Explaining linguistic phenomena. Edited by DAVID COHEN. Washington, DC: Hemisphere Publishing Corp., 1974. Pp. xv, 207.

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This volume is a collection of papers originally presented at a symposium at the University of Wisconsin, Milwaukee, in May 1973. While the set topic was the problem of explanation in linguistics, the issues that receive the most discussion here are the scope of grammar and the relation of an optimal grammar (whatever its scope) to psychology. Two positions are represented concerning the scope of grammar: it is either wide or narrow. We say that grammar has wide scope if its task is to describe all systematic linguistic phenomena, including those dealing with the use of language. We say that grammar has narrow scope if its task is just the enumeration of the grammatical sentences of a language and their associated structural descriptions. Similarly, two positions are represented concerning the relation of an optimal grammar to psychology: grammar is either mentally represented (is 'psychologically real'), or it is not. If one takes an optimal grammar to be mentally represented, one can hold that representation to be expressible either in a materialist theory of mind, or in a non-materialist (dualist) theory. Although no contributor to this volume espouses dualism, we can consider the position that takes an optimal grammar to be psychologically real to be 'mentalist', and the position that takes that grammar not to be psychologically real to be 'anti-mentalist' or 'autonomous'. Anti-mentalists need not hold the position that no mental representation is descriptively equivalent to an optimal grammar; they are simply committed to the view that the object of linguistic investigation is not mentally represented.

The two issues of scope and of mentalism are logically independent, though nowadays they are not so considered in practice. Those that hold to the wide-scope view of grammar are, in general, mentalists, while those that hold to the narrow-scope view may be either mentalists or anti-mentalists. The other logical possibility, that of holding a wide-scope anti-mentalist view, may have been entertained by some post-Bloomfieldian structural linguists (e.g. Zellig Harris and Charles Hockett), but the position is not represented in this volume. The wide-scope mentalist position is represented here by three authors: Larry Hutchinson ('Grammar as theory', 43–73), Harry Whitaker ('Is the grammar in the brain?', 75–89), and Herbert Clark & Susan Haviland ('Psychological processes as linguistic explanation', 91–124). The narrow-scope antimentalist position is taken by Gerald Sanders ('Introduction', 1–20) and by Fred Dretske ('Explanation in linguistics', 21–41), while the narrow-scope mentalist position is taken by Thomas Bever ('The ascent of the specious or, there's a lot we don't know about mirrors', 173–200), Emmon Bach ('Explanatory inadequacy', 153–71), and Ray Dougherty ('What explanation is and isn't', 125–51).

The narrow-scope view of grammar commits one to claim that there are systematic linguistic phenomena not accounted for by grammars, and that consequently there may be cases in which what our informants tell us and what our grammatical

description tells us about a given range of linguistic phenomena will be different; if so, we choose to believe our grammar rather than our informants. Those that hold the wide-scope view take this consequence of the narrow-scope view as a reductio ad absurdum; but in reality it is not, so long as the proponent of the narrow-scope position is prepared to explain how such systematic differences arise between informants' judgments and theoretical predictions. Or, to use Dretske's formulation (35–41), there are two kinds of linguistic data: there are facts about speakers—their judgments as to what is grammatical, what is ambiguous, what is a paraphrase of what, etc. (Facts B); and these provide evidence for facts of a wholly different sort (Facts A), namely ones about grammaticality, ambiguity, synonymy etc. The grammarian, on the narrow-scope view, is concerned with the development of a theory that accounts for Facts A. That theory, together with others about how people use language, provides an account for Facts B. But it is Facts A, not Facts B, that provide the empirical basis for grammar.

Two difficulties with the wide-scope view of grammar are articulated by Bever (199): 'We could decide that every observed property of language is ipso facto to be described by grammatical devices. To do so would not merely complicate the set of formal grammatical universals, it would also fail to place the burden of description on the appropriate non-grammatical [i.e. extra-grammatical] system.' When he refers to complicating the set of formal grammatical universals, Bever has in mind the addition of such principles as 'derivational constraints' and 'transderivational constraints' to grammatical theory. However, the addition of such constraints does not necessarily have the effect of complicating the set of grammatical universals; proponents of generative semantics, such as Postal 1973, have convincingly argued that their addition can effect a conceptual simplification of grammar. The issue, therefore, is not whether the theory of grammar that results from adopting the wide-scope view is more or less 'complicated' than that which results from adopting the narrow-scope view, but whether the theory has more or less explanatory power. The answer would appear to be that it has less: it provides for a greater number of ways of describing any given grammatical phenomenon, and hence is less able to single out the descriptively most adequate analysis as the only possible analysis, given the theory.[1] Bever's second objection may be elaborated as follows: if a grammar, which is a single system of rules, describes all linguistic phenomena, then those phenomena that are a consequence of some (on the narrow-scope view, extra-grammatical) system of language use, such as speech perception, will not be separately described from those phenomena that are a consequence of some other system of language use, such as speech production; and neither of those sets of phenomena will be distinguished from those that are a consequence of the (on the narrow-scope view, purely) grammatical system of linguistic structure. That is,

[1] Dougherty, in his paper, claims to have provided a methodological argument against generative semantics, but it boils down to the one just outlined: generative semantics (like any of the other current generative theories) allows for too many possible descriptions of any given linguistic phenomenon. Also, even if Dougherty had given a methodological argument, one would have to be suspicious of it, since he is concerned to show the methodological unsoundness of a particular attack on one of his own analyses of English. If one is to argue methodology, one should consider analyses where one does not have a personal stake in the outcome.

wide-scope theories of grammar are in principle incapable of distinguishing among the various types of linguistic phenomena.

In the face of these objections, therefore, it is not surprising that proponents of the wide-scope view, e.g. Hutchinson, Whitaker, and Clark & Haviland in this volume, have so far failed to make a convincing case for their view; their arguments have rested either on a misunderstanding of the narrow-scope view (namely, that since it cannot in principle account by itself for the observed facts of language, it must be inadequate), or they have been fallacious. Thus, Clark & Haviland's recital of various linguistic phenomena that cannot be described within narrow-scope grammar (or, in their terms, a grammar that accounts solely for linguistic 'competence') is irrelevant to the question whether such phenomena should be considered to be within the scope of the grammar. Indeed, in each case they consider, there is sound reason to believe that they should not.

The arguments by Hutchinson and by Whitaker, on the other hand, are fallacious. Hutchinson's argument that grammar is a psychological theory is based on the false premiss that the only alternative to this view is the wide-scope anti-mentalist view (which he aptly labels 'descriptivist')—that grammar provides an account directly of the utterances that people make and of their judgments about them, but not in terms of the rules by which they may be assumed to construct those utterances or render those judgments. He ignores completely the possibility of holding a narrow-scope view (whether mentalist, like Bever's, or anti-mentalist, like Sanders's and Dretske's), against which his arguments would fail. Whitaker's argument is directed specifically against the narrow-scope anti-mentalist view. His attack on the narrow-scope aspect of that view is based on the claim that narrow-scope grammatical theories have excessive generative capacity (he alludes to the work of Peters & Ritchie 1973, via secondary sources). What he fails to recognize, however, is that such an attack, if successful, refutes only a certain class of such theories, not all of them. His argument collapses as soon as one recognizes that a proponent of the narrow-scope view need not be committed to the particular grammatical theory, say, of Chomsky 1965. His attack on anti-mentalism is really an attack on dualism; and it completely misses the point that anti-mentalists need not be committed to the view that no representation of linguistic knowledge is present in the mind (they may even be materialists, in that they would consider such a representation to be neuro-physiologically realized).

The issue that divides the mentalists from the anti-mentalists can be clarified by adopting Whitaker's terms 'linguistic grammar' (LG; what I called above 'optimal grammar') and 'mental grammar' (MG). Mentalists hold that LG = MG, while anti-mentalists deny that equivalence. The papers in this volume, however, provide an incomplete perspective on this controversy—first, because the outspoken mentalists all endorse the wide-scope view (Bever is not so much concerned with defending mentalism as he is in attacking the wide-scope view, and Bach and Dougherty are chiefly concerned with issues other than that of mentalism); and second, because the two anti-mentalists, Sanders and Dretske, do not present strong arguments on behalf of the autonomy of grammar from psychology. Sanders argues that the construction of grammars for particular languages 'has no independent scientific status', and that the only linguistic endeavor of any scientific

value is the construction of theories of grammar 'that account for the properties and relations of the set of all natural languages' (16). Even if this is correct, it does not follow that the study of grammar is necessarily autonomous from psychology. But I fail to see the validity of his assertion that a grammar of a particular language is of no scientific interest. He derives this claim from the premiss that such a grammar has a 'grossly unnatural domain'; but no real substantiation for this is given. In any event, one should be able to maintain an anti-mentalist view of grammar without having to give up the notion that grammars of individual human languages are reasonable objects of scientific study.

The only other argument that Sanders and Dretske offer on behalf of the anti-mentalist view is the following: Grammar is the study of the connection between sound and meaning. The study of each of these domains, separately, is reducible to the subject matter of other disciplines. The study of the connection between them, however, is not. Sanders puts the matter this way (15): 'all linguistic objects ... are pairings of symbolically equivalent sounds and meanings. The study of articulated sounds falls within the domains of physiology and acoustic physics. The study of meaning falls within the domain of a theory of cognition or natural logic. What remains for linguistic investigation and explanation, therefore, is really only the SYMBOLIC RELATIONS [emphasis his] that hold between sounds and meanings in natural languages.' Or, in Dretske's words (32–3): 'Linguistic theory ... becomes the study of the relationships that exist between a set of brute facts (sounds) and a set of institutional facts (the fact that those sounds mean a certain thing) ... The system of rules (grammar) that transforms the brute action into an institutional action is a device by means of which we can explain, not WHY someone performed the institutional act ..., but HOW [emphasis his] one performs the institutional act by or in performing such brute acts. None of this has anything to do with psychology.'

I do not see how these arguments really get at the mentalist's position: the mentalist can agree with all this (except for Dretske's last sentence), and still argue that the rules that govern the symbolic relations between sound and meaning, or that transform brute acts of speaking into institutional acts of meaning something, are internalized by human beings. What the anti-mentalist has to be able to show, and what Sanders and Dretske have failed to show, is that there is some necessary reason why the object of grammatical study (LG) cannot in general coincide with whatever systematization of linguistic knowledge may be present in the mind (MG).

The classic statements of the mentalist's view may be found in various places in Chomsky's writings. Dougherty conveniently summarizes them as follows (126–7): 'A generative grammar of a language L is a device which defines "grammatical sentence in L" by specifying all of the grammatical sentences in L. The term GRAMMAR ... is used with a systematic ambiguity to refer both to the internalized competence of an informant and to the linguist's model of this competence ... The linguist engaged in the construction of a grammar is attempting to represent the unconscious mechanisms which enable an informant to distinguish an infinite number of well-formed sentences from an infinite number of ill-formed ones. We might say that the construction of a grammar is the discovery of an unconscious logic, a logic which differentiates the well-formed from the ill-formed sentences. We assume that this logic can be formally characterized by an explicit set of

descriptive mechanisms and instructions for interpreting these mechanisms.'

The crucial difference between the mentalist and the antimentalist is that only the mentalist claims that an internalized grammar is itself a formal system that generates all and only the sentences of a language, and that this formal system is what the grammarian is attempting to discover. Since the determination of an optimal formalization for a given subject matter is based on a procedure of hypothesis-testing which uses the criteria of adequacy and simplicity, it must be assumed by the mentalist that human beings, in acquiring formal grammars, do so on the basis of similar criteria. However, it cannot be assumed that human beings use the working scientists' set of simplicity criteria (they obviously do not require scientific training in order to acquire knowledge of language); rather, it is assumed that they bring to bear innately-specified simplicity criteria whose character must also (along with the grammars that are internalized) be discovered by the grammarian. This is why Chomsky insists that the internal simplicity measure for evaluating grammars is specific to the task of grammar acquisition, and must be determined by empirical linguistic research.[2] But this requirement, that grammatical theory must include a special set of simplicity criteria, in itself makes the mentalist view suspect. No other scientific theory shares this property,[3] and the necessity for it in grammatical theory is occasioned solely by the assumption that LG is equivalent to MG.

The mentalist view is also suspect on other grounds. If grammars are mental objects, then their properties must reflect properties of mind. But which ones? Wide-scope mentalists will have to hold that all properties of mind (including, presumably, that of mortality) are reflected; narrow-scope mentalists, on the other hand, must distinguish those properties of mind that are reflected in grammar (that enter into the construction of the representation of linguistic competence) from those properties that are not reflected in grammar (but that may enter into the construction of the representation of linguistic performance). For example, the fact that the mind is a finite object is reflected in the requirement that grammars of human languages must be finitely representable—or, more precisely, that there be finitely representable metagrammmars from which the empirically motivated infinite grammars of human languages can be constructed by an effective procedure. But the fact that the mind is so constituted that it cannot cope with multiple center-embedding is not reflected in narrow-scope grammatical theory. On what principled basis, then, can one distinguish those properties of mind that must be reflected in the form of grammar from those that are not? So far, no such basis has been suggested. Moreover, the requirement that grammars be finitely represented—the

[2] There is no way to obviate the need for simplicity criteria in evaluating grammars, even if one can very narrowly restrict in advance the class of possible grammars—Bach's speculation (163) to the contrary notwithstanding. Bach apparently does not recognize the fantastic number of possible grammars that are consistent with primary linguistic data, even given the restrictions he suggests.

[3] As Bach understates it (156), 'it is difficult to find parallels to this in other disciplines. What we have, in effect, is a[n autonomous] truth criterion built into the theory'. Bach suggests that the use of Lorenz-invariance in physics is parallel to the linguist's postulation of an autonomous evaluation measure; but the analogy fails, since Lorenz-invariance in physics functions as a constraint on the class of possible theories, much as a proposed linguistic universal does.

only requirement on the form of grammar proposed by narrow-scope theorists which follows from a property of mind—need not be viewed simply as a consequence of the finiteness of mind; rather, it may be viewed as a consequence of the requirement that grammars of human languages must be formal objects. For narrow-scope mentalists, then, the linguistic competence–performance distinction is a 'distinction without a difference', and we have yet to find any property of grammar that specifically reflects a property of mind.

However, if LG is not MG, then it must be an abstract entity, distinct from any internalization of grammatical systems by human beings, alien beings, or computers. Given the almost unanimous agreement among linguists (and among people generally) that knowledge of language is a uniquely human property (at least among living, terrestrial beings), most linguists would unhesitatingly agree with Hutchinson (72) that 'to claim that [the] processes and objects [of grammar] are real but non-mental seems absurd'. The appearance of absurdity, however, is deceiving. Almost all the same linguists who would agree with Hutchinson on this point would also agree that the optimal representation of logic is not to be identified with anyone's internalization of a system for determining the validity of arguments. Yet the parallel with language is exact. Knowledge of valid argumentation is also a uniquely human property. The theory of logic, furthermore, is empirically founded on certain pretheoretical judgments about what constitutes a valid argument, and about what distinguishes a valid argument from an invalid one—much as the form of a grammar is ultimately founded on what people agree as constituting bona-fide grammaticality judgments. To say that grammars of human languages are abstract entities is no more absurd than to say that optimal representations of logical systems are abstract entities. To say that is also not to deny that there is something about languages that reflects the fact that humans uniquely acquire them spontaneously under ordinary, life-supporting circumstances. There should be nothing surprising about the fact that human beings are constituted so as to acquire a body of knowledge that is optimally represented in a certain abstract form.

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Subject and predicate in logic and grammar. By P. F. STRAWSON. London: Methuen, 1974. Pp. viii, 144. [Distributed in the U.S. by Barnes & Noble; cloth $12.50, paper $5.25.]

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Strawson argues that the subject–predicate distinction, as he understands it, is best exhibited in certain basic cases; e.g.,

(1) Socrates is brave.