Syntax:
Autonomous or Meaning Motivated?

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... on ne peut rien savoir de scientifiquement valable concernant les actes d'expression si l'on n'a fait préalablement l'étude des actes de représentation dont ils émanent.[1] (Gustave Guillaume 1954:28)

1. *Introduction*

Perhaps the most remarkable trait of human language is the way it adapts spontaneously to the particular experience the speaker wants to express. Thanks to our mother tongue, the linguistic means are available to render more or less faithfully whatever we intend to communicate regardless of the particular nature or quality of the message. This is remarkable first of all because, in itself, raw experience is strictly private and incommunicable, a fact Northrop Frye (1971:124) depicts quite vividly in the following passage:

> ... it is clear that all verbal structures with meaning are verbal imitations of that elusive psychological and physiological process known as thought, a process stumbling through emotional entanglements, sudden irrational convictions, involuntary gleams of insight, rationalized prejudices, and blocks of panic and inertia, finally to reach a completely incommunicable intuition.

And language provides the means for making each such incommunicable intuition, or rather a representation of it, communicable. Furthermore, if we consider the extraordinary range and diversity of the messages that can be represented and expressed — ultimately, no two experiences are identical — and the number of persons speaking a given tongue, we get some idea of the potential for representation provided by one's language. Most

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[1] One can learn nothing of scientific value about acts of expression if beforehand one has not made a study of the acts of representation giving rise to them. [My translation.]

remarkable of all perhaps is the spontaneity of speaking, the fact that this set of representational possibilities works so rapidly and efficiently that we are quite unaware that something very remarkable is going on each time we undertake what is for us a very commonplace activity, an act of language. This fact alone is a clear indication that the mother tongue consists of a system of representational mechanisms ready to be activated whenever needed. Small wonder that some of us are intrigued by, and make such an effort to understand and explain, this "mechanism for commuting thought into something said", as Guillaume (1960:2) characterizes language.

The traditional way of seeking such an explanation was based on the assumption that the meaning of a form is a representation of some facet of the speaker's experience, and that finding an explanation involved finding a single meaning for the form so that the use of the form could be attributed to it. For the most part however, these efforts proved fruitless because of polysemy. Bloomfield's comment on two grammatical forms is typical of the outcome of many such attempts:

> ... the difference between *wrote* and *was writing* is so elusive and differs so much for different verbs and in different phrases, that the definer, after stating the main principles, cannot do better than to resort to a demonstration by means of examples. (Bloomfield 1933:280)

One can quite understand why the repeated failure of such attempts to analyze usage in terms of a basic meaning led to the following generalization:

> ... it is questionable that the grammatical devices available in language are used consistently enough so that meaning can be assigned to them directly. (Chomsky 1962:108)

From this it follows not only that "grammar is autonomous and independent of meaning", but that "the relation between semantics and syntax ... can only be studied after the syntactic structure has been determined on independent grounds" as Chomsky says (1962:17). This brings him (p. 100) to "the conclusion that only a purely formal basis can provide a firm and productive foundation for the construction of grammatical theory" and the notion that syntax consists of a set of rules concerning form, not meaning.

On this basis a linguist or an ESL teacher can, by means of rules, readily describe the syntax of, for example, number agreement in a noun phrase with determiner and substantive. This might involve listing determiners such as *many*, *these*, *several*, numerals (except *one*), etc., that are used with a plural substantive, or rather (to avoid bringing in meaning) with a substantive ending in -*s*,[2] as well as determiners such as *this*, *every*,

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[2]To avoid ambiguity, the terms "singular" and "plural" will be used here to designate meanings— "single entity" and "more than one entity" respectively.

one, the indefinite article, etc. used with the ∅ substantive. This type of descriptive technique is no doubt useful for many purposes in the machine treatment of language, and may well be adequate for the language class-room, at least at elementary levels, but for the more rigorous approach required by a scientific investigation, its inadequacy soon becomes appar-ent, as I shall now try to show.

2. *Descriptive Inadequacy*

To bring out the sort of difficulty this notion of syntax leads to when we adopt the point of view of a science based on the observation of its object, let us examine more closely the case just evoked of number-sensitive determiner + substantive. One of the first things to strike our attention when usage is examined with any care are cases where the rule for number agreement is not observed. It is not infrequent to find singular determiners with -*s* substantives, as in:

(1) at a crossroads
     this Olympic Games
     every holidays
     a stairs
     a singles
     that ungodly surroundings

For these and many other such attested uses, see Wickens' recent study (1992:175–219). A much more frequent "irregularity" is the opposite case of a plural determiner with a ∅ substantive:

(2) these people
     five crew
     many staff
     two dozen
     two horsepower
     three bear (cf. Hirtle 1982:49–78 for more examples)

How to catch all such uses in a net of formal rules is anything but clear because for most of these examples the alternate "regular" form of the substantive is also found:

(1') a crossroad
      this Olympic game
      every holiday
      a stair
      a single

They will not be used to designate inflections (∅, -*s*) because, as we shall see, -*s* substantives can be singular in meaning and ∅ substantives plural.

(2¹)   these peoples
       five crews
       many staffs
       two dozens
       two different horsepowers
       three bears

Alternate determiners can also be used in our examples, plural in the first set:

(1¹¹)   several crossroads
        these Olympic Games
        many holidays
        these stairs
        two singles
        those ungodly surroundings

and singular in the second set:

(2¹¹)   a people
        each crew
        this staff
        a dozen
        one horsepower
        every bear

Thus, although the majority of uses of such substantives can be accounted for by the ordinary rules of agreement, certain uses contradict these rules, a fact indicating not that the language is aberrant but that the rules are inadequate. This then is the first point: a description based solely on the form, the physical aspect of the sign, does not provide a faithful reflection of the observable reality of usage.

3.   Observing the Meaning Expressed

It may be objected here that the uses exemplified in (1) and (2) are, after all, relatively infrequent and even rare, and it may even be argued that grammar rules need not account for every last use. That is certainly a valid point of view for the practical purposes of the ESL classroom and many computer programs, but for scientific investigation it is not. In science, which is based on the observation of its object, the exception proves the rule, that is, the apparently contradictory case puts the explanatory hypothesis to the test. One is reminded here of Charles Darwin's manner of investigating. According to his son:

There was one quality of mind which seemed to be of special and extreme advantage in leading him to make discoveries. It was the power of never letting exceptions pass unnoticed. ... He often said that no one could be a good observer unless he was an active theoriser. This brings me back to what I said about his instinct for arresting exceptions: it was as though he were charged with theorising power ready to flow into any channel on the slightest disturbance, so that no fact, however small, could avoid releasing a stream of theory, and thus the fact became magnified into importance. (Darwin 1961:109–110)

Thanks to his highly developed ability to observe in the light of a hypothesis, Darwin was able to spot exceptions and use them to refine, develop or renew his hypothesis. The point here is that a rare occurrence should not be considered as something unimportant which can be overlooked, or even as a nuisance to be avoided or somehow accounted for by some ad hoc provision, but should be sought out as an opportunity for gaining new insights. In this respect the scientific point of view is quite different from the practical point of view.

If we adopt the scientific point of view here, it brings us to ask what we can learn from the irregular uses cited above, those which are not described by the rules made up by grammarians or linguists.[3] The first thing to be observed is that the different versions of a noun phrase cannot be used indiscriminately since each expresses something slightly different. An expression like *a crossroads*, with the sense of 'an intersection where several roads meet', depicts a single composite entity, whereas *a crossroad* has the sense of 'a single secondary road crossing a main road'; consequently, out of context *several crossroads* would be ambiguous, meaning either 'several intersections' or 'several secondary roads crossing a main road'. *Game* shows the same sort of usage. In *the most* [records] *set at any one Games, including Olympics*, the idea of 'an organized set of contests' is brought out, whereas in *it* [judo] *was first contested as an Olympic game at Tokyo in 1964*, the single contest is designated. *These games*, as a consequence, might be ambiguous as to whether it designates several organized sets or several single contests. For these observations and similar remarks concerning *holidays* and *stairs*, see Wickens (1992:192–193). In tennis, expressions like *a singles* and *a doubles* are common. Here the determiner expresses

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[3]The following discussion of grammatical number in English is based on two full length studies: Hirtle (1982), where the hypothesized system of number in the substantive is established in the light of observed usage, and Wickens (1992), where the hypothesis for *-s* morpheme is substantiated through a far more extensive examination of data. The present article makes no attempt to present all this data nor even to summarize the arguments based on it, but rather to bring out a consequence implicit in these works.

the number of matches played, whereas the *-s* of the substantive designates "two interacting, opposing and mutually dependent teams" (Wickens 1992:185) constituting the match. In baseball, on the other hand, we find *a single* but not **a singles* so that the expression *two singles* out of context is ambiguous. In *that ungodly surroundings*, which evokes an environment consisting of a number of unsalutary elements, the Ø substantive would not be used;[4] with a plural determiner — *those ungodly surroundings* — the expression would designate, not a plurality of environments, but the different entities making up one environment.

This brief examination of a number of uses where the syntactic relation does not conform to the grammarian's rule will perhaps suffice to make the point here, namely that the particular syntactic relationship involved, agreement, is meaningful. In each case agreement tells us something about how the speaker has thought the substantive, how the notion of the substantive is formed in order to represent the experience of the speaker. To claim that the syntax of these examples is divorced from meaning would be to ignore facts accessible to any competent observer. By the same token, the syntax of regular uses is also meaningful because it too tells us something about how the speaker has thought the substantive, it too is to be interpreted in terms of the speaker's intended message.

Thus, although it may at first sight appear to be redundant, the result of a chain reaction, number agreement in the noun phrase is in fact a means of expressing meaning. And it is not an isloated case. Subject/verb agreement (Reid 1991), *to* + infinitive (Duffley 1992), gender agreement of pronouns (Morris 1992), the adverb (Guimier 1988), *any/some* + substantive (Hirtle 1988) have all been shown to involve meaningful syntactic relations in English. In fact there is now ample evidence available to substantiate the second point to be made here, namely that syntax, far from being autonomous, is a means of expressing meaning. Such a claim cannot, however, be seriously entertained unless the above objection raised by Chomsky is met. We shall therefore address the question of whether or not the *-s* and Ø endings of the substantive are "used consistently enough so that meaning can be assigned to them directly" (Chomsky 1962:108).

4. *Assigning a Meaning to -s and Ø*

As one examines more and more noun phrases consisting of singular determiner + *-s* substantive as in (1) above, it becomes clear that the substantive refers to a single complex entity, to 'one entity involving more than one component', not to 'more than one entity'. That is, the *-s* substantive here

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[4] *A princely surrounding* (O.E.D., s.v.) strikes one as slightly archaic.

is grammatically singular and not plural, hence the use of a singular determiner. Considering the -*s* substantive a singular in these uses provides a solution for the apparent contradiction on the level of the noun phrase but it raises a much more fundamental problem, the very problem that frustrated so many traditional analyses: the polysemy of the -*s* morpheme. How is it possible for an ending to be an efficient means of expression and communication when it can express such different meanings as 'plural' and 'singular' (and, as we shall see, a third meaning as well)? This appears to involve a flagrant contradiction with the facts because communication is not possible if morphemes have more than one meaning, as Stern (1931:85) pointed out some years ago:

> There is no getting away from the fact that single words have more or less permanent meanings, that they actually do refer to certain referents, and not to others, and that this characteristic is the indispensable basis of all communication. ... It is on this basis that the speaker selects his words, and the hearer understands them.

Moreover, this "one form/one meaning" requirement seems to be at the basis of Chomsky's objection because without it a coherent theory of usage based on meaning is not possible.

The best way to confront this problem is to situate it within the general view of language alluded to above: language considered, not as a set of rules, but as a system of representational mechanisms. From this standpoint, the system of grammatical number in English is itself to be considered one of these operational units which permit us to represent and say so spontaneously what we have in mind. Since the whole idea of a mechanism, be it physical (a machine) or mental (a psychomechanism), is to permit certain operations in order to obtain results, the -*s* morpheme must not be conceived of as something static, but as operational. That is to say, in itself the -*s* ending should be considered the sign not of a fixed meaning but of an operation, the operation required to produce the fixed meanings observed in discourse. Hence as part of the system, independently of any use with a substantive, the single underlying meaning of the -*s* morpheme is a potential, the possibility of a mental operation for engendering a certain range of senses. As such, the operation signified by -*s* can be called on to produce the particular sense required for any given use. This manner of conceiving the meaning of a morpheme not only makes communication possible but offers a plausible solution to the general problem of communicating with polysemous signs: by proposing a single meaning, it ensures the necessary condition for communication; by proposing this meaning as a potential operation, it makes possible several actual meanings in discourse, thereby accounting for the observed polysemy.

It remains to show just how the mental operation postulated for a morpheme can result in different senses. This can be explained by proposing that the movement involved can, like physical movements, be held up at different points in its development. To illustrate by means of a trivial example: the mechanism for opening and closing the mouth provides the potential for the two opposed operations each of which can give rise to innumerable actual movements because either operation can be intercepted at any point. Held up at its beginning, the opening operation produces a minimum opening, as for drinking with a straw; held up at some subsequent instant, it produces openings of various sizes, as for eating; held up at its final instant, it produces a maximum opening, as when one is at the dentist's.

In like fashion, we can consider the operation signified by -s to be a movement from a point corresponding to a minimal quantity, 'one', toward points corresponding to greater and greater quantities. This conception of the meaning potential of -s can be diagrammed by means of a vector as in Figure 1.
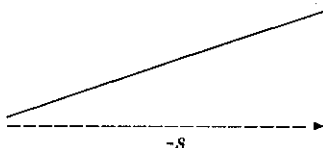

Figure 1: The horizontal vector depicts the movement signified by -s, the broken line indicating that it is a potential movement, the oblique that it is a movement from minimum to maximum.

To obtain a singular sense for the substantive, the -s movement is intercepted at its first instant, thus giving rise to the representation of the notion of the substantive formed in a minimal space, 'one', as in *a crossroads* and the other examples in (1). This can be diagrammed as in Figure 2.
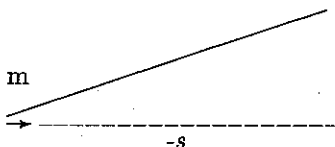

Figure 2: Only the first instant of the movement is actualized to represent a minimum (m) space for the lexical notion, giving it a singular sense.

To obtain a 'more than one' sense for the substantive, the -s movement is intercepted at a later instant, thus representing the notion of the substantive in a greater-than-minimal space, as in *several crossroads* and the vast majority of uses of -s substantives. This is depicted in Figure 3.
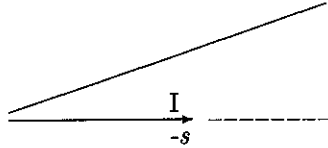
Figure 3: Part of the -s movement is actualized to represent an intermediate space (I) for the notion, giving it a plural sense.

Since an intermediate space can be obtained by intercepting the -s movement at any point beyond its first instant, the speaker can represent any quantity within the wide range described as plural by holding up the movement close to or further away from its starting point. The question naturally arises whether there is a maximum space representable by the -s morpheme. A use like *Crossroads can be dangerous* depicts all crossroads and so the substantive has a generic sense. Such uses, which illustrate the third characteristic sense of the -s morpheme, maximum quantity, can be obtained by intercepting the -s movement at its final instant, as depicted in Figure 4.
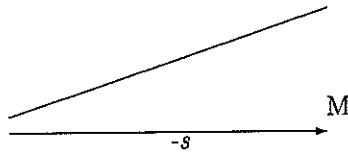
Figure 4: The whole of the -s movement is actualized to represent a maximum space for the notion, giving it a generic sense.

What has just been outlined will suffice to show that there is no contradiction in proposing that the same ending can, in different uses, form the notion of a substantive to express singular and plural and even generic senses on the condition that we abandon the habit of conceiving meaning only as something static and view it on the level of the system in terms of a movement, a mental process. That is, it is quite consistent to assign a single meaning to a polysemous morpheme provided we conceive of this meaning as operational, as a potential capable of producing the senses observed in discourse. In this way Chomsky's objection to basing grammatical analysis on meaning can be met and the argument for "a purely formal basis ... for

the construction of grammatical theory" falls, thereby calling into question the very conception of grammar as a set of formal rules.

The implications of the claim made here are so far reaching that it calls for further justification by examining the other set of irregular examples, those in (2), where a plural determiner occurs with a ∅ substantive. Let us proceed by contrasting determiners to ascertain the meaning of the ∅ ending. *People* can express two easily differentiated senses calling for either a plural or a singular determiner: when *people* represents a number of individuals making up a group it takes a plural determiner, as in *these people*, but when *people* represents a single group it takes a singular determiner, as in *this people*. Similarly for *crew* and *staff*: where *five crew* and *many staff* name the members of a unit, *one crew* and *one staff* generally name a single unit, (although in a less frequent use, they can also name a single member, and so could be ambiguous). *Dozen*, on the other hand, expresses a quantity measured in twelves so that *two dozen* expresses a double measure making up one amount and *one dozen* evokes a single measure making up an amount. The same for horsepower: *two horsepower* expresses two measures, *one horsepower* a single measure, constituting a given force. Finally a more subtle distinction: *three bear* would name several specimens, individuals insofar as they are members of a species, as opposed to *three bears*, which simply names three individual animals. These few examples will suffice to make the point that ∅ substantive with a plural determiner really expresses a sense of plural, though it is always a plural within a whole, an "internal plural".

Thus, we have another case of polysemy: ∅ usually gives its substantive the sense of singular, but occasionally the sense of plural. The problem can be treated in the same manner as above: by proposing that ∅ ending is the sign of another movement, but in this case a movement from the point of maximum quantity to the point of minimum quantity. Intercepting this movement at its final instant engenders a representation of minimum space, and gives the substantive a singular reading. This actualization of the whole ∅ movement is depicted in Figure 5.

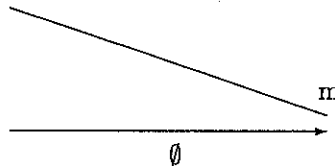Figure 5: The whole of the ∅ movement is actualized to represent a minimal (m) space for the substantive, giving it a singular sense.

The substantive will have an internal plural or mass[5] reading if the ∅-movement is intercepted at some point before its end to give a greater than minimum space. Figure 6 depicts one such interceptive possibility.
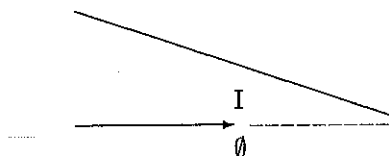
Figure 6: The ∅ movement is partially actualized to represent an intermediate (I) space, giving the substantive an internal plural or mass sense.

Finally, a substantive with ∅ ending can also have a generic sense, derived from a maximum space meaning of the ending obtained by intercepting the movement at its beginning. This is shown in Figure 7.
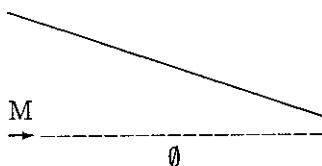
Figure 7: The first instant of the movement is actualized to represent maximum space (M) for the substantive's notion, giving it a generic sense.

Again we have been able to assign a single meaning to a "grammatical device" which is used with such consistency that it cannot express a quantity outside the range permitted by the movement. It can, however, express any quantity within the maximum to minimum movement, provided, of course, the particular lexical notion of the substantive permits it. Although other senses of ∅ ending would have to be treated here to make the demonstration complete (cf. Hirtle 1982 for the details), sufficient has been said to establish our third point: it is possible to isolate and describe a morpheme's more or less permanent meaning, which, as we have seen is a necessary condition both for communicating and for linguistic analysis. In order to do so, however, meaning must be conceived operationally,[6]

[5]The distinction between internal plural and mass senses arises from different ways of conceptualizing the lexical notion. See Hirtle (1982).

[6]The only other real attempt to argue a one form/one meaning explanation for grammatical number in English is found in Reid (1991), where the ∅ morpheme is said to signify "Entity Number meaning One". The procrustean effect of maintaining a static meaning like this for all uses comes out clearly in the case of mass nouns, for which "Entity Number meaning One is used faute de mieux

as an interceptible movement, because otherwise, it seems, one can only comment on the elusiveness of meaning variation as Bloomfield did, and conclude with Chomsky that "grammar is autonomous and independent of meaning". An operational view of language, and particularly of meaning, is therefore crucial.

5. *Syntax as Meaning Motivated*

Having argued in this way that syntax is not autonomous but related to meaning, it remains to discern as clearly as possible the relation between the two. We can best do this by carrying our analysis of grammatical number in English one step further in addressing a problem just raised: two plurals are being proposed for certain substantives. The fact that there really are two plurals here is confirmed both by the difference in physical form and the observable difference in meaning between them. This can be shown by substituting the -s substantive into the above expressions, as in (2'). Thus, where *these people* designates persons insofar as they belong to a group, *these peoples* designates several ethnic groups; *five crew* names members of a unit whereas *five crews* names five units; *many staff* similarly designates individuals in a unit, *many staffs* a plurality of units; *two dozen* names a double measure in a total amount, *two dozens* names two amounts, two entities; *two horsepower* evokes two measures making up a single force, *two different horsepowers* two forces; and *three bear* signifies three members of a species, but *three elephants* names three separate animals with the same nature, as we have seen. Although the distinction may not always be immediately evident, in each such case of ∅ plural vs. -s plural there is a discernible difference in the meaning expressed, that between representing the several constituents as included in a single containing entity (∅) or representing them as separate entities (-s).

On the basis of such observations and many others like them, it has been shown that the constant impression expressed by ∅ morpheme is one of continuity in space, and that that expressed by -s is one of discontinuity. The opposition between the two morphemes is based on these impressions. Thanks to the psychomechanism underlying the system of number, these two opposed impressions arising from our experience of spatial realities are integrated into a systematic, operational whole, which can be diagrammed as in Figure 8.

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to communicate a message for which it is not ideally suited" (Reid 1991:80). On the other hand, viewing the ∅ morpheme as signifying a process for quantifying continuate space (see below) accounts for this very common use of nouns in terms of their lexical input.
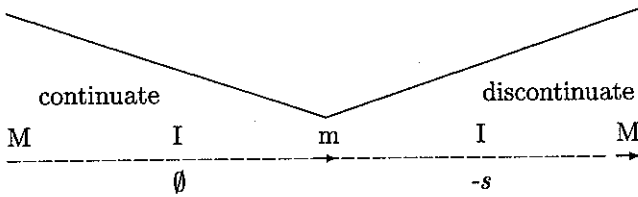
Figure 8: The system of number in English consists of two potential movements for representing the space of the substantive's notion as continuate or discontinuate.

Thanks to its basic representational psychomechanism, this mental system of grammatical number in English can represent the notion of any substantive as continuate or as discontinuate, and this in a minimum, intermediate or maximum stretch of space, as we have seen. Of course the possibilities for representing a given substantive will be limited by its particular concept, no single concept having been found so far which is interceptible at all points in the system. However, granted the inventiveness of speakers and the infinite variety of human experiences to be represented, there is theoretically no restriction on the way the system can form notions for continuity and discontinuity in space. Attested examples like *a lot of car for your money*, *a new airlines*, *The twins each have sweet tooths*, give some idea of the resources the system of number makes available to the speaker's creativeness.

Whatever the use, the lexical notion expressed by every substantive in discourse bears the imprint of the system of grammatical number — continuate or discontinuate, minimum, maximum or intermediate — depending on its correlate in the intended message the speaker is representing. In other words, whether one says, for example, *this people* or *these people* or *these peoples* or even *people (are funny)* depends on how one shapes the lexical notion of *people* spatially by means of the system of number to conform best with what one has in mind to say. The important thing here is that the manner of representing the notion through its grammatical number determines the agreement, singular, plural, or generic, between substantive and determiner. That is, it is the morphology, in the sense of the meaning represented by the morpheme, which conditions the syntax; the syntax is organized in such a way as to make the represented meaning as explicit as possible. Thus the relation between meaning and syntax is that between conditioner and conditionee: syntax is meaning motivated.[7]

At this point it may well be objected that one cannot understand the examples in (1) and (2) without the syntax of the noun phrase, and that

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[7]For an illustration in French concerning the position of the adjective, see Valin (1981, esp. pp. 41–78).

it is therefore the syntax which conditions the meaning. This is indeed the common experience of anyone interpreting a sentence but it does not invalidate what has just been said because it involves a change from the point of view adopted here, that of the speaker, to that the listener. For the linguist the object to be observed, analyzed and explained is discourse, that is, the product of diverse acts of language. Sciences based on observation have tended to adopt the point of view first expressed by Aristotle that "we shall understand things best if we consider them as they emerge from their origins", that is, in the light of the way they are produced. Hence the linguist is first concerned with working back from observed uses to the act of language as carried out by the speaker and so must first adopt the strategy of the listener to understand each use before comparing and analyzing their meanings. In this way the linguist can attempt to hypothesize the processes producing the object to be explained, as we have tried to do for -*s* and ∅. Thus the points of view of speaker and listener are complementary both in communication and in linguistic analysis. Indeed, the listener's (and linguist's) need to grasp the whole noun phrase or sentence or even discourse in order to understand the meaning expressed by the morphology of the substantive confirms the role of syntax in helping make meaning explicit.

This brings up another point deserving comment because it helps bring out the complementary roles of morphology and syntax in expressing meaning. A polysemous morpheme — the case, it would seem, of most if not all morphemes — cannot of itself make its diverse senses explicit because its physical form does not vary according to the sense to be expressed. Out of context there is no way of knowing how *people* with its ∅ morpheme is to be interpreted — generic, plural or singular. And yet the speaker, once aware of whether the intended message involves human beings in general, a number of persons or an ethnic group does give the general notion of the substantive a particular sense by means of the morpheme. Syntactic or other means are required to make this sense explicit for a listener, but when these are insufficient, the interlocutor, not knowing where the speaker has intercepted the ∅ movement, is confronted with an ambiguous expression. An operation-signifying morpheme is an extraordinary instrument for shaping human thought and syntax is a necessary means for expressing what is thus represented.

6. *Conclusion*

The first point we have tried to make is that a formal description does not reflect the complex reality of discourse, which involves exceptional or irregular uses as well as those which can be captured by rules. It was then

shown that the syntax of such exceptional uses given above is a means of expressing meaning since these expressions differ in meaning from the regular uses; by the same token, the syntax of the regular uses is meaningful since it is interpreted meaningfully as well. The next point was to show how the meaning expressed can be assigned in a consistent fashion to the morphemes involved. This led to another, more radical sense in which syntax is meaningful: not only is syntax, like morphology, a means of expressing what the speaker has represented linguistically, it is actually conditioned by that linguistic meaning. That is to say, syntax is meaning-motivated and so meaning-expressing, even in the most commonplace, apparently redundant uses.

If syntax is conditioned by the meaning to be expressed, it follows that an explanation of observed syntax can be found only by appealing to the meaning components, both lexical and grammatical. That is, because morphology conditions syntax, a sufficient understanding of the representational mechanisms of the words involved is a prerequisite for a satisfactory analysis of any syntactic group. Ultimately, this means that a viable theory of the sentence can be constructed only on the basis of a sufficiently developed theory of the word.

Much therefore depends on the question of whether or not "the grammatical devices available in language are used consistently enough so that meaning can be assigned to them directly" (Chomsky 1962:108). The answer hinges on how one treats the problem of polysemy. On the basis of Guillaume's postulate that the grammar of the tongue we speak is essentially a system of psychosystems for representing experience, it has been argued here that our grammatical morphemes are used quite consistently and that a single meaning can be assigned to them. This view has, in various ways, been proposed by scholars in other schools — Jakobson, the Columbia School and, more recently, many working in a cognitive approach — but none, it seems, have adopted Guillaume's solution to the crucial problem of polysemy. This entails the idea that the single meaning potential of a morpheme is one of the operations constituting the psychosystem, and its polysemy arises from intercepting this operation of thought at different instants during its actual development. Thus, viewing any morpheme as having a potential meaning which can give rise to several actual meanings observable in discourse not only provides an elegant solution to the problem of polysemy, but also gives real content to the notion of language as a system of operational systems.

All this points to the inadequacy of "a purely formal basis" to account for both regular and irregular usage, and brings out the need to observe both form and meaning to "provide a firm and productive foundation for the construction of grammatical theory". On this foundation the linguist

can investigate both morphology—attempting to discern the potential
meaning of each morpheme—and syntax—attempting to describe the op-
erations involved in establishing the syntactic relations between meanings
observed in sentences (a subject we have not touched on here). Ultimately,
this approach leads us to the view that linguistics is not a formal discipline
but a science based on observation—as fine and extensive an observation
as possible of both meaning and form—with a view to describing the prior
conditions, the acts of representation, giving rise to the observed data.
Even more important is the fact that, in making meaning primary, one
comes closer to the reality of language, language as used by the ordinary
person. This type of grammatical analysis leaves full scope to the inventive-
ness of the human mind, whose extraordinary linguistic creativity cannot
be captured with a net of rules because the aim in undertaking an act
of language is to represent and express a message, to commute a unique,
incommunicable experience into something said.

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