

NOTES AND DISCUSSION

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SEMANTIC STRUCTURATIONS

The word "structure" is now too often used as a password. But in linguistics it appears to have been adopted independently, before the current vogue. Here it has retained its most narrow connotation. The study of linguistic structures means the study of the construction of certain linguistic fragments: the attempt to uncover, according to their linguistic function, the real units that make up these fragments and the rules for using these units in constructing the fragments. This method of analysis, functional and structural, forty years ago transformed the description of language, whether it was a question of phonemics, of morphology, or even of syntax. But for a long time the structuralists themselves insisted upon the resistances that semantics raise—and its most apparent formal manifestation, the lexicon—to any attempt at analysis of this sort.

These resistances have stood in the way of linguistic structuralism as a general theory. And they have prompted experiments to verify whether or not, as a whole or in part, one could structure the semantics of a language or at least its lexicon. Sometimes it was a question of proving the validity of new methods in this rebel field; sometimes it involved proclaiming

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the universal validity of these methods, which however remained questionable so long as such a specific linguistic field did not seem accountable to them. Recently these endeavors have multiplied, but no longer in order to justify completely a theory under study to structure lexicons, parts of lexicons, or semantic "fields." Frequently they are undertaken to satisfy immediate needs. If lexicons, or perhaps even all the significations, could be structured, dictionaries could then be composed in a more rational fashion. Translators might then hope finally to have an instrument at their disposal that would enable them to measure literally the sense of a term, and consequently to compare the signification contents of two terms in different languages. The classifications of indices, and of equivalences, files, and all the tools of documentation might then be perfected. Who knows, perhaps even genuine semantic dictionaries, conceptual or notional, real *thesauri* in the style of *Roget's*, could be constructed, substituting for the alphabetic order a combination of entries that would strictly reflect the combination of notions, concepts or ideas: in short, of significations. The evaluations of interviews conducted by psychologists and sociologists could perhaps then be treated and presented, and subsequently exploited, in a more refined fashion. Such are the avowed or underlying objectives, sometimes remote, sometimes utopian, of the many current attempts at lexical or semantic structuration. The growth of these endeavors has become so rapid in the last fifteen years that a work such as, for instance, that by Stephen Ullmann, *The Principles of Semantics* (1951), definitive at the time of its publication, today appears, even in the re-edition of 1957 (New York, The Philosophical Library), more as a history, always very useful and still the only one, of past doctrines concerning semantics than an exposé of current principles. These are barely outlined or acknowledged in the *Supplement* to this re-edition, or in *Semantics, An Introduction to the Science of Meaning* (Oxford, Basil Blackwell, 1962).

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The researcher is confronted at the outset with this paradox: all the linguists today agree that *there must be some kind of*

an organization of the lexicon and of its contents: the significations. All agree that it is unthinkable that words exist in one way or another in our head under the form of elements totally isolated from each other. This conviction is expressed by Saussure's statement that language is not a nomenclature. But at the same time many linguists have repeated that this organization of significations, even if explored by means of a lexicon, escapes any exhaustive analysis of a structural kind.

Those who assume, however, that this structure exists think that it escapes us (perhaps temporarily) for at least three reasons. First, because of the "difficulty encountered in manipulating semantic reality without the aid of some concrete, corresponding phonic or graphic reality" (Martinet, *Arbitraire linguistique et double articulation*, p. 107): the difficulty of analyzing Saussure's meanings, without having recourse to the linguistic word-forms which make them manifest to us. In fact, if the meanings are analyzed through their word-forms, one might hope that the lexicon could be structured. But is this feasible with the semantics of a language, the whole of the significations that it conveys.

Here is the second reason why the structuration of significations proves to be difficult, a reason that is very well formulated in *L'Analyse conceptuelle du Coran* (The Hague, Mouton, 1963), by J. C. Gardin and his collaborators. The authors demonstrate that the analysis of words taken individually does not exhaust all of the significations expressed in a work (or, more so, in a language). Some may be important to a given civilization but not evident in isolated terms. Thus the word *retaliation* or its equivalent may not exist for a civilization that possesses the legal idea that "if a man brakes the arm of another man in a quarrel, his arm will be broken in turn." In order that the lexical analysis get back to the semantic analysis, all the concepts should have a particular name on the one hand, and on the other hand so that they will express all of the meanings that are part of a civilization. This is never the case. Many semantic contents are manifest exclusively through the relations between words. Thus the concept of "support given to men by God in the search for their salvation" may possibly not make use of a word such as *grace*. A dictionary of significations (of a work) should be a kind

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of dictionary of possible phrases, or sometimes of groups or fragments of phrases,—the “sequences” of Gardin. The latter demonstrates that such a dictionary, even if constituted on punch-cards of the pick-a-boo type, could not be considered as exhaustive.

The third reason, which makes the possibility of semantic structuration doubtful, is the enormity of the field encompassed. To describe the semantics of a language, all of the significations that it evidences, would be no less than to study the entire contents of the civilization that are expressed by this language—and no less than to attempt to discover all of its interconnections. (Present-day linguistics is very conscious of this, and the American school of anthropology has expressed it quite clearly.)

I am tempted more and more to add a fourth reason to the three preceding ones: lexical and semantic structuration could perfectly well not be unitary methods but extremely complex groupings of structurations of very different types, possibly only juxtaposed, possibly integrated, but according to liaisons that we do not yet understand. This would explain a fact, which has been clear since Meillet, who said: “To the contrary (of phonetics and grammar), words do not constitute a system (a structure): at the most they form small groups” (*Linguistique historique et linguistique générale*, I, p. 84). Considerable research has already been done on the rules of organization for many of these small groups: military grades, names of colors, terms of family relationship, etc. Since, starting with the statement, “an elephant is an animal,” we can construct, “a grey elephant is a grey animal” but not “a small elephant is a small animal,” the adjectives *grey* and *small* belong to different semantic systems (R. S. Wells, in *Word*, 10, 1954, pp. 235/249). Hjelmslev in his report to the Eighteenth International Congress of Linguists (Oslo, 1957) is entirely of this opinion and he concludes that the problem consists in reducing the open categories of the lexicon (the endless lists of all the substantives, all the adjectives, etc.) to “small closed categories” of the type we have just quoted (*Actes*, p. 653). We undertake gladly, according to need, this work of reduction, which is the structuration of semantic fields. But once this has been accomplished,

the question remains: will we then have the structure of a lexicon, or only structures (no one irreducible to another) of parts of a lexicon?

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Men have never become resigned to this apparent lack of order in the supply of connotations evident in their language. They very early endeavored to devise lexical or semantic classifications designed to put order into this supply. (From the time of Sumer, one finds a "science of listings," which, without producing dictionaries, yet had already established semantic classifications that were fundamentally linguistic.) Most of the time, due to the inability to attain directly the semantic substance (the proper organization of meanings), a lexical order is constructed. Sometimes this order is conventional and purely convenient (albeit a prodigious invention), such as alphabetical dictionaries. Sometimes it attempts to explain true relationships between meanings (through their word-forms), whether in dictionaries of the *thesaurus* type, whose classification reflects the entire structuration of the knowledge of a civilization; or whether in etymological dictionaries in which relationships between the meanings are constructed through the successive derivations of the sense of word-forms in the course of history.

But do these relationships between word-forms, or meanings, express the lexical or semantic structure according to which the language under study functions, that is, according to which we choose our semantic or lexical units when we construct a statement in this language? We may answer obviously in the negative insofar as alphabetical dictionaries are concerned, and etymological dictionaries, which do not function on a synchronological basis, the only real one for the speakers of a given language: *saupoudrer* no longer has a semantic functional relationship with *salt*. One could answer in the affirmative in the case of a notional dictionary only if it could be demonstrated that its construction reproduced the semantic or lexical categories genuinely at work in the language concerned. In the present state of research we cannot yet say that these categories can be

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scientifically determined. We can therefore conclude that no dictionary of this type is satisfactory.

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Up to now two methods have been put forward for those who attempt to discover these lexical or true semantic categories, the sum total of which could build either the lexical or the semantic structure of a language. Either to return to formal procedures, properly linguistic, that is, to use as a base the nomenclature objectively present in the word-forms; or to take recourse to conceptual, non-linguistic procedures, to analyze significations according to the distinctive features of those that are not materially synchronizable in the forms themselves of the words.

The linguistic form of a term constitutes by itself in fact the means of constructing a kind of classification that is semantic properly speaking, and that frequently goes unnoticed. All the words constructed on a productive root (*animate*, for instance); all the words constructed with a productive prefix or suffix, *in-* or *-ment*; all the lexical units composed of fixed forms (*nut-cracker*) or of stable lexical groups (*wall of dry stones*); all the declinations (productive endings in the plural or feminine gender); all the conjugations (the hundred forms of a verb), structure the main walls in the edifice of meanings of a language, in the proper sense. They constitute formal categories according to which we can produce and understand thousands of significations, in order to speak automatically. All this—which is the grammar—is at the same time the formal and semantic structuration of a given language. But of one part only of this language. This aspect of lexical and semantic structuration of languages, even if it is not always understood as such, even if it still requires a great deal of work in detailed semantic analysis, is well known. It does not teach us anything more about the structure of significations. If one speaks of structuring the lexical or semantic, one is looking precisely for the rules of organization of the meanings and word-forms, which are not indicated by the grammatical forms.

Alongside these formal signs, linguistics has recourse to criteria, equally formal, that constitutes the place of a lexical unit in a given statement. There can be no doubt that the study of the distributions of adjectives, such as *sharp* and *pointed*, for instance (according to whether they can qualify the same nouns: *nails*, *beak*, etc., or whether they exclude them, in the case of *pointed* with *disease*, *pain*, etc.) does not lead to truly structural and particularly precise descriptions of certain lexical facts. (See J. Dubois, "Distribution, ensemble et marque dans le lexique," *Cahiers de lexicologie*, vol. IV., 1964, 1). Martin Joos has demonstrated in the same way how the structural description of the many acceptations of the word *code* can be carried out successfully through the analysis of the distributions of adjectives (*rigid*, *strict*, *ethical*, etc.) that are compatible or incompatible with a given group of these acceptations. But this distributional method, as ingenious and efficacious as it may be for providing structural descriptions of the use of the acceptations of the same word, of synonyms and homonyms, seems impracticable for an attempt to structure an entire lexicon, in which every word would have to be described by the whole of these distributions, then integrated into as many successive systems as there would be other words participating increasingly or decreasingly in the distributions.

Whether or not some other formal linguistic characteristics exist which could be objectively disclosed in the same way in all of the statements of all the investigators has also been studied. Jean Dubois has experimented in this way with an analysis of an entire lexicon, basing himself on evidence of terms tied by relationships of identity (*worker*, *wage-earner*, *proletarian*, etc.) or in semantic opposition (*worker*, *bourgeois*, *proletarian*, etc.). (See *Le vocabulaire politique et social en France de 1869 à 1872*, Paris, Larousse, s. d., 1963). It is easy to see that here we depart from the methods of formal analysis, since it is a decision of conceptual order, not evident to all the investigators, which is posed by the terms (for the legitimate needs of a given analysis) *proletarian-worker* or *worker-bourgeois*).

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The major objection that may be made to all formal analyses, as valuable and as certain as they may be, is that they appear incapable of structuring an entire lexicon.

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There remain then analyses of a conceptual type. By that we mean the attempts to grasp a classification of the word-forms (or at least of all the lexicalized word-forms of a language) that are not based on formal characteristics since it seems that for the time being this latter method leads to an impasse. If we affirm that the word *brother* contains these units of minimal significations: *descendant, first degree, male*; or when we affirm that *father, mother, uncle, aunt*, etc. are part of the semantic field of kinship, nothing is gained on the linguistic level, nor have we delineated a formal characteristic, a distributional aspect of the terms considered, that would justify these affirmations. It is a problem in itself to know if such analyses, although relevant to linguistic units, are still themselves linguistic. In order for them to be so, we repeat, they must show the genuine lexical or semantic units of certain subdivisions which could be called fields or better lexical or semantic systems. A genuine system (lexical or semantic) would exist if one could prove that the units in question were functional in communication; that is, if they constituted the exclusive supply of terms among which the speaker necessarily has to choose in order to construct the signification of a given statement. It seems very difficult to prove this linguistically. A term such as *father* is part of the category formed by all the terms that can be exchanged with it in a given statement: *father has come to see us*. It may be seen immediately that this category is very vast, and semantically heterogeneous (here, *holy spirit, tax-collector*, etc. commute with *father*); again, that *father* belongs to as many categories of this type as there are possible statements in which it could figure. We do not dispose of the *formal* means to select the statements in which *father* commutes only with other terms of kinship. Perhaps only in a child's learning of the language, and above all loss of speech—studied in the light of present-day

linguistics—could we establish on the basis of formal criteria whether or not psychological realities corresponding to such systems exist.

But whether or not they are linguistic, methods of conceptual analysis are useful to introduce an order into the mass of words in a lexicon which up to now apparently have been difficult to organize all the way to the end.

Sometimes then we try to make sub-lexicons in a lexicon of conceptually related terms: the strict delimitation of each "small group" depends on the narrowness of the definition of the concept, and that depends in turn frequently on the field being explored. It is easier to delineate the concept of *steel* or *gramineous*, of *granite* or *feline*, than the concept *psycho-linguistic* or *under-development*. But within these limits there is agreement on procedure. European linguistics has for a long time called and still calls the latter the investigation of a semantic field of terms that cover such or such a concept; American linguistics here speaks in general of a hierarchic analysis. The question is always to seek a logical classification, to delimit reciprocally all the "species" of the same "genre." For Trier, *Kunst*, *List* and *Wissen* are species of the genre *Verstand*. For Conklin, the genre pimento (*chili pepper*, hanunoo in the Philippines, *Lādaq*) is divided into sub-genres, wild and cultivated. The sub-genre "cultivated" is itself sub-divided into two, the reds (six distinct species) and the greens (four), which do not cover the discriminations in scientific botany but correspond to classifying and linguistic features related to the form of the fruit: *cock-spur*, *cat-nip*, etc ("Lexicographical Treatment of Folk Taxonomies," in *International Journal of American Linguistics*, special number *On Lexicography*, 1962). Somewhat like French peasants seventy years ago classified potatoes as yellows, whites, pinks and violets, rounds, longs, flats or gherkins. These are certainly exclusive semantic systems, whose terms are units of communication, each having at least one definable feature in common with all the others of the system, or at least one distinctive definable feature that opposes it to the others.

Sometimes, on the contrary, we try not to structure types of semantic genres within their species, but to analyze the

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semantic contents of each term in units of smaller significations, which would be its components. In the same way that (I) *am* most probably contains the five minimal semantic units: *to be, first person, singular, present indicative*, a term such as *poppy* may be considered to contain the minimal units: *to be, living, plant, herbaceous, phanerogamous, papaveraceous*, etc. This type of analysis has been advocated in European linguistics by Hjelmslev, who speaks here of the research of forms, or by Sörenson's idea of minimal semantic units (*Word Classes in Modern English*, Copenhagen, Gad, 1958). He calls these units semantic "primitives," after Leibnitz; and American linguistics calls precisely the same procedure a compositional analysis.

These two types of procedure inevitably recall the old, in fact well-known methods of the logicians. We might think that Hjelmslev is incorrect in his appraisal on this point when he writes: "There is an abyss which separates it (structural semantics) from the ancient attempts to establish a universal semantics or *ars magna*, culminating in the *scientia generalis* or *characteristica generalis* of G. W. Leibnitz, but depending in principle on the method and for the essence of its idea on the *Ars generalis* by Raymond Lullus" (*Actes of the Eighteenth International Congress of Linguists*, Oslo, 1958). In fact, Hjelmslev himself is compelled right away to add: "These attempts have had the great merit of opening up an analysis of semantic contents (...) We may say that they failed not because of the principle but because of the method." (*Ibid.*) His insistence that we be "cautioned decidedly against any attempt to take extra-linguistic classifications as a base" (in order to structure a semantics) did not however protect him from this danger. In fact, when he proceeds to its application in order to "arrange all the lexical facts from the point of view of this principle (that of compositional analysis)," he concludes: "But a great deal of preparatory work has already been done by lexicography; the lexicographic definitions of monolingual dictionaries are in fact an important approximation of this work" (*Ibid.*, p. 653). Even if the basic philosophical conceptions are no longer the same (we no longer believe *a priori* that all languages reflect universal concepts), it is Leibnitz's method of *definitions*, pure and simple.

One sees in conclusion from this inventory of the research that the will to structure linguistically all the meanings of a language is understood by one postulate: that all sustain among them by degrees genuine linguistic relationships, spreading their network over the entire contents of the civilization manifested by this language. Semantic structuration would then tend to cover the general catalogue of knowledge without duplication or lacunae, the complete systematics of all the known data of this civilization. (Which to us explains the legitimacy, if not the correction, of the present usage of the word *semantics*, whether in psychoanalysis, ethnology, or history of art, etc.) The intent to structure an entire lexicon supposes the same postulate insofar as the whole of the word-forms of a language is concerned, and, further, the postulate that the network of word-forms exactly cover the network of meanings. These postulates, as we have seen, are far from being admissible without discussion by everyone. Certainly we all know that linguistic word-forms are the means at the service of an end; the end, precisely, is to place in evidence semantic contents. But for a long time the trick has been to show that there is no immediate linguistic isomorphism between the structure of the word-forms and that of the meanings: otherwise, all languages would be rational (one sole morphological category, for example, the suffix *eur*, would indicate one sole logico-semantic category, the active agent). The whole of the very complex and undoubtedly disparate relationships which permit the formal structures of a language to reflect the structure of the content of thought (the semantics of this language) without paralleling formally the latter, has not yet been discovered or described. This may be because up to now man has not yet had at his disposal the statistical and mathematical equipment to make this description possible; or because he has not yet discovered the use of this equipment, if he has it. And perhaps such equipment, much more complex and more penetrating than our "handmade" analysis—for instance the one Pierre Guirard outlines in "Les structures aléatoires de la double articulation" (*Bulletin de la Société de Linguistique*, vol. 58, 1963)—would provide us with an understanding of how the correlations between our systems of meanings and our systems of word-forms function.

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Such for the time being seems to be the situation. Much work is being accomplished, in many, if not too many divergent or convergent directions, to the point where we might call ourselves too rich in hypotheses, theses and solutions, if all this were not to come to some end. One might think that semantics, in 1965, still awaits its Saussure or its Troubetzkoy. Or, if he is among us, no one appears as yet to have been aware of it.