

Remarks on the Scientific Maturity of Linguistics

It is interesting to observe the reactions of linguists to the first extensive study in English¹ based on Gustave Guillaume's theory of the Psycho-mechanics of language because the objections raised seem to be symptomatic of the state of linguistics today. As such they merit the closest scrutiny to see whether they are well founded and so indicative of a sound state of linguistic health or whether, as those of Guillaumian bent would claim, such objections manifest a need to advance beyond certain positions, to move out of scientific adolescence. The latter point of view will be presented in this article.

Perhaps the objection that can be most fruitfully scrutinized first is that of "polysemy". The Guillaumian approach is to seek in tongue (= *langue*) a single potential significate—in this case a formal (= grammatical) significate—which lies behind and conditions, determines in some way, the great variety of actual significates in discourse. In the name of polysemy it is suggested that one ought to accept the existence of multiple meanings as one of the facts of linguistic life and, apparently, make no attempt to trace them back to a single explanatory principle. A necessary presupposition of such a position is that the various meanings of a sign are haphazard since it rejects *a priori* all attempts to seek an underlying principle or starting point² as the element of unity essential to any order or system. Thus, if the linguist does not accept the notion that there is an underlying grammatical meaning—a formal significate in potency—from which the various observable meanings of discourse are derived, these meanings must appear haphazard. What goes against the scientific grain here is that the haphazard involves disorder, and so

¹ W. H. Hirtle, *The Simple and Progressive Forms. An Analytical Approach* (Les Presses de l'Université Laval, Québec, 1967). The reviews referred to are to be found in *Studia Neophilologica* 39 (1967), 363-365; *Les Langues Modernes* 62 (1968), 118-121; *Revue des Langues Vivantes* 34 (1968) 429-431.

² The latter term is preferred since it recalls more adequately that the act of language is a real operation.

defies reasonable explanation. This would lead one to the conclusion that the phenomenon of meaning is incomprehensible; to imply that meaning, because of its very nature, is incomprehensible for the human mind, would seem to be at present a mark of scientific immaturity born probably of frustrated attempts to comprehend. Such a conclusion is all the more questionable in that what is implied to be beyond our mental grasp is itself a product of the human mind. As Dr. Johnson remarked, "Words are the daughters of earth and ... things are the sons of heaven." Until arguments of this sort are satisfactorily dealt with, one can only reject polysemy as the final answer and accept the alternative: to look for the hidden condition which accounts for all of a grammatical form's meanings actualized in discourse.

In Psychomechanics this hidden condition—the potential significate—is considered to be a meaning of another order, one which provides the capacity for actualizing all the meanings observed in discourse. Three objections to this concept will be mentioned here. One is that the theory of Psychomechanics is not necessary to carry out the analysis presented in this study since other writers had already proposed "the same idea" (perfective vs imperfective) as the distinction between simple and progressive though they did not "develop it further". But it is precisely this "developing it further" which is of scientific significance:¹ for example, showing the conditioning relationship between the potential grammatical significate and as many actual significates as possible or outlining the relationship between the various parts of the verb system (the tenses, the moods, the grammatical auxiliaries, etc.) as a means of indicating that there is no contradiction with other elements. Without a general theory such as the Psychomechanics of Language, the scientific value of such finds often cannot be discerned.

¹ In illustration of this point, the following passage from Kepler, published in 1609, is pertinent since it expresses "the same idea" as Newton did over half a century later:

It is therefore clear that the traditional doctrine about gravity is erroneous ... If two stones were placed anywhere in space near to each other, and outside the reach of force of a third cognate body, then they would come together, after the manner of magnetic bodies, at an intermediate point, each approaching the other in proportion to the other's mass. (Cited in A. Koestler, *The Sleepwalkers*, Pelican Book, 1968, 342.)

A commentator even remarked that the only thing lacking is a "little development and explanation" (*Ibid.*, 343) and yet it is Newton who gets the credit for the discovery because he was able to situate the find in its proper context. See also J. W. N. Sullivan, *The Limitations of Science*, Mentor Book, 1963, 167: "To comprehend a thing is to see it in its relations, to see it in its place within a particular framework".

Another objection with regard to the potential significate proposed for each verb form is that it seems to be derived from certain very common uses of the forms in spite of the fact that in Guillaumian linguistics no one use should be considered as the condition for the others. In reply to this objection, it should be remarked that, since all uses are an expression of some possibility offered by the potential significate, it is only to be expected that certain uses should suggest its nature more clearly than others. However, this is very different from considering one use as the source of the others, from deriving one use from another, a process which is basically a confusion of the order of the condition and that of the effect. Confusion of this sort leads to suggestions to the effect that not all "contextual meanings" should be "assigned to discourse". A science that does not even recognize clearly what it is trying to explain is hardly mature.

The third objection to the Guillaumian precept that the grammarian's job is to discover the hidden potential significate lying behind directly verifiable actual significates is to the effect that there is "no clear method" for making such discoveries. One need only remark that no science has ever worked out a clear method for making discoveries. Indeed, as others have pointed out, much of the recent discussion about method in linguistics is sterile because a method can be judged only in the light of its results. Again this objection does not seem to indicate a full awareness of what a science is.

Another point will help to clarify the concept of the potential significate and also indicate an important difference between Psychomechanics and other schools. One reviewer considers it a fault to examine, for the needs of analysis, each word in the verb form separately since "it is clear that the verb BE plus the *-ing* form must be taken together as the mark of the progressive". Certainly, BE plus the *-ing* form are the "mark" whereby we recognize the progressive but between recognition and analysis there is after all a distinction. The activity of analysis would seem to involve "separation into parts" so that any attempt to discern the nature of the progressive brings one to consider each part, that is each word, separately.

Underlying this criticism is a failure to grasp the originality of Guillaume's theory. Where other schools work on the level of syntax, of the sentence (the complexity of which often calls for a set of symbols which always need to be interpreted by and in ordinary language), Guillaume

gave his best energies to developing a theory of the word because he believed that only when one understands what a word as a grammatical unit is can one explain how it functions and so develop an adequate and intelligible theory of the sentence. Thus a Guillaumian is led not only to analyze a compound verb into its grammatical parts, but, pushing the notion of analysis to its limit, to "crack" the word itself, to penetrate it in order to discern the parts of its significate. This of course requires a special method, just as splitting the atom requires a special method, but not until this has been done, not until all the elements of the word's formal significate have been laid bare and the systems of which they are a part explicitly described, does the Guillaumian consider that the job of grammatical analysis is complete.

Another series of objections centers around the notion of mentalism. Though one writer disclaims any such objection, he does question the situating of the systematic side of language, tongue, "in the mind". It is not at all clear how one can be a mentalist and not deal with things "in the mind". Elsewhere, it is remarked that "a linguist approaches the mentalist method ... with some distrust". The implication that all mentalists use the same method does not correspond with the reality of modern linguistics. Furthermore there is a danger here that method will be judged on its own in spite of the fact that only the results can provide a sound basis for judgement. Confusion on this point is apparently what led one reviewer to describe as an "extraordinarily naïve defence of mentalism" what in reality is an appeal to judge a method by its "heuristic value".

A more searching criticism of the theory as a mentalist approach is that psychomechanics "has to work with data to which the mind first has to give a meaning". Basically this objection can be made about any science of observation, even physics where, at the limit, perception must intervene for the reading of a dial.¹ The fact that we do not understand precisely how the mind furnishes data is perhaps a weak point in any such science, but we either accept this or give up scientific pursuits. In any case, to present the problem in terms of a particular theory is to pose it in the wrong light since more general epistemological considerations are involved.

But it remains true that, compared with some other sciences the prob-

¹ Cf. E. Simard, *La Nature et la Portée de la méthode scientifique* (Presses de l'Université Laval, Québec, 1956), 52-3.

lem is no doubt more acute in the study of language where "it is not impossible that two individuals should give a different explanation for an identical example". As an objection to theories which try to deal with meaning in mentalist terms, this remark can be interpreted in two ways. Taken in a very broad sense it could imply that the very nature of discourse precludes the possibility of reaching agreement on the meaning of a sentence. But the very fact that language is used for communication indicates that some agreement is achieved so this position would appear to be untenable. In a more restricted sense, the remark could be taken to mean that certain examples are ambiguous, that is, it implies agreement on two (or more) meanings. This certainly provides an exacting test for any theory of meaning but it would seem that this should be a point in favour, and not a criticism, of Psychomechanics since as early as 1928 Guillaume was already explaining a grammatically ambiguous example like *Un instant après, le train déraillait*,¹ and all subsequent studies of discourse based on Guillaume, including the one under discussion here, involve explanations of this sort. In any case, where there is a consensus as to the actual significate (e.g. that in a given example the simple form expresses repetition) one can quite appropriately speak of "data". Though it may be more difficult to reach this consensus in questions of meaning than, say, in questions of optics, once reached it provides data quite as valid as that of any other discipline.

A final objection has been formulated in this respect: criticized for many years because of its "radically mentalist" position, even now, in spite of a swing of the pendulum sending linguists back to a consideration of problems of meaning, Psychomechanics is not in the mainstream of linguistics because it is little concerned with problems of "formalization". Apparently it is a grave lack not to have an arsenal of symbols to express the various notions involved in grammatical analysis. A metalanguage of this sort being a means, not an end in itself, a Guillaumian would consider it a waste of effort to develop one before the need is felt, that is, before its use would help to make the explanation clearer. In any case, to suggest that Psychomechanics should follow the linguistic pendulum is to imply a rather disconcerting notion of linguistics. Surely a mature

¹ G. Guillaume, *Temps et Verbe* (Champion, Paris, 1965), 68-69 (First edition, 1928). The sentence might be translated either 'An instant later the train was leaving the rails' or 'An instant later the train would have left the rails'.

science is not subject to the fashion of the day but is, on the contrary, fixed on its object, in our case language.

A number of objections are concerned with the proof provided to substantiate the theory of the simple and progressive forms. As in other sciences, the proof required is that the theory account for the observed data, that is, for the uses of these forms in discourse. It is here, where the extent and variety of the data provide a challenge to any theory, that one would expect the most searching criticism. But one's expectations are not met. Criticisms of terminology, doubts as to whether an example is "normal English", the remark that "there is not a great deal new here"—these hardly touch the scientific problem of proof. Of little greater value are criticisms about particular explanations like "a little farfetched", "ingenuity of this kind merely emphasizes the unsatisfactory nature of the analysis". Remarks of this sort imply that explanations must meet a test of apparent plausibility, of verisimilitude. Again we find that other theoretical sciences have long since rejected this type of criterion so that, for example, it would be simply irrelevant to criticize as "far-fetched" the physicists' explanation that the chair one is sitting on is over ninety percent space.

A more pertinent criticism of particular examples is to the effect that the impression (that of dignity with regard to the example *The Queen walks slowly to the throne*) is in the situation and is not a nuance arising from the verb form as witnessed by the fact that a change in the lexical content of the verb (e.g. *The Queen runs ...*) can destroy the impression. First, it is true that the impression exists in the situation, or rather, in the mind of the person who experiences the situation. On the other hand, it is the role of language to provide the means of re-presentation and expression of this impression. Furthermore, it is clear that the impression or *effet de sens* evoked by the utterance arises, not merely from the verb form, but rather from the whole context in discourse. Indeed, the very concept of potential significates—lexical and grammatical—implies that such nuances occur only on the level of discourse where, in particular, the union of lexical and grammatical has been consummated. So it is contrary to the point of view of Psychomechanics to seek the nuances of discourse already actualized in the verb form's position in the grammatical system, basically that is, to confuse discourse and tongue. Rather, the attempt is made in Guillaumian analysis to show how a given grammatical significate in tongue can, in conjunction with other pertinent elements of

the sentence, give rise to the observed nuance. Thus in an example like the above, the problem for the grammarian is to explain the difference, not between two *lexèmes* (*walk* and *run*) but rather between two verb forms (*walks* and *is walking*) and their respective nuances.

Such, then, are the criticisms leveled at the proof. Other remarks tend to be commendatory: "interesting and stimulating", "it is striking that so simple a starting-point as this opposition *complete versus incomplete* should lead to so many subdivisions", "demonstrates that all the nuances of discourse arise from the total organization of the system", etc. Remarks of this sort, very flattering for the author, suggest that he has made his point, that, the proof being on the whole approved, his theory has been accepted. But no, though no fundamental objections are raised concerning the proof offered, the theory is rejected. One writer apparently thinks that the theory is disproved because he cites four examples and characterizes the explanations offered for them as "ingenious". Another questions "both the method and the theory". And a third remarks "one can therefore easily accept the distinction made by Mr. Hirtle without accepting the psycho-mechanical explanation". The attitude underlying these remarks—that even though the theory works, it is not acceptable—is indicative of a serious lack in scientific formation: ignorance as to what substantiates or "proves" a theory or again what transforms a hypothesis into an acceptable and accepted theory.

Another clear indication of this same lack in scientific maturity concerning proof can be seen in the objections to certain notions advanced concerning the relationship between the simple and progressive forms and the system of voice. Presented in the study as mere hints without any attempt at providing supporting evidence, these notions were nevertheless characterized by one writer as "empty speculation" or "false". What is disquieting here is not that the notions themselves may prove to be unfounded—this is a possible fate for any hypothesis or theory—but rather that they should be judged such without any supporting evidence. The history of science offers many examples of fruitful ideas being rejected because they go against some prevailing opinion and not because of scientific proof. As Meillet said: *La science ne vit pas de vérités, elle vit de preuves.*

Perhaps the point can be expressed in terms of the task which Psycho-mechanics sets itself: to understand and so to explain our experience of language. A form like the progressive has a rather curious behaviour: in

some cases interchangeable with the simple form except for a slight shift in nuance, it can in other cases replace the simple but with a considerable change in meaning and in still others it would be refused, the simple only being used. How can the grammarian explain this behaviour, make it comprehensible as a phenomenon, show that it derives from an underlying principle which is inherent in the language system itself, in short, demonstrate that it is not "capricious and arbitrary"? Whether or not the study discussed here provides the final answer to this question, the question itself is one that linguistics, in order to be the science of language, cannot afford to ignore. And proposed answers (theories) should be accepted or rejected on the basis of whether they explain the phenomenon, that is whether they lead to an understanding of the observable facets of language.

W. H. HIRTLE