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CRITICAL NOTICE

Edward L. Keenan, ed. *Formal Semantics of Natural Language* (Cambridge: Cambridge University Press 1975). Pp. 475.

This book contains twenty five papers describing the current research of twenty seven linguists and philosophers of language. Current in 1972, that is. The book came out in 1975. The papers are therefore ten years out of date. The fault is mainly that of this amnesiac reviewer, on whose desk the book languished. In any case, noone should now rush out to buy the book, hoping to see how the hot topics are developing. But there are a number of articles in it that are of fairly wide interest, and several which appeal to various specialist interests. I therefore list the papers under a number of topics, in order of usefulness, so that readers working on a topic may can tell what there is in the book that they might be curious about:

Quantifiers in Natural Language: Lewis, Partee, Altham & Tennant, Biggs
Methodology of Linguistics: Keenan, Heidrich, Von Stechow, Gross
Model Theory: Jardine, Von Kutschera, Potts
Tenses: Emmonds, Dahl, Fuchs & Rouault
Adverbs & Adjectives: Kamp, Lewis, Bartsch, Heidrich
Intensional logic & Montague grammar: Kamp, Bartsch, Kutschera, Heidrich, Stechow

Context & Presupposition: Lakoff, Isard
Cross-reference (anaphora, deixis): Partee, Seuren, Lyons

Some of the articles I cannot make any sense of, either from their obscurity or my ignorance of their apparatus, and a couple, though intelligible, are just incredibly soporific. Most of the papers are both accessible and interesting, though. I gather them into four headings.

Quantification. David Lewis's interesting and closely argued paper, 'Adverbs of Quantification' is concerned with the fact that adverbs like 'always,' 'sometimes,' 'usually' clearly function roughly as saying 'for all (some, many) x. ...' Sometimes one can take them as uniformly quantifying n-tuples of variables, but not always. Lewis produces some generalizations to cover some clutches of cases. (Altham and Tennant, in 'Sortal quantification,' do much the same job in greater detail in the special case of the one-place 'many.') Along the way Lewis argues that 'if' in 'always if' and the like cannot be taken as forming sentences of the form 'always (if *p* then *q*).' And at the end of the paper he discusses some meaning-preserving transformations of these 'adverb + if' sentences, which have the effect of treating pronouns governed by an 'an' or a 'some' in the antecedent of such a 'conditional' as Geachian pronouns of laziness.

Geachian issues reappear in Barbara Partee's 'Deletion and Variable Binding.' Partee argues that the distinction between pronouns of laziness and quantified variables has syntactic consequences, that the application of deletion rules which transform, e.g. one of a pair of coreferential 'he's into 'himself', depend on the distinction. The interest of this conclusion lies in the fact that Geach's original point was that sentences requiring very different interpretations are produced by apparently the same syntactic machinery. If Partee is right, though, the syntax involved is different. One might naturally look for a uniform treatment of quantification, of which variable-binding and laziness were two instances. Lewis's paper might help in this project, which is the explicit aim of Gareth Evans' two papers in this *Journal* (c.f. 'Pronouns, quantifiers and relative clauses,' **7** [1977]).

Tenses and Generative Semantics. A rather similar issue, this time about tenses, is raised by Joseph Emonds in 'Arguments for assigning tense meanings after certain syntactic transformations apply.' This is a difficult but extremely interesting paper. Emonds is interested in the fact that some of the contrasts between English past and perfect tenses seem not to apply when the verbs in question are imbedded in various contexts, mostly intensional ones and notably the counterfactual. Emonds' solution involves postulating independent markers in deep structure for

perfect/imperfect and present/past (this is not exactly his terminology.) These are then projected onto the less rich system of English surface structure tenses. In effect, tenses are taken to represent factors other than time (that's uncontroversial enough), and the claim is that it makes a syntactic difference which of these factors a surface tense is representing. It is this last claim that is like Partee. I'm not completely convinced, partly because I find it all so confusing. All I'm convinced of is a weaker point, argued for also by McCawley ('Tense and time reference in English' in Fillmore and Langedoen, eds. *Studies in Linguistic Semantics*), that there are far more tense-markers in deep structure than appear on the surface.

The methodological issue that arises naturally out of both Partee's and Emond's papers is that of the point, if there is one, in the syntactical derivation of a sentence at which semantical considerations are to be attached. This question has come to be associated with the controversy over generative semantics. That's a war of ten years ago, but real issues remain, and some of the papers attack them directly. In particular, Pieter Seuren's 'Referential Constraints on lexical items' and Carl Heidrich's 'Should generative semantics be related to intensional logic?' are about lexical decomposition, the idea that e.g. the analysis of 'kill' as 'cause to die' must be appealed to to explain some syntactical phenomena. Seuren shows how subtle lexical decomposition would have to be, essentially because the implicit subjects of 'cause' and 'die' can be spread in various ways over the underlying structures. Heidrich shows that lexical decomposition can be incorporated into the framework of Montague's ideas, not, I feel, to the illumination of either.

Several papers are applications of Montgue's machinery. So much energy seems to be needed to get the machinery to turn over that not much is left to do anything with it. Or perhaps it is the reader who hasn't the energy left to notice. An exception is J.A.W. Kamp's 'Two theories of adjectives,' which is more concerned with Montague's ideas than his apparatus. Kamp's problem is that of interpreting adjectives ('nice') in such a way as to facilitate the interpretation of adverbial ('very nice') and comparative ('nicer') constructions. He explains very clearly the advantages in taking adjectives to be mappings of predicates (common nouns) to predicates ('girls' to 'nice girls'). He then gives extremely involved reasons for dissatisfaction with this theory. He does it the hard way (not that I know an easier), by trying to develop an account of comparatives on the 'mappings from predicates to predicates' view, and then arguing that the ideas that have to be developed would also support the simpler construal of adjectives as being, like nouns, plain predicates. But this would seem to give nouns as well as adjectives comparatives, and the article ends with a very interesting, though vague and programmatic,

discussion of the differences between nouns and adjectives as predicates.

Model theory. As its title suggests, all the papers in the book have something to do with treating spoken languages roughly as one would formal ones. Some of them cast doubt on what might seem the natural way of doing this, the application to natural language of model-theoretical ideas. Timothy Potts, in 'Model theory and linguistics,' argues that model theory can tell us nothing about meaning and – I gather – logical form in natural language. The argument depends, as far as I can see, on the mistaken idea that a set of models amounts to a set of translations into the metalanguage. This is obviously false, since there are far more models than there could be translations, and the metalanguage need not contain any terms with the same sense as non-logical object-language terms. It does raise the issue of the relation between 'true in M' and 'true,' though. And this issue is dealt with more profitably by Nicholas Jardine in 'Model theoretical semantics and natural language.' At the heart of what Jardine has to say is a claim that to apply model theory to a natural language one has to treat some of its expressions as semantically primitive in an exceedingly crude way, that is as expressions whose satisfaction can be 'recognized' without application of any other predicates of the language. If this were so, then model theory *would* lead to logical positivism and various other evils, quite clearly. But I don't see why this need be true.

I am saying nothing about George Lakoff's paper 'Pragmatics in natural logic,' Stephen Isard's 'Changing the context' and Edward Keenan's 'Logical expressive power and syntactic variation in natural language,' all of which are worth reading, nor about John Ross's 'Clausematiness' which seems terribly deep and powerful but boggles my mind. There is a lot in the book, and while none of it is world-shaking, enough of it is valuable to make it worth having in your library or, if you're rich, on your shelf.

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