EXPLORATIONS IN SEMANTIC THEORY

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EXPLORATIONS

IN SEMANTIC THEORY

by

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with a Preface

by

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PREFACE

From his first entrance into the field of linguistics, Uriel Weinreich maintained a strong interest in and high hopes for a theory of semantics. His earliest reviews (e.g., of Gleason, 1956) showed an adamant refusal to be intimidated by the fiat against the study of meaning promulgated in American descriptive linguistics. In his review of Ullman (1955) and early writings on lexicography, Weinreich held up the possibility of our creating a coherent body of semantic description, and in a 1961 draft proposal for research on the "Semantic Structure of Natural Languages" he argued:

The study of the semantic aspects of language has fallen far behind the investigation of its grammatical and phonological dimensions. This has happened because linguists have, quite justifiably, sought to base grammatical analysis on firmer foundations than an implicit, intuitive notion of meanings. But while it is granted that the formal aspects of language must be described on a formal basis, there is no reason why its semantic structure cannot be studied as such... It is necessary to operate... with explicit, verbalized, validated *meaning-descriptions*.

In his earlier work on semantic description, Weinreich formalized such notions as 'designation', 'denotation', 'polysemy', 'idiomaticity', and 'taxonomy', and attempted to link them to the main body of formal linguistic description. From his research seminar on semantics there emerged a number of workman-like studies which combined semantic techniques with formal description — notably the componential analysis of English verbs by Bendix (1966) and the investigation of negative prefixation by Zimmer (1964). In Weinreich's own general papers on semantic

theory and lexicography (1962, 1963a), he demonstrated a rare gift for
locating crucial examples that offer us sudden insights into the complexi-
ties and symmetries of semantic structure. He also introduced to linguists
the formal approach to the semantics of natural language developed by
logicians such as Reichenbach, now very much a part of semantic dis-
cussions. Perhaps the most important element in Weinreich's develop-
ment of semantic theory was his firm determination to bridge the gap
between formal description and semantic intuition.

There is no question that Weinreich's early thinking about formal
semantics was limited by the taxonomic character of linguistic descrip-
tion as it was then carried on. Weinreich recognized in generative gram-
mar the "rejuvenation" of formal linguistics; he was not disturbed by the
fact that Chomsky appeared to share Bloomfield's conviction that
linguistics was not ready for the work of semantic description. His 1962
course in syntax prepared students for broader extensions of generative
grammar, and in the following year he began a general course on seman-
tic structure with a close examination of Katz and Fodor's "The structure
of a semantic theory" (1963) which had just appeared.

Weinreich's first approach to K&F was patient, sympathetic, even en-
thusiastic. He had an extraordinary capacity for throwing himself into
other men's work, defending and expounding it as if he had written it
himself. He applied K&F's theory to a wide variety of examples, explored
the consequences and raised penetrating questions from within rather
than without the theory. It soon became plain to us as students that
Weinreich had given more attention to exploring and developing K&F's
ideas than they had themselves. The extraordinary limitations of the
K&F theory did not appear immediately; they emerged only as Weinreich
attempted to apply sympathetically what they had written. The sharply
critical attitude towards K&F which appears in *Explorations* (first publish-
ed in *Current Trends in Linguistics* III 1969) was the product of Wein-
reich's gradual realization that their application of generative theory was
more mechanical than substantial; that they had not seriously absorb-
ed the aims or methods that Chomsky had outlined. How else could
one explain the astonishing fact that their projection rules amalgamated
the difference between *Cats chase mice* and *Mice chase cats?*

Weinreich's intellectual honesty prevented him from masking his im-

patience with K&F. When he began to suspect that he had taken their theory more seriously than they had themselves, his natural annoyance found expression at a number of points in the discussion, as in the choice of the example just cited. Katz and Fodor at first ignored Weinreich's criticism when they received a pre-publication copy and a request for comments. But when *Explorations* appeared in print, Katz reacted "as if his entire life's work had been attacked". His polemical response in *Foundations of Language* (1967) was a total defense, a polemic which denied that Weinreich had made any significant observations and maintained that any faults in the theory had long since been repaired without help from him. Weinreich was astonished to discover that Katz had simply taken over many of his criticisms and was now presenting them as his own innovations. Though he realized that some of Katz's ideas were converging with his own, Weinreich found it difficult to deal with the curiously "absorbent" character of Katz's theorizing, and contented himself with a brief note on the scholarly ethics involved (1967).

The main body of *Explorations* is a formal apparatus for constructing the meaning of a sentence from the meaning of its parts. This formalization is a response to the incentive and challenge provided by Chomsky to rise to a higher level of accountability in formal description. Weinreich's decision to embed his ideas in a formal model based on the current state of generative grammar was a difficult one, since he was well aware that any such machinery was bound to become outmoded. *Explorations* utilizes the framework provided by Chomsky's *Aspects* (1965) in a pre-publication version; the kind of base and deep structure here assumed has since been radically criticized by Ross, Lakoff and McCawley. In their attack on deep structure as an independent entity, they argue that we can no longer maintain a syntactic investigation free of semantic description. Their position is the converse of that found in *Explorations*, which utilizes syntactic categories for semantic interpretation. In that sense, Weinreich's position may seem closer to Chomsky's current "interpretive" approach, but one must bear in mind that Weinreich was utilizing in 1965 the basic framework which Chomsky still maintains in 1971. In following the argument of *Explorations* today, the reader may want to decide for himself whether Weinreich would now prefer to pursue a formal model akin to the framework of generative semantics. It is difficult

to find any work within the interpretive framework which responds to
Weinreich's call for a systematic exploration of semantic structure; on
the other hand, McCawley's study of universal principles in the structure
of noun phrases (1968, dedicated to Weinreich) seems to represent the
most direct continuation of Weinreich's thinking on several topics.

In any case, Weinreich was obviously not concerned with the survival
of the particular concord, transfer and construal rules which he provides
here. In a talk at a conference on computer-related semantic research, he
described his own work as "very preliminary and very programmatic"
(1965). But by writing rules at a high level of specificity, he demonstrated
his confidence that formalization lies at the heart of linguistics, and that
further insights depend upon the construction of a formal apparatus
with at least this degree of specific accountability. Weinreich demonstrated
that any linguistic theory must have the equivalent of his semantic
calculator and semantic evaluator, with a re-cycling process comparable
to the one here outlined. It is in the formal approach to deviant expres-
sions that *Explorations* presents a new and exciting prospect. As Weinreich
put it, in a 1965 Postscript to his paper "On the Semantic Structure of
Language", the current work seeks to overcome "the prejudices of gener-
ative grammar against deviant expressions and its helplessness in deal-
ing with them up to now".

Since linguistics now seems to have entered a period when the pressure
towards formalization is receding, when many linguists have despaired
of writing a workable body of accountable rules, the formal aspect of
Weinreich's work may now draw less attention than the substantive
notions, concepts and problems which he isolated and identified. *Explo-
rations* develops the fundamental concept of semantic relations that
Weinreich first set forth in 1963. There he tried to show logicians that
semantic relations were more complex than the simple linking mecha-
nism that they had relied on, and at the same time argued to linguists that
there are fewer semantic relations than grammatical relations, not more.
In this earlier presentation, Weinreich relied to a certain extent on intui-
tion in grouping on the one hand the symmetrical linking relations of
attribute and head, subject and predicate, adverb and verb, and on the
other hand the asymmetrical nesting relations of verb and object, prep-
osition and noun phrase. In *Explorations* the basic distinction is elabo-

rated by specifying three types of non-linking constructions. Although
these semantic relations do not play a major role in the rules for semantic
processing set forth here, it seems likely that further explanations of the
semantic-syntactic linkage will become heavily involved with them.

Weinreich's conception of transfer features as presented here has of-
fered an appealing solution to problems that have vexed everyone who has
attempted semantic analysis. In the short time since *Explorations* has
appeared, we find that this notion has become a fixed addition to linguists'
thinking about semantic structure. That is not to say, however, that many
writers have used transfer features in the formal accounting of semantic
combinations. Those who study *Explorations* will be impressed, even
intimidated, by the labor involved in a formal theory of semantic process-
ing. At the same time, we are forewarned that nothing is to be accom-
plished by turning our backs on formalization, and adding to the moun-
tainous literature of anecdotal observations about semantic peculiar-
ities. The final sentence of "Problems in the analysis of idioms" (1969)
re-states the methodological issue:

We would then do well to guard against a loosening of the notions "theory"
and "rule", lest linguistics be debased to a pseudoscience comparable to the
interpretation of dreams.

Any response to *Explorations* which would claim to continue in the direc-
tion of Weinreich's work must bear this last word in mind.

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INTRODUCTION [1]

In its current surge of rejuvenation, linguistics faces opportunities long unavailable for reintegrating semantics into the range of its legitimate interests. That sounds associated with meaning are the proper objects of linguistic study has never been denied. But unlike sounds themselves, the meanings with which they are somehow paired are not physically manifest in an utterance or its graphic rendition. And so, when squeamishness about 'mental' data prevailed, particularly in America, the only official role left for the informant was that of an emitter of uninterpreted texts. Semantic material — whether it was imagined to reside in the situational stimulus, or in the speaker's brain, or in another speaker's overt response — was, in any case, inaccessible to observation: it was, in fact, as elusive in the case of living languages as of dead ones. Lexicography carried on in paradisiac innocence without questioning its own theoretical foundations; but for critical linguistics, no theory of meaning was on hand for semantic statements to conform with, and no procedures were in sight for testing semantic claims against finite, surveyable bodies of evidence. As for lay opinions about variant forms — what Bloomfield (1944) dubbed 'tertiary responses' — these were read out of linguistics altogether. "The linguist's gospel", it was said (Allen 1957: 14), "comprises every word that proceeds from his informant's mouth — which cannot, by definition, be wrong; but ... as a matter of principle, whatever the informant volunteers *about* his language (as opposed to *in* it) must be assumed to be wrong."

Today many linguists are breaking out of these self-imposed restric-