

ON SOME CATEGORIES FOR DESCRIBING THE SEMOLEXEMIC STRUCTURE

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1. A lexeme is the minimum unit that carries meaning. Thus a lexeme can be a "word" as well as an affix (i.e., something smaller than a word) or an idiom (i.e., something larger than a word).

2. A sememe is a unit of meaning that can be realized as a single lexeme. It is defined as a structure constituted by those features having distinctive functions (i.e., serving to distinguish the sememe in question from other sememes that contrast with it).¹

A question that arises at this point is whether or not one lexeme always corresponds to just one sememe and no more. Three theoretical positions are foreseeable: (1) one which holds that one lexeme always corresponds to just one sememe and no more, (2) one which holds that one lexeme corresponds to an indefinitely large number of sememes, and (3) one which holds that one lexeme corresponds to a certain limited number of sememes. These three positions will be referred to as (1) the "Grundbedeutung" theory, (2) the "use" theory, and (3) the "polysemy" theory, respectively.

The Grundbedeutung theory, however attractive in itself, is to be rejected as unrealistic. Suppose a preliminary analysis has revealed that a lexeme seems to be used sometimes in an "abstract" sense and sometimes in a "concrete" sense. In order to posit a Grundbedeutung under such circumstances, it is to be assumed that there is a still higher level at which "abstract" and "concrete" are neutralized—this is certainly a theoretical possibility, but it seems highly unlikely and unrealistic from a psychological point of view.

Jakobson's study of the meanings of the Russian cases, which is a classical example of the application of the Grundbedeutung approach, will be worth discussing in this connection.² According to Jakobson (1936), the meaning (i.e., Grundbedeutung³) of the genitive case, for example, is said to be that "der Umfang der Teilnahme des Gegenstandes am Sachverhalte der Aussage

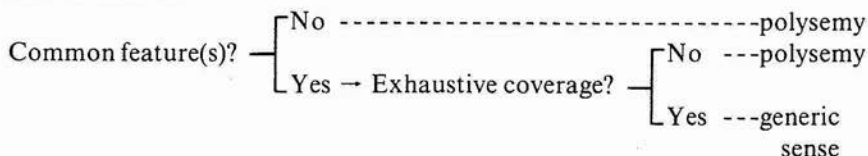
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geringer als sein gesamtes Umfang ist." The definition can be proved inadequate by pointing out either that a case other than the genitive can be used in a way that fits the definition or that the genitive can be used in a way that does not fit the definition. Compare, on the one hand, the two expressions, *John's arrival* and *John arrives*. Since John's role in the event referred to is the same in both cases, Jakobson's definition intended for the genitive also applies to (at least certain uses of) the nominative. Compare, on the other hand, expressions like *time's river* and *the city of Rome* (here assuming that the *of*-phrase is functionally equivalent to the genitive). If, as is often said, these are really examples of "apposition," Jakobson's definition does not logically apply here.⁴

The use theory, which in its extreme form claims that a lexeme is used in a new sense every time it is used in a new context (thus implying that there is no such thing as "sememe"),⁵ is to be rejected on empirical grounds. If this claim were true, the speaker would be unable to guess the meaning of an already familiar lexeme used in a context he encounters for the first time—which is not really the case. Similarly, if the number of the meanings of any lexeme were infinite, no speaker would ever be able to master a language to a satisfactory degree—which is again not really the case.

If both the Grundbedeutung theory and the use theory are to be rejected, the polysemy theory will seem to offer the most realistic solution. The polysemy theory, however, must be able to show just how many sememes can most reasonably be posited as correlated with the lexeme in question. In other words, given a preliminary analysis in which a certain number of senses are tentatively posited for a lexeme, the theory must explain on what criteria certain senses are to be collapsed (as one generic sense, or more technically speaking, as representing one sememe) and certain others are to be kept separate (as polysemous senses, or as representing different sememes).

The judgment can be made in the following way: Suppose a preliminary analysis has tentatively posited three senses (i.e., three possible sememes), S_1 , S_2 , and S_3 , for the lexeme in question. Check whether there is a set of common semantic features for S_1 , S_2 , and S_3 . If there is not, S_1 , S_2 , and S_3 are polysemous senses (i.e., separate sememes). If there is, then check further whether S_1 , S_2 , and S_3 mutually contrast with regard to this set of common features and jointly exhaust all the possible cases in which they are relevant to the same set of common features. If they do not, S_1 , S_2 , and S_3 are polysemous senses (i.e., separate sememes). If they do, they can be collapsed into a single generic sense (i.e., they constitute one sememe). The whole procedure can be summarized as follows:



Suppose, for example, that the lexeme *child* is tentatively analyzed as having two senses, 'male young human' and 'female young human.'⁶ There is a set of common semantic features, 'young human.' 'Male' and 'female' constitute a neatly contrasting pair with regard to the set of features, 'young human'; they also jointly exhaust all the possible cases in which they are relevant to the same set of common features (i.e., children are either male or female). The two senses are therefore to be collapsed into 'young human'; in other words, *child* represents a case of generic sense.

Suppose next that the lexeme *father* is tentatively assigned three senses, 'male parent,' 'progenitor,' and 'Catholic priest.' A common feature for them would be 'human.' But 'being male,' 'being a progenitor,' and 'being a Catholic priest' do not well contrast with regard to the feature 'human,' much less jointly exhaust all the possible ways of human existence. The three senses, therefore, represent a case of polysemy.

Suppose, third, that the lexeme *character* is assigned two senses, 'a written symbol' and 'a distinctive quality,' among others. It would not seem possible to define a set of features common to those two senses and the two senses must be kept separate, i.e., they are polysemous senses.

It will be noticed that there are two stages at which tentatively defined senses are judged to be polysemous. These two stages represent the different degrees to which the tentatively defined senses differ from each other. Those judged to be polysemous at the first stage (e.g., *character*) represent a clearer case of polysemy (i.e., there is a greater semantic distance between them) than those judged to be polysemous at the second stage (e.g., *father*). The latter are closer to a case of generic sense. The degree of certainty with which a judgment about mutual contrastiveness and exhaustive coverage can be made may of course differ delicately from one case to another. This, however, simply reflects the inherent indeterminacy of the semantic system of human language.

3. Suppose the number of sememes that correspond to a given lexeme is defined in this way. We will then find the following types of correspondence (Lamb 1964):⁷

(1) Simple realization: one lexeme—one sememe, e.g., *hydrogen*. Typical examples are found among technical terms.

(2) Neutralization: one lexeme—more than one sememe, e.g., *man*—'human being,' 'male human,' 'husband,' 'servant,' etc. This is a case of polysemy.

(3) Diversification: more than one lexeme—one sememe, e.g., *oculist* and *eye-doctor* (apart from different stylistic values). This is a case of synonymy.

(4) Empty realization: one lexeme—no sememe, e.g., *there* as in *there is a book*.⁸

(5) Zero realization: no lexeme—one sememe, e.g., the sememe of 'goal' as in *creep under a bed* (cf. *creep from under a bed*).

Obviously, the notion of zero realization cannot be employed indiscrimi-

nately. If one should decide, for example, that there is zero realization of the sememe 'come' after the preposition *to* in *you may come if you want to*, one would have to posit zero realization for any verb that could occur in place of *come* in the above sentence (e.g., *you may stay if you want to*, *you may stand if you want to*, etc.). This would be a highly undesirable consequence. It is obvious that cases like this had better be described as deletion transformation rather than realization.⁹

4. Componentially, sememes do not exclude each other. In other words, a sememe (or more precisely, a semantic unit that constitutes a sememe) can be a component part of another sememe. (Consider the taxonomical structure that characterizes many parts of the lexicon of any language. Thus a semantic unit constituting a sememe realized as *child* is part of the semantic unit constituting a sememe realized as *boy* or of the one constituting a sememe realized as *girl*.) This overlapping in structure is characteristic of the semantic system and contrasts it in a characteristic way with the phonological system of language.

Consider the following hypothetical parallelism. Suppose that a certain language had a set of three phonemes whose compositions are as follows:

/p/: 'closed' + 'labial' + 'unvoiced'

/b/: 'closed' + 'labial' + 'voiced'

/P/: 'closed' + 'labial'

Structurally, this is parallel to the following set of sememes:

BOY: 'human' + 'young' + 'male'

GIRL: 'human' + 'young' + 'female'

CHILD: 'human' + 'young'

It has already been noted that a structure like this is not at all uncommon in the semantic system of language. On the other hand, it will not be difficult to see that a language, part of whose phonological system is constructed as shown above, is not very likely, because one would then constantly be at a loss to judge whether the sound intended by the speaker is /p/ or /P/, or /b/ or /P/ as the case may be. This would no doubt lead to more confusion in communication than could possibly be tolerated. Thus there is an important structural difference between the way in which sememes are constituted by distinctive semantic features and the way in which phonemes are constituted by distinctive phonological features: a sememe can incorporate as its constituent part a set of semantic features that is realized as another sememe, but a phoneme does not seem to incorporate as its constituent part a set of phonological features that is realized as another phoneme in the same language.¹⁰

5. We now proceed to discuss how a semantic unit (itself capable of functioning as a sememe) is combined with another semantic unit (also itself capable of functioning as a sememe), so as to constitute a semantic unit of larger size that functions as a sememe in the language in question. There are two types of combination: incorporation and presupposition.

5.1.1. Incorporation can be seen, for example, when the sememes GO and ACROSS are combined to produce CROSS, a sememe to be realized as the lexeme *cross* (as in *cross a bridge*). The sememes combined may be on approximately the same footing, as in MAN₂¹¹ (= either 'male human' or 'human male'), or one sememe is dominant and the other is, as it were, absorbed into it, as in CROSS just mentioned. The former case can be considered as a special case of the latter and the term *incorporation* will be used to cover both cases.

"Incorporation" is one of the key notions in Gruber (1976), where three possible cases are distinguished:

- (1) Obligatory incorporation of an obligatory element
- (2) Optional incorporation of an obligatory element
- (3) Optional incorporation of an optional element

E.g.: (1) ACROSS is an obligatory element for the meaning of *cross*. *Cross the bridge*, but not **cross across the bridge*, is acceptable. The incorporation of CROSS, therefore, is obligatory.

(2) THROUGH is an obligatory element for the meaning of *pierce*. Both *pierce the cushion* and *pierce through the cushion* are acceptable. The incorporation of THROUGH, therefore, is optional.

(3) UP is an optional element of the meaning of *climb* because not only *climb up the ladder*, but also *climb down the ladder*, *climb into the tent*, etc., are possible. Both *climb the ladder* and *climb up the ladder* are acceptable. The incorporation of UP, therefore, is optional.

Gruber further mentions a logically possible fourth case, namely, "obligatory incorporation of an optional element," and adds that if such a case did exist, it would not conveniently be described by his representation.

It can be argued against Gruber's scheme that cases (3) and (4) do not have to be posited after all. Two things can be pointed out in this connection. One problem is with the term "optional element." If a certain semantic element is optional for the meaning of a lexeme, it does not have to be specified as a component part of the meaning of the lexeme, because it does not bear a distinctive function for the meaning of the lexeme (i.e., does not serve to distinguish the meaning of the lexeme from the meanings of other lexemes in the same language). (Notice that MALE, LINEAL, and ONE GENERATION ABOVE EGO are specified for *father*, because these semantic elements distinguish the meaning of the lexeme *father* from the meanings of such lexemes as *mother*, *uncle*, and *son*, respectively, but that there is no need to specify STRONG, for example, for *father*, because there does not exist in English a pair of lexemes in which one refers to "a strong father" and the other to "a not strong father.")

The other problem is that Gruber's scheme is suspiciously based on a Grundbedeutung approach. UP is certainly optional for the meaning of *climb*, as Gruber thinks, only if a single total meaning is to be posited for the lexeme. But consider the fact that although the directionality of motion is irrelevant for *climb* when it is used as an intransitive verb, it will only be understood as

referring to a downward movement when used as a transitive verb (e.g., *climb the ladder*). This points to the need for giving a special treatment to those uses in which *climb* refers to an upward movement, in other words, for describing the meaning of *climb* in terms of polysemy. Thus in the sense in which *climb* refers to an upward movement, UP is an obligatory element. At the same time, it is possible to say in this particular sense either *climb the ladder* or *climb up the ladder*. The incorporation of UP, therefore, is optional. This will allow us to classify the verb as belonging to the same category as *pierce*. In the other sense, in which *climb* refers simply to a creeping motion, however, neither UP nor DOWN—or INTO, etc., for that matter—is an obligatory element for the meaning of *climb*; they do not undergo incorporation, either. They do not, therefore, have to be specified in describing the meaning of *climb*.

5.1.2. Theoretically, three ways of describing incorporation will be conceivable. One is to represent it as a Boolean union, as is seen in the early stage of the Katzian approach (see Katz and Fodor 1964). This seems to be all right so long as the semantic units concerned are approximately on equal footing, as in HUMAN, MALE, and YOUNG for *boy*. But when this is not the case, as in GO and ACROSS for *cross*, the method is highly unsatisfactory. It fails to reflect the obvious fact that GO is the head and ACROSS is subordinate to it.

A second way of representation is to recognize the unequal relationship, as is seen in Weinreich's proposed emendation (Weinreich 1966) of the early Katzian approach. Besides "linking" (as in OFFSPRING and FEMALE for *daughter*), Weinreich posits "nesting," a relationship in which one element is specified by the other (as in FURNITURE → FOR SITTING). Weinreich's proposal is obviously an improvement over the early Katzian approach, but can be further refined. To say that one element is specified by the other is not enough. For the purpose of semantic representation, it must be made clear in what respect it is specified. Weinreich perhaps already had this point in mind when he represented one of the elements FOR SITTING (and not simply SITTING). But FOR is itself a recurrent element and can be given an independent status as a semantic unit. Then, parallel to FOR (purpose), we have a series of such relating features as AS A RESULT OF (result), AT THE SAME TIME AS (simultaneity), as well as ACROSS, FROM, IN, ON, TO, etc.

This brings us to a third type of representation in which sememes are combined through the mediation of a relating feature specifying in what kind of relationship they are combined. Notice that the thing I call a *relating feature* here is also a sememe and is usually realized as a lexeme having a prepositional or a conjunctive function. In contrast, we will introduce a term *proper feature* to designate a sememe combined through a relating feature.

Incorporation can then be classified into the following three categories, depending on the kind and size of the semantic unit involved in incorporation:

- (i) a proper feature (or a semantic unit with a proper feature as head)

- (ii) a relating feature + a proper feature (or a semantic unit with a proper feature as head)
 - (a) only a relating feature incorporated
 - (b) both a relating feature and a proper feature (or a semantic unit with a proper feature as head)
- (iii) a relating feature + a propositional structure

Examples (the semantic units that are incorporated are shown in brackets):

- (i) CHILD = HUMAN + [YOUNG]
GLIDE = GO + [SMOOTH]
- (ii) (a) CROSS = GO + [ACROSS]
ACCOMPANY = GO + [WITH]
- (b) DRIVE = GO + [BY + CAR]
FLY = GO + [IN + AIR]
- (iii) BRING = COME + [AT THE SAME TIME AS + HAVE]
CHASE = GO + [IN ORDER TO + BE BY]

5.2. The distinction between incorporation and presupposition can be seen by comparing the sememes MARE and GALLOP. It is clear that a semantic unit HORSE is involved in either case, but HORSE is one of the semantic features that constitute the inherent property of the sememe MARE, while this is not the case with GALLOP. With GALLOP, HORSE is a tactically presupposed feature of a semantic unit whose inherent property is representable as something like GO + ALL FEET OFF GROUND TOGETHER IN EACH STRIDE.

5.2.1. Presupposition in the present text can be understood either in a restrictive or in an interpretive sense. In a restrictive sense, presupposition specifies a range of sememes with which the semantic unit representing the inherent feature is *allowed* to enter into combination. If the sememe with which it combines falls within this range, the resulting combination is judged semotactically well-formed; if not, semotactically ill-formed. In an interpretive sense, presupposition specifies a range of sememes with which the semantic unit representing the inherent feature is *expected* to enter into combination. If the sememe with which it combines falls within this range, the resulting combination is judged normal; if not, deviant.

The difference is crucial. In the restrictive sense, a combination not fulfilling the conditions specified is simply rejected. In the interpretive sense, it is reinterpreted (or at least checked for reinterpretation) as if the conditions specified were fulfilled. Thus an expression like *a flower smiles* will be rejected outright in the restrictive view, while in the interpretive view, it is reinterpreted as a case of personification, as if the flower were endowed with the feature HUMAN. Since the restrictive view is obviously too strong, excluding all metaphorical expressions as illegitimate, the interpretive view is here preferred.¹²

5.2.2. Not all sememes have their range of presupposition specified.¹³ In the sense in which we are now considering it, presupposition is one-way (and

not mutual) determination. There is a hierarchical relationship in this respect among different types of sememes.¹⁴

For example, sememes of the 'action' or 'change of state' type (e.g., GO, NEIGH, DIE, etc.) presuppose sememes of the 'thing' type (i.e., 'actions' and 'changes of state' have the semantic range of 'things' specified that are capable of performing those actions and of undergoing those changes of state, respectively). Similarly, sememes of 'quality' type (e.g., GOOD, YOUNG, LOVELY, etc.) also presuppose sememes of 'thing' type (i.e., 'qualities' have the semantic range of 'things' specified that possess those qualities). Notice that in either case the presupposition works only in one way. NEIGH presupposes HORSE, but not vice versa; there are many things a horse can do besides neighing. DIE presupposes ANIMATE, but animate beings undergo other changes than dying, too. LOVELY presupposes FEMALE or NON-ADULT, but being lovely is not the only state in which a female or a child can be.

In the same way, sememes representing 'relating features' presuppose sememes of either 'thing' type or of 'proposition' type, as the case may be. ACROSS, for example, presupposes SPACE, but not vice versa.

Sememes of the 'action' or 'change of state' type, while presupposing sememes of the 'thing' type as noted above, are in turn presupposed by sememes of the 'manner' type. Similarly, sememes of the 'quality' type are themselves presupposed by sememes of the 'degree' type. Thus VIOLENT and TO A HIGH DEGREE presuppose ACTION and QUALITY, respectively, but not vice versa.

Thus sememes of the 'thing' type stand at the top of a hierarchical relationship, presupposed by others but apparently not presupposing any other. They do, however, have presuppositions of their own—but presuppositions of a different kind. The presupposition of sememes of the 'thing' type seems to be that there exist such 'things' as are referred to by them. Thus the sememe STONE, for example, presupposes that in the world of the English-speaking people there exist 'things' referred to by a lexeme (or a set of lexemes) realizing this sememe. Insofar as this presupposition refers to the world of reality, it is different from the kind of presupposition we have been considering above.

It may appear that the hierarchical relationship of presupposition we have described can also be defined in terms of parts of speech. Thus for example, "verbs" and "adjectives" can apparently be described as presupposing certain kinds of "nouns." That this formulation is not correct will easily be seen if we consider nominalized verbs and adjectives. *Death* and *loveliness* are nouns, but they need the same semantic range of application specified as the verb *die* and the adjective *lovely*, respectively. This consequence is only natural, since parts of speech are surface categories (belonging to the lexemic stratum), while the presuppositional relationship we are considering operates at a deeper level (belonging to the tactical component of the sememic stratum).

5.2.3. In describing presupposition, two types of sememes are to be specified. Sememes of one of these refer to the inherent property; sememes of the other

refer to the functional property. Thus for a sememe like NEIGH, it is necessary to specify as its range of presupposition not only HORSE (inherent property) but also AGENT (functional property). This two-fold specification is necessary, because there is no one-to-one correspondence between the categories for inherent property and those for functional property. Thus consider ANIMATE and INANIMATE, on the one hand, and AGENT and NON-AGENT, on the other. INANIMATE can indeed only be NON-AGENT,¹⁵ but ANIMATE can be either AGENT or NON-AGENT.¹⁶ Thus a sentence like *he moved* is ambiguous between two interpretations; he may have moved of his own will or he may have moved because he was pushed, etc.

Not all sememes, however, have this two-fold specification. Sememes of the 'action' type typically need specification as to both the inherent and the functional property of the sememes they presuppose. But sememes of 'change of state' type as well as those of 'state' or 'quality' type need only to be specified as to the inherent property of the sememes they presuppose. Thus it is relevant to specify whether *John* in *John moved* represents an AGENT or a NON-AGENT. But it would seem highly irrelevant to ask whether *John* in *John died* represents an AGENT (e.g., committed suicide) or a NON-AGENT (e.g., was killed in a car crash). 'Change of state' verbs refer primarily to the consequence of a change and do not significantly concern themselves with whether or not the change is produced on purpose. For 'state' verbs, the possibility of AGENT interpretation is eliminated.

5.2.4. Sememes referring to an inherent property that are presupposed by other sememes are presumed to constitute a subset of all the sememes in the language. It is tempting to suppose that sememes presupposed by others are those referring to generic (and therefore likely to be employed frequently) rather than specific (and therefore likely to be employed less frequently) categories. There is no guarantee that this will always hold. Consider a community in which a special social significance (e.g., taboo) is given to a certain object. It is easily conceivable that the language of this community provides its speakers with special vocabulary to be used when referring to such an object (e.g., a word for 'visit' as applied to the Emperor, as was once the case in Japanese). The extreme case would be a language in which every conceivable particular object is provided with a specific lexeme (with its correlated sememe). Such a language could not possibly exist, because the burden it would impose on the speaker's memory would be well beyond the capacity of the human brain. There should, therefore, be a certain natural boundary to the degree to which the category of the sememe presupposed can be specific. But it is impossible to say *a priori* how specific it can be, because the categorization depends on cultural factors, which can be different from one language community to another.

5.2.5. Sememes that refer to a functional property and that are presupposed by other sememes will not be numerous. If anything approaching a list of

'universal' sememes should ever be possible, it would concern not sememes referring to inherent properties, but those referring to functional properties. Fillmore's case grammar was interested in this task and at its final stage arrived at a list of eight cases: AGENT, EXPERIENCER, INSTRUMENT, OBJECT, SOURCE, GOAL, LOCATION, and TIME (Fillmore 1971). The approach Fillmore chose was an inductive one, but because of the uncertainty as to how much contextual meaning could be read into the meaning of the case, the list he proposed impressed one as indeterminate and unconvincing.

Perhaps we could also try a deductive approach. It may help us, if not to arrive at a final list of cases, at least to be convinced that the number of cases must remain indeterminate. For example, on the basis of a localistic hypothesis, we could start with four fundamental cases, OBJECT, on the one hand, and SOURCE, GOAL, and LOCATION, on the other, to represent motion (X GO FROM Y, X GO TO Y) and existence (X BE AT Y) in space.¹⁷ But if we leave the concrete level and come to think of the same set of relationships at an abstract level, then SOURCE, GOAL, and LOCATION will correspond to CAUSE, RESULT, and COMITATIVE, respectively. Or again, if SOURCE, GOAL, and LOCATION are represented by a human being (potentially capable of acting and feeling) and are assigned privileged positions in sentence structure, then the three cases will be reinterpreted as AGENT, BENEFICIARY, and POSSESSOR, respectively.¹⁸ (Cf. *The ball went away from John* → *John threw/pushed, etc., the ball away*, *The ball came to John* → *John got the ball*, *The ball was with John* → *John had the ball*.) Furthermore, LOCATION can stand outside a propositional structure (i.e., AT Y + PROPOSITION) as well as inside a proposition, as we have already seen (i.e., X BE AT Y). If then the mode is changed from spatial to temporal, we have BEGINNING, END, and TIME corresponding to SOURCE, GOAL, and LOCATION, respectively (e.g., *In New York, something happened* → *In the morning, something happened*). We thus have the following list:

Concrete Mode	Abstract Mode	Human Mode	Time Mode
SOURCE	CAUSE	AGENT	BEGINNING
GOAL	RESULT	BENEFICIARY	END
LOCATION	COMITATIVE	POSSESSOR	TIME
OBJECT			

We see that some of these possible cases are commonly discussed in the literature, but some (e.g., CAUSE, BEGINNING, END) are not. Further derivation of cases is also possible. INSTRUMENT, for example, is clearly related to COMITATIVE; it is a variant of COMITATIVE in the environment in which causation is involved. But we will not discuss this problem any further here.

5.3. We have so far assumed the distinction between incorporation and presupposition. In fact, the two categories show different behaviors with

regard to redundancy. *Male boy*, for example, is an unmistakably redundant expression. This can be accounted for by saying that BOY has a sememe MALE incorporated into it and that this and the same sememe represented by *male* produce redundancy. *A horse neighed*, on the other hand, is semantically not redundant. HORSE is not an inherent feature for NEIGH but is only presupposed by it, and the presupposition is fulfilled by the lexeme *horse*, which realizes the sememe HORSE.¹⁹

But consider an expression like *glide smoothly* or *pierce through the cushion*. A possibility of analyzing the meaning of *glide* as GO + SMOOTH and of *pierce* as GO + THROUGH has already been touched upon. SMOOTH and THROUGH are supposed to be inherent features in this analysis. The expressions *glide smoothly* and *pierce through the cushion* should therefore be semantically redundant, just as *male boy* is. But actually, they are not.

In cases like these a semantic unit that is supposed to be incorporated as an obligatory element is, as it were, projected on the syntagmatic axis.

5.3.1. We will first discuss cases like *pierce through the cushion*. Compare the following:

- (1a) go through the cushion
- (1b) pierce through the cushion
- (1c) pierce the cushion

Here two semantic units, GO and THROUGH, are involved. In (1a) THROUGH is not an obligatory element for GO. In (1b) and (1c), on the other hand, it is an obligatory element for GO. The unit GO in (1a) and the one in (1b) and (1c) have therefore to be distinguished; we will keep the representation GO for the former and use PIERCE for the latter. PIERCE presupposes a semantic unit that consists of a relating feature THROUGH and a proper feature SPACE (in which the former feature may or may not be incorporated).

Now it will easily be seen that there is an obvious structural parallelism between a set of terms, "a relating feature" and "a proper feature," which we have used in discussing incorporation, on the one hand, and a set of terms, "a sememe referring to functional property" and "a sememe referring to inherent property," which we have used in discussing presupposition, on the other. If we reread THROUGH + SPACE as SPACE AS PATH and think that THROUGH is a specification of the function PATH, then the structural parallelism between it and semantic units like ANIMATE AS AGENT, HUMAN AS BENEFICIARY, CONCRETE AS OBJECT, etc., will be obvious. This brings us to a generalization, namely, a sememe of 'action' type presupposes a semantic unit that consists of a sememe referring to functional property and a sememe (or a set of sememes) referring to inherent property. The sememe referring to functional property may or may not be incorporated. Whether or not it is incorporated is a matter for individual sememes. PIERCE allows either incorporation or non-incorporation. But compare the following:

(2a) get to the station

(2b) reach the station

In either case, a semantic unit, LOCATION AS GOAL, is involved. The sememe GOAL can be incorporated only in (2b); in (2a), however, non-incorporation is the only possibility.

It is quite possible to conceive of a language in which the sememes referring to functional property are always realized by certain forms (whether particles or case-forms) and in which therefore the notion of incorporation does not have to be applied to their description. In fact, it can even be eliminated from the description of English, if we take syntactic positions ("subject-position," "direct-object-position," etc.) as realizing the functional property. For example, if we think that the direct-object-position realizes the functional property GOAL in (2c), then *reach* no longer incorporates GOAL but presupposes it (just as in the case of (2b)); the difference is simply that the GOAL is realized by a preposition in (2b) and by the syntactic position of object in (2c).

Of more interest seen in a broader perspective is the question whether or not the presupposed semantic unit involving a sememe referring to functional property and a sememe (or a set of sememes) referring to inherent property is obligatorily actualized in the utterance. Intralinguistically, there are differences in this respect according to the kind of the functional sememe involved. A sememe referring to AGENT, for example, usually seems to have a greater probability of actualization than one referring to INSTRUMENT or LOCATION. But here there are interlinguistic differences, too. A language of 'subject-prominent' type generally shows a greater degree of obligatoriness in this respect than a language of 'topic-prominent' type.²⁰ Thus, where a subject-prominent language like English says *I ate it*, Japanese, a topic-prominent language, would simply say the equivalent of *ate*, leaving the presupposition as to the agent and the object unactualized. Notice that as an utterance in a particular context either expression is semantically equally complete. The presuppositional relationship is the same and offers the same possibility of interpretation for the hearer. The only difference is that what fulfills this relationship is explicitly stated in one but is implicitly given by context in the other.

One implication of this is that a subject-prominent language shows a greater degree of independence from the context, and a topic-prominent language shows a greater degree of dependence on it. It is a well-known fact that the children of a subject-prominent language community start with utterances of topic-comment type (which are grammatically "looser" and more context-dependent) and undergo a process of acquiring rules to produce sentences of subject-predicate type (which are more context-independent). It will also be interesting to note that in the highly honorific way of saying things in Japanese, even the agent (which, in the subject-prominent language, is typically associated with the subject and is therefore a highly obligatory

element) is represented as if it were a location (which is naturally more prone to be suppressed) where something takes place. Thus referring to the Emperor, one might say the equivalent of *At the Emperor, eating came to pass*.

5.3.2. Next comes the problem of *glide smoothly*. The expression may indeed be mildly redundant from a semantic point of view, but by no means intolerably so. Several factors seem to be involved in producing this effect. It is quite legitimate to suspect that one of the semantic components incorporated in GLIDE is not exactly the same as the sememe that is realized as *smoothly*. But consider first a very similar case like *young boy*. YOUNG (or NON-ADULT) is often posited as one of the semantic components of the sememe BOY, and this component is usually identified as the sememe realized as the lexeme *young*. The expression *young boy* should therefore be semantically redundant, but it is by no means so.

Now the impression one gets from an expression like this is that the feature of 'being young' in particular is given special emphasis.²¹ But this is clearly not the whole story, because *male boy* would sound unnatural even under the same assumption. The difference between *young boy* and **male boy* lies in the fact that 'being young' is a matter of degree but 'being male' is not (cf. *very young*—**very male*), so that it is possible in the case of YOUNG to emphasize in particular its comparatively higher degree, while this is not possible for MALE.

There is a certain parallelism between this situation with *young boy* and the one in which expressions like *walk on foot*, *sail by ship*, *drive by car*, and *swim in the water* are felt more or less semantically redundant, while expressions like *walk on one foot*, *sail on an ocean liner*, *drive in a new car*, and *swim in the muddy water* are not. The latter expressions specify particular instances falling within an allowable range. "Specification" can be used as a term covering the cases just mentioned and those like *young boy*. Thus specification reduces the impression of semantic redundancy, because it adds certain new information.

Still another factor may be at work in an expression like *ride on horseback*. If this expression is quite commonly used (in spite of its apparent semantic redundancy), it is perhaps because the addition of *on horseback* excludes the other possible meanings of *ride* (e.g., referring to a car, a train, etc.).

But perhaps more relevant than all these is a certain psychological tendency of ours. If a semantic unit is incorporated, its identity is lost in the new totality it now constitutes. The sememe BOY may indeed incorporate YOUNG, but then this YOUNG does not have the same effect on the speaker as presumably the same semantic unit YOUNG that is realized as the lexeme *young*. Some semantic units (e.g., MALE) may resist this tendency,²² but those which allow of different degrees and specification are easily affected. Our mind does not react alike to something that is there and to something that is not there. This inevitably brings indeterminate factors into any semantic analysis that assumes incorporating processes among semantic units.

NOTES

1. For a fuller discussion of this point, see Ikegami (1977).
2. Jakobson (1936) quotes the following claim of Hjelmslev (1935-37) with approval: "Ein Kasus wie eine Sprachform überhaupt bedeutet nicht einige verschiedene Dinge; er bedeutet ein einziges Ding, er trägt einen einzigen abstrakten Begriff, auf dem man die konkreten Verwendungen ableiten kann."
3. Jakobson's preferred term here is "Gesamtbedeutung."
4. Moreover, the Grundbedeutung approach will fail to account for obvious polysemy of the kind one finds in an expression like *the man's murder* ("transformationally" related either to *the man murdered X* or to *X murdered the man*). The failure of the Grundbedeutung approach is due to the fact that by looking for a common semantic denominator for all the possible uses of a lexeme, it disregards even those significant semantic contrasts that the lexeme contracts with other lexemes in a certain particular set of environments.
5. Cf. Wittgenstein's often quoted claim that the meaning of a word is its use in the language.
6. The meaning of *child* as a kinship term, together with its other specialized meanings, is here disregarded.
7. In most cases, these types of realizational relationship are found in combination with each other—a relation described by Lamb by the term "interlocking."
8. If functioning like a grammatical subject is taken to constitute the "meaning" of the lexeme *there*, then the example does not belong here. But this depends upon how one defines the "meaning" of a lexical item.
9. Cf. Gruber (1976:sec. 1.2).
10. Thus there is clearly a limit to how far the analogy between the phonological and the semantic system can go. Coseriu (as expounded by Geckeler [1971:195]), for example, talks about the "archilexeme" (e.g., *Mensch* in contrast to the "lexemes" *Mann* and *Frau*) by analogy with the archiphoneme (in contrast to the phoneme). But an archilexeme here can very well be a lexeme (as is in fact the case with *Mensch*); hence it does not belong to a different stratum from the lexeme.
11. By MAN_2 is meant a different sememe from MAN_1 (= 'human').
12. This does not, of course, imply that all "deviant" expressions will be provided with a metaphorical interpretation. They may be branded as nonsense strings. Whether a deviant expression is judged metaphorical or nonsensical is not a matter of degree of deviance but of contextual constraints, which may or may not make a plausible reinterpretation possible.
13. According to Fillmore (1969), the meaning of such a lexeme as *bachelor* is divided into presupposition (HUMAN, MALE, ADULT) and assertion (UNMARRIED). Fillmore speaks as if the division into the two parts were fixed for the meaning of a lexeme. This is of course false. Suppose there is a party to which only bachelors and spinsters are invited. If someone says in this party, *That person is a bachelor*, then it is MALE that is asserted and HUMAN, ADULT, and UNMARRIED constitute the presupposition. The distinction between assertion and presupposition depends on the particular context in which the lexeme is used. Fillmore's discussion is misleading in that it disregards this crucial point.
14. The view here thus stands in contrast to Chomsky's treatment, supported on purely formal grounds (Chomsky 1965:114-115), in which the choice of the verb is constrained by a free choice of nouns with certain features assigned to them. It will perhaps be worthwhile to consider a possible correlation between the choice of descriptive models and the typological distinction between subject-prominent (or noun-centered) language and topic-prominent (or verb-centered) language.

15. The fact that there are cases of personification does not, of course, contradict this point. Personification is in fact possible because of the norm that stipulates that INANIMATE is NON-AGENT.

16. I am not going into a discussion of the definition of the agent; see Cruse (1973). I would like to point out here only that the notion of the agent may not only be indeterminate within one language, depending on what criteria one adopts, but it may also vary between different languages. Thus, for example, the association of the AGENT with ANIMATENESS is much stronger in Japanese than English, so that presented with a sentence like *The wind opened the door* or its Japanese equivalent, the Japanese speaker would feel more personification than the English speaker. See Ikegami (Ms.).

17. See Ikegami (1976a, 1976b); also Hjelmslev (1935-37) and Anderson (1971).

18. For the close connection between SOURCE and AGENT, one can refer to the fact that many languages use the SOURCE marker for marking the AGENT. It is also significant that the SOURCE marker does appear when the agent is (as in the passive) not placed in its privileged position in a sentence.

The hypothesis proposed here also accounts for the semantic difference pointed out by Green (1974:157) between *John taught Mary English* and *John taught English to Mary*. In the former sentence, *Mary* is placed in a privileged position as a term referring to a human being, while in the latter *Mary* is represented simply as a location intended as goal. It is natural, therefore, that the former sentence is associated with the successful mastery (at least to a certain extent) of English, while the latter leaves the point open.

Finally, the relation between LOCATION and POSSESSOR concerns the typological contrast (already pointed out by Issatschenko [1974]) between the *BE*-language and the *HAVE*-language. See Ikegami (1976b and 1978).

19. Weinreich (1966) once proposed to describe the same situation in terms of "transfer features." Thus *neigh* (he would say) has a transfer feature *HORSE*, which is transferred to the other lexeme with which *neigh* comes into combination. While it is true that this is a convenient way of accounting for metaphor, it obviously produces redundancy when applied to a sentence like *A horse neighed*, because the feature *HORSE* is already there with the lexeme *horse*. An ad hoc rule to delete the redundant feature will then be needed.

20. For the typological distinction, see Li (1976).

21. An extension of this usage is the so-called "non-restrictive" (as contrasted with "restrictive") use of an adjective: e.g., *fair Ophelia, white snow*. Note that the qualities projected are not necessarily distinctive for the meaning of the head noun.

22. The surest way of producing the effect of redundancy is the repetition of the same (or partially the same) lexemic forms. (The unacceptability of *cross across* certainly owes to this: cf. *cross over to*.) But if the repeated item (even though closely synonymous) differs formally, our linguistic instinct dictates that there must be some difference in meaning and that the repeated item does not simply repeat exactly the same meaning.

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