

PIETER A. M. SEUREN

LEXICAL MEANING AND PRESUPPOSITION¹

O. Introduction

Not everyone is agreed that lexical meanings are, or can be, complex and are thus open to analysis. Fodor, for example, has claimed for years now that all lexical meanings are one and indivisible. This is, however, not the prevailing opinion. In fact, there is an old tradition, going back to Plato, of lexical analysis, and various systems have been thought up to implement lexical analytic procedures. In fact, systematic comparison of lexical items irresistibly invites analysis. Compare, for example, the three English verbs *kill*, *murder*, and *assassinate*. Whereas *kill*, following McCawley, can be seen as 'cause to die',² *murder* clearly is 'kill' plus something extra, i.e., 'kill unlawfully, with malice aforethought', as the legal definition has it. And, in its turn, *assassinate* is 'murder' plus something extra, i.e., 'murder an important public figure on account of his/her public status'. Examples like these are easily multiplied.

Through the centuries, three main approaches have been developed to carry out lexical analysis:

- a. componential analysis
- b. field analysis, and
- c. prelexical analysis.

1 The ideas developed in this paper are a direct consequence of the theory of presupposition as developed in Seuren (1985, forthcoming). The lexical aspects of this theory, which are central in this paper, are directly inspired by Fillmore's seminal paper (1971), which gained wide recognition but remained without a follow-up, probably because of the absence of clear operational criteria for the distinction between presuppositional and assertive content. One aim of this paper is to provide sufficient workable criteria in this respect. It is hoped that this study will contribute to further investigations along the lines set out by Fillmore and followed up here.

2 Fodor's (1970) objections have been answered in Seuren (1985: 204-8).

The method of componential analysis is the oldest and most widely practised one. We find it in Plato's dialogue *Cratylus*, which was followed in classical antiquity by a long stream of etymologizing analytic treatises on word forms and word meanings. It is found, for example, in Leibniz's famous attempt at a universal analytic metalanguage for the description of all lexical items of a language. We find it in Katz/Fodor's (1963) and Katz/Postal's (1964) system of features and markers, and the closely related method, mainly used in anthropology, of componential analysis of kinship terms.

Field analysis is a 20th century innovation. It is based on an application of the metaphor of geometrical extension. The meaning of a word is compared with a 'field', which has a centre, a periphery, and topologically definable relations with neighbouring fields. Word meanings are thus constrained, strictly speaking, to a definition in terms of two parameters, just as geometrical planes are. The metaphor could, of course be extended to three-dimensional, or n-dimensional, space, but then it becomes hard to see what is gained by the notion of space. In any case, what we find is two-dimensional space. In a still rather blurred way, this notion is found in Erdmann (1910), but more clearly in the writings by Trier between 1931 and 1934 (Trier's theory of '*sprachliche Felder*'). In a less geometrical way, but with an accent on 'nuclear' versus 'non-nuclear' items (verbs), elements of this approach are encountered again in Dixon (1971, 1972).

Prelexical analysis is historically bound up with the movement in grammatical theory known as 'generative semantics', flourishing in the late '60s and early '70s. It is a form of lexical semantic decomposition based on an analogy with 'open' syntax: for certain classes of lexical items, such as causative verbs, striking parallels can be pointed out between their syntactic properties and those of their 'open' syntax correlates.

All three types of lexical analysis, however, have so far met with insurmountable problems: whereas applications to isolated sections of the lexicon seemed feasible, it always proved unfeasible, or downright impossible, to apply any of these three types of analysis to a natural language lexicon as a whole. For componential analysis it has so far proved impossible to establish a workable metalanguage, or rather a metalexicon, for the expression of the semantically atomic components. (In itself such an exercise would seem to be of great value, since any proposal as to such a metalexicon necessarily amounts to a hypothesis about the cognitive categorization according to which the members of a speech community interpret the world. But the task has so far proved to be beyond the

powers of those who accepted it.) Field analysis is too heavily constrained to stand a chance of being generally applicable to lexical items (which clearly have more than two dimensions of description, - if it makes sense at all to speak of the number of parameters required in this respect). Prelexical analysis, likewise, has so far lacked the generality of application required of a general method of lexical analysis.

The upshot is, therefore, that we still lack a general method of lexical analysis. This (embarrassing) fact is reflected in the monolingual and bilingual dictionaries that are available today. Word meanings are analysed there on an *ad hoc* basis. Definitions are given, but without any axiomatic underpinnings. And in order to make up for deficiencies in the definitions given, lexicographers resort to examples meant to convey the conditions for the correct use of the words in question. Although this practical method has served us well through the ages, it has serious theoretical shortcomings (such as, in particular, that of definitional circularity). It also suffers from practical disadvantages, in that translation processes could conceivably be speeded up considerably if dictionary lemmas were structured in a more systematic way than they are in the dictionaries that are available nowadays. Given the massive amounts of translations that have to be made in the context of vastly increased international contacts on all levels, this would seem to be an interest of considerable magnitude.

What this paper is meant to illustrate is that there is in any case one general distinction that can be maintained throughout the lexicon of any language, and that is likely to be of considerable use in systematizing the semantic analysis of lexical items. This distinction is closely linked up with the phenomenon of presupposition. But before we can proceed to a discussion of this distinction, a few remarks of a general methodological nature are in order. Three points need to be considered in particular.

1. Preliminary points

First, it must be stressed that lexical theory cannot be of the predictive kind, but must of necessity be retrodictive. Theories dealing with sets of data whose character, to the extent that it is systematic, is determined by too many parameters of too many different kinds must give up the hope of predictive power: when systematic processes or structures can be 'broken into' at any moment or any place by factors whose appearance is largely due to chance, it becomes impossible to predict categorically the further course of the process or the

eventual shape and functioning of the structure. In such cases the factors involved are too many and beyond control. Predictive theories need data that are sufficiently insulated or encapsulated. If this condition is not fulfilled, the best that can be achieved is a retrodictive theory, which can locate causal factors only after a fact has occurred or failed to occur. Its predictive power is then necessarily restricted, at best, to a range of possible alternative future phenomena. Typical examples of retrodictive theories are found in the historical sciences, most of the medical sciences, meteorology, and lexical theory. One should, therefore, not expect lexical theory to be able to predict whether a given language will have some specific lexical item, or whether items of a certain form or structure will have some predicted meaning or grammatical function. The best that can be achieved is, after observation of lexical facts, indicate the factors that must have been at work, to the extent that they are identifiable. The first task of lexical theory is, therefore, to detect lexical regularities and devise a system of categories and possible factors.

The second point is closely connected with the first: lexical items tend to be, by their very nature, unique. They symbolize or express concepts, and we speak of a concept when the conceiving subject recognizes phenomena with certain properties as being of a kind. Conceptualization processes are heavily dependent on idiosyncratic factors of personal or group experience and functionality, while at the same time being constrained by system-internal structuring principles. Lexical items can be said to represent Gestalt knowledge. They arise typically when new kinds of recognizable phenomena present themselves in the lives of the speakers. Examples abound, especially in the sciences, but also in ordinary life. The English word *engine* underwent a rapid and dramatic specialization and fixation of meaning when engines became a fact of life. Pop groups bring out *albums*, not *records*, presumably because, in the relevant circles, records with pop music on them represent a separate recognizable category. The word *record* itself is a recently acquired lexical item with the specialized meaning of flat disc with engravings that can be transformed into acoustic signals by means of a gramophone (note that a *compact disc* is not a record). It is, however, not possible to predict that a language will make a lexical distinction between *record*, *album* and *compact disc*. All that can be done is say, in hindsight, that, apparently, such and such developments in public or cultural life have been responsible for the emergence of these lexical distinctions.

The third point is equally closely connected: to posit internal structure in

the meanings of (a class of) lexical items does not imply that such structural analyses should exhaust the meanings in question. In other words, lexical analyses need not be compositional in the technical sense of the term as it is used in formal semantics: the total meaning of a lexical item may be more than the value resulting from the functional calculus of its parts (or, as it is often put in vulgarizing terms, more than the sum of its parts). (Whether it may perhaps, in some cases, also be less than 'the sum of its parts' is an open question that will have to be decided on empirical grounds.) This point applies in particular to the componential and to the prelexical methods of analysis. It is quite conceivable that a successful and convincing componential or prelexical analysis is proposed for one or more lexical items while, at the same time, it is recognized that the item or items in question have meanings that go well beyond the analyses given. The reason for this is precisely our second point: lexical items tend to be semantically idiosyncratic and arise according to communicative needs. Since new concepts are often specializations of existing, wider concepts, it is quite natural that speakers should make use of existing lexical structures associated with the wider concepts and add the specificities as a small extra ballast, using either a new lexical form or an existing form which then acquires ambiguity or at least recognizably specific usage. *Record* in the sense of 'grammophone record' is an example of an already existing item, now equipped with a separate though related specific meaning. The English verbs *murder* and *assassinate* are specializations of the wider item *kill*, whereas, as we have seen, *assassinate* is a further specialization of *murder*. It is perfectly possible to maintain that all three of these verbs have the same 'skeletal' structure of 'cause to become dead', while at the same time carrying different idiosyncratic 'extras'.³

The non-compositionality of lexical analyses is mirrored in compound nouns, but these have the advantage that their 'internal analysis' is there for everyone to see. Here, too, the resulting meaning is only partly derivable from the component parts: a *tennis elbow* is not like a *tennis racket*, and the difference is not reducible to that between an elbow and a racket. Examples are *rife: coat-hanger* and *sliffhanger*, *face towel* and *face value*, *city hall* and *concert hall*. Available background knowledge is clearly essential in determining the correct final meaning, together with conventionalized linguistic meaning (as with

3 Chomsky's criticisms in this respect (1972: 72, 142-6) miss the point, since they are based on the misconception that prelexical analyses should be compositional.

cliffhanger). Compound nouns are thus a living proof that structure assignment need not mean compositionality: sheer memory, i.e., the lexicon, will supply the missing elements.

The point of having a non-compositional 'skeletal' structure is obvious: it cues, or prompts, the associated meaning. Compounds do this overtly, in the external acoustic material. Single lexical items must be assumed to do the cueing or prompting internally, thereby facilitating lexical search procedures. The main problem is empirical: what kind of evidence will support internal analyses, distinguishing linguistic from encyclopaedic knowledge? Only partial answers are available as yet, as we have seen. An adequate general answer is still lacking, but it should be very high on the list of priorities in lexical studies.

2. Presuppositions and lexical conditions

Let us pass on now to the main topic of this paper: lexical analysis in terms of different kinds of lexical conditions. The distinction links up directly with presuppositions. We shall speak of a presupposition P of a carrier sentence A when:⁴

- a. P is an entailment of the assertive form of A;
- b. the sequence 'P and/but A' forms good discourse, while 'A and/but P' does not;
- c. a sequence of the form 'possibly not P, but A' is felt to be contradictory.

Thus, (1b) is a presupposition of (1a), but (2b) is not a presupposition of (2a):

- (1)a. Susan has forgotten that today is her birthday.
- b. Today is Susan's birthday.
- (2)a. Lady Fortune neighs.
- b. Lady Fortune is a horse.

(1b) is an entailment of (1a): it is intrinsically and per se impossible for (1a) to be true while (1b) is not true; then, 'Today is Susan's birthday, but she has forgotten that it is' is a perfectly natural bit of discourse, while the reverse order produces an awkward sequence; and 'Maybe today is not Susan's birthday, but she has forgotten it is' is intuitively contradictory.

4 For detailed analyses and discussions, see Van der Sandt (1982; 1988) and Seuren (1985: 210-3, forthcoming).

For (2), we notice that (2b) is at least not clearly an entailment of (2a): is it or is it not possible for someone to neigh while not being a horse? The sequence 'Lady Fortune is a horse and she neighs' is good discourse, but so is 'Lady Fortune may not be a horse, but she neighs'. According to the definition given, (2b) is thus not a presupposition of (2a).

It has been observed by a large number of authors that presuppositions have at least one specific property not shared by non-presuppositional entailments: when the carrier sentence A is embedded under an entailment-cancelling operator, such as negation, intensional operators of propositional attitude (*believe, hope, wish*), or certain modal operators, then the presupposition is, normally, not simply cancelled or lost, but is retained as what is variously called an 'invited inference', 'suggested inference', or 'default assumption'. Thus, while (3a) presupposes (3b), (4a) does not presuppose (4b) but still has (4b) as invited inference or default assumption:

- (3)a. John's son lives in Kentucky.
- b. John has a son.
- (4)a. John thinks that his son lives in Kentucky.
- b. John has a son.

This property is not shared by 'ordinary' entailments, as appears from the fact that, while (5a) entails (but not presupposes) (5b), (6b) is not retained as an invited or suggested inference (default assumption) of (6a):

- (5)a. John bought tulips.
- b. John bought flowers.
- (6)a. John thinks that he bought tulips.
- b. John bought flowers.

What interests us here, however, is not so much the phenomenon of presupposition itself as the question of the structural source of presuppositions. The (fairly vast) literature fails to give a satisfactory answer to this question: presuppositions are accepted as 'being there' even though it is not known how or why. Only in Seuren (1985, forthcoming) is a general answer provided. In that analysis, presuppositions derive in principle from the semantic properties of the highest lexical predicate of the carrier sentence. This applies equally to the so-called 'existential' presuppositions and to the 'factive' and 'categorial' presuppositions.

In the case of existential presuppositions we have to do with entailments of existence, as in (3) above: for someone to live in Kentucky he has to exist;

hence the existential presupposition (3b). This is the class of presuppositions that attracted philosophers: a sentence like 'The present king of France is bald' (Russell 1905), presupposes that there is a king of France at the moment of speaking. In Seuren's analysis this class of presuppositions is derived from the lexical property of the highest predicate in the sentence in question, i.e., *live* or *bald*, that its subject term must refer to a really existing entity for that predicate to be applied truthfully. We say that these predicates are extensional with respect to their subject terms. Although predicates are usually extensional with respect to their terms, this is by no means always the case. The English predicates *look for*, *talk about* or *think of*, for example, are not extensional with respect to their object terms: one can perfectly well talk about something without that something actually existing, and analogously for the other predicates.

Factive presuppositions have always been associated with sentence predicates, the so-called factive predicates. These are predicates (verbs, adjectives, or other predicate expressions) that take an embedded clause as subject or as object term, with the special property that the truth of the embedded clause is presupposed, as in (1a) above, with the factive predicate *have forgotten*. Examples of factive predicates with factive object clauses are *know*, *realize*, *remember*, *have forgotten*, *regret*, *discover*. Factive predicates with factive subject clause are, e.g., *be a pity*, *be a shame*, *be regrettable*, *be (un)fortunate*, but not, e.g., *be probable*. Here, the lexical origin of the presupposition is obvious (Kiparsky/Kiparsky 1971).

The categorial presuppositions are much more idiosyncratic, and thus more typically lexical. This class is best illustrated by means of a few examples. Thus, (7a) presupposes (7b), (8a) presupposes (8b), and (9a) presupposes (9b):

- (7)a. John has come back.
- b. John was away.
- (8)a. John confessed that he had forged the signature.
- b. The forging of the signature was bad or criminal.
- (9)a. My neighbour is buxom.
- b. My neighbour is a woman.

Presuppositions such as these can likewise be derived from the semantic conditions associated with the main predicate: *come back* requires of its subject term referent that it was away; *confess* requires of its object term referent

that it be bad or criminal; *bucom* imposes on its subject term referent that it be a woman.⁵

Notice, however, that some 'ordinary', i.e. non-presuppositional, entailments are likewise derivable from lexical semantic conditions for truth. In standard logical systems, the logical entailments are specified on the basis of the logical structure of sentences (propositions), including certain specifically logical elements, such as the quantifiers, the truth-functional operators, and any other sentential operator for which a logic has been devised (in particular the modal operators of possibility and necessity). But apart from these, there remain vast classes of non-presuppositional entailments that are purely and uncontroversially lexical. Logicians consider these as falling outside the realm of logic, but they can hardly be considered as falling outside the realm of (lexical) semantics. Examples are (10)-(12), where the (b)-sentences are ordinary entailments of the (a)-sentences:

- (10)a. Harold has bought a new car.
 b. Harold has either paid money or committed himself to pay money.
- (11)a. Harold has died.
 b. Harold is dead.
- (12)a. Harold is a father.
 b. Harold has one or more children.

Entailments such as these can only be derived from semantic conditions associated with the main predicate of the sentence in question: *buy* implies paying money, *die* implies an ensuing state of being dead, and *be a father* implies the having of children.

Our problem now is that we must distinguish between those lexical conditions that generate presuppositions and those that generate only ordinary entailments. For this purpose a distinction is made between two categories of lexical conditions, the preconditions, which generate the presuppositions, and the satisfaction conditions, which generate the non-presuppositional, 'ordinary' lexical entailments. Formally, we associate with each predicate an extension, i.e., a set of individuals for unary predicates, a set of pairs for binary

5 There is a 'remainder' class of presuppositions, mainly those associated with or generated by words like *too*, *only*, *even*, or cleft and pseudo-cleft constructions. In Seuren (1985: 295-313) it is proposed to treat these as, likewise, lexically derived: the words in question are considered to be (abstract) predicates, and (pseudo)clefts are analysed as standing under the main predicate of (specifying) *be*.

predicates, a set of triples for three-termed predicates, etc., such that the predicate in question actually holds for the members of the associated set. These extension sets are, of course, to be defined not by enumeration but by comprehension, i.e., by stating the conditions that must be fulfilled by individuals, pairs, triples, etc., to qualify as members. These conditions are then divided into two categories, the preconditions and the satisfaction conditions. A viable notation is the following, whereby the symbol ' σ ' denotes the function that takes the predicate to its extension set, the colon introduces the preconditions, and the vertical stroke introduces the satisfaction conditions (we take the predicate 'P' to be binary: P^2):

$$\sigma(P^2) = \{ \langle e, f \rangle : \text{. . . (preconditions) . . .} \mid \text{. . . (satisfaction conditions) . . .} \}$$

Now, a sentence of the form ' $P^2(a,b)$ ' - where 'a' and 'b' are the subject term and the object term, respectively, is true just in case the referent of 'a' fulfils both the preconditions and the satisfaction conditions of P^2 in so far as they affect the first member of the pair $\langle e, f \rangle$, and the referent of b likewise fulfils both the preconditions and the satisfaction conditions formulated for P^2 with respect to the second member of the pair $\langle e, f \rangle$. One is thus entitled to conclude from the truth of $P^2(a,b)$ to that of any sentence expressing the fulfilment of the preconditions and satisfaction conditions of P^2 . Presuppositional entailments are generated by the preconditions; 'ordinary' lexical entailments by the satisfaction conditions.

3. Further aspects

Preconditions, and the associated presuppositions, are highly functional with regard to processes of actual linguistic communication. Human communication essentially involves the building up of discourse structures: we would be utterly unable to communicate the way we do if we were restricted to single sentences whose semantic interpretation was entirely self-contained. Philosophers have, at times, entertained such a view of communication, and devised analyses that made sentences semantically entirely self-contained,⁷ but a problem analysis quickly shows that such a view is untenable if not naive. In speech it is continually necessary to refer back to an entity or set of entities referred to earlier. This can very often not be achieved in any other way than by first

6 Informally: "the extension of P^2 is the set of all pairs $\langle e, f \rangle$ such that, first, ... (preconditions) ..., and, then, ... (satisfaction conditions) ...".

7 I am referring in particular to the analysis proposed by Russell in his 'Theory of Descriptions' (1905), and by Quine in various works, especially (1960). For a refutation of Geach's (1969; 1972) attempt to save this kind of analysis, see Seuren (1977; 1985: 319-22).

fixing reference and then maintaining it, with the help of formal linguistic means, through a bit of discourse. It is the central function of definite terms to do precisely that, as in:⁸

(13) Last night I saw a movie. *The movie/that movie/it* was terrible.

It is now beginning to be accepted that semantic analyses of sentences presuppose (in a non-technical sense) a mental mechanism that sets up so-called discourse-representations, containing representations of (sets of) entities that have been set up in the discourse at hand ('addresses'). Definite terms denote (i.e., select and 'land at') the intended addresses.

The complex of presuppositional phenomena has found a functional interpretation in terms of discourse representations. It has been established (Van der Sandt 1982, 1987; Seuren 1985; Fauconnier 1985) that presuppositions (and thus lexical preconditions) fulfil a dual function: they play a role in the determination of truth-values with respect to a given model ('the world'), and, moreover, they contribute in an essential way to coherence and acceptability of discourses. The general view is that presuppositions must have been incremented to any given discourse domain before the carrier sentence can be deemed 'acceptable' in that discourse. This incrementation can take two forms: actual or virtual. 'Actual incrementation' implies that some sentence expressing the presupposition in question has been actually pronounced in preceding discourse, and has thus been incremented in virtue of having been uttered. 'Virtual incrementation' implies that the sentence has not been actually pronounced, but is incremented *post hoc*, when the carrier sentence is uttered. This *post hoc*, or 'backward' incrementation (also called 'accommodation') is made possible by the fact that presuppositions are structural properties of sentences, derivable from lexical preconditions. Backward incrementation is, moreover, subject to a cognitive condition: normally speaking, a presupposition can be incremented *post hoc* only if it is compatible with available background knowledge.

Under conditions that are not very clear, this background knowledge check can be overruled. Typically, in such cases, a metaphor comes about. E.g.:

(14) And the train was waltzing at sunset round the walls of Verona.⁹

8 For a detailed discussion of this aspect of linguistic communication, see Seuren (1985: 214-8).

9 From: E. M. Forster, *Where Angels Fear to Tread*.

This sentence violates a lexical precondition of the predicate *waltz*, which requires that its subject term refers to an animate being capable of walking or dancing. A train, obviously, falls outside that category, and backward incrementation of the presupposition that the referent of the subject term is an animate being capable of walking (or dancing) should thus be blocked. Apparently, this veto is nullified on account of a temporary upholding of the fiction that trains are capable of walking. But we shall not go further into such questions here.

Sentences that carry presuppositions are thus seen to have a limited usability: they can be used only in such discourses as either already contain their presuppositions or allow for these presuppositions to be incremented *post hoc*. This is a highly functional property of sentences, since (a) it provides for error-detecting checks on correct understanding of a given discourse, and (b) it allows for the building up of mental discourse representations with a minimum of actually uttered sentences. This latter property crucially depends on the mechanism of backward incrementation, with its requirement of compatibility with available background knowledge.

But let us return to the distinction between 'preconditions' and 'satisfaction conditions'. One immediate consequence is that the machinery of preconditions is crucial for an understanding of the phenomena of polysemy. The term 'polysemy' is used for the at first sight curious fact that identical definite terms can refer to things of very different categories, depending on their context of use. Thus, the definite term *the school* in (15) will refer to a building in (15a), to an institution in (15b), to a set of people in (15c). And the definite term *the game* in (16) will take a temporally limited process as a possible referent in (16a), but the equipment for an activity in (16b), and the desired result of an activity in (16c):

- (15)a. The school is on fire.
- b. The school had excellent results last year.
- c. The school has a day off.

- (16)a. The game lasted two hours.
- b. I bought the game for little money.
- c. He had the game in his hands.

The preconditions of the various predicates used provide directives as to the right category of referent: *to be on fire* requires preconditionally a concrete object; *to have results* requires a functioning organism as referent for its subject term; *to have a day off*, in its turn, wants a human subject. These

conditions, in association with the general definition of *school* as 'teaching institution', leads to 'school manifested as concrete object' for (15a), 'school manifested as functioning organism' for (15b), 'school manifested as a group of people' for (15c). And similarly for (16): given a general (approximate) definition of *game* as 'play bound by rules and yielding a winner', we get for (16a) 'game manifested as a process', since that is what the predicate *last* requires. For (16b) we get 'game manifested as object of purchase', given the predicate *buy*. And for (16c), given the predicate *have in one's hands*, we get 'game manifested as desired result'. Clearly, any such solution to the theoretical problem of polysemy can only be validated by means of detailed lexicographically adequate semantic descriptions of predicates, in terms of preconditions and satisfaction conditions.

It should be noted that the distinction between these two kinds of lexical conditions is not limited to words or expressions that function as verbs or adjectives in surface structures. From the point of view of the lexicon, all items with lexical meaning are predicates. This is so because, irrespective of the surface category of a word, when it has a lexical meaning it imposes lexical conditions on whatever entity it can be applied to. Such entities can be world individuals, or properties thereof, or processes, or facts, etc. Thus there are conditions for anything to be properly called a house, a table, a law, etc. Likewise, there are conditions for anything to be properly called reliable, fortunate, possible, necessary, quick, etc. Formally, it is perfectly possible to treat even function words as predicates: *and*, *or*, *not*, *if*, *because*, *although*, etc., can be seen as abstract predicates over extensions of (pairs of) clauses (Seuren 1985: 314-46, 455). And there may be certain advantages in such an analysis. But for our present purposes it is sufficient to stipulate that all items with lexical meaning, i.e., in principle verbs, adjectives, nouns, adverbs, and prepositions, are predicates from the point of view of lexical meaning analysis.

So far only incidental probes have been carried out on isolated words to establish their preconditions and their satisfaction conditions.¹⁰ A few things strike the eye immediately when such analyses are carried out. First, negation

¹⁰ With the exception of Vliegen (1986), where a systematic analysis is carried out of German and Dutch verbs of hearing, with a systematized descriptive metalanguage and a systematic distinction between preconditions and satisfaction conditions.

seems to apply in the first place to satisfaction conditions, leaving the preconditions unaffected. Take, for example, the sentence:

(17) Harold is not a bachelor.

In unmarked cases, i.e., normally speaking, this will be taken to imply that Harold is a married man. This does not follow from the standard componential analysis of *bachelor*, which says that this predicate applies to an entity which is [+human], [+male], [+adult], [-married]. Given such an analysis, there is no rationale for the fact that the negation singles out the [-married] feature, and tends to leave the other features unaffected. However, under an analysis as proposed here, this fact is systematic. Let the extension set of *bachelor* be defined as follows:

$\sigma(\textit{bachelor}) = \{e : e \text{ is human, male and adult} \mid e \text{ is unmarried}\}$

Now, on the principle that unmarked negation affects only the assertive, and not the presuppositional, content of a sentence, it is clear why (17) implies that Harold is married. Note that the negation test has been widely used, since Strawson (1950), to spot presuppositions.¹¹

A further striking feature of this analysis is that related items, either in the same language or across languages, tend to differ little in their satisfaction conditions, while the differences concentrate in the preconditions. Let us consider, in outline, the case of the English word *bald*, compared with German *kahl* or Dutch *kaal*. All three words have a precondition that the subject term referent be normally wholly or partly covered with a prototypical covering, and the satisfaction condition is in all three cases that the covering which is normally there is not there. However, *bald* differs from its Eastern counterparts *kahl/kaal*, in that *bald* has the extra preconditions that the subject term referent should be (part of) an animal being or textile (with the single idiosyncratic addition of 'rubber tyre'). We can thus say that someone, or someone's head or eyebrow, is bald, that there is a bald patch in the carpet, and, singularly, that my car has bald tyres. But we cannot say, for example, that the landscape is bald, or that this tree is bald, or that the wall is bald. In these cases the word *bare* is appropriate. In German and Dutch,

11 Seuren (1985: ch.3) shows that negation over Negative Polarity Items necessarily affects only satisfaction conditions, leaving preconditions alone, whereas negation over Positive Polarity Items affects them all indiscriminately. This fact is a central element in his argument for two truth-functionally distinct negations and a logical system with three truth-values.

however, the words *kahl* and *kaal*, respectively, are perfectly appropriate, and no separate word corresponding to *bare* exists.¹² We see that the differences are entirely expressible in terms of preconditions, while the satisfaction condition remains unaltered.

Within one language, words can often be grouped together under identical satisfaction conditions but different preconditions (reverse groupings seem to be much rarer). Thus we can take together the neutral *say* or *assert* with verbs like *confess* or *admit*, which have a precondition that the object term should refer to something reprehensible or (especially for *admit*) to the subject's disadvantage. Likewise for the neutral *ask* (*questions*) as opposed to verbs like *interrogate*, *cross-examine* or *hear* (*witnesses*), which differ preconditionally as to the category of persons that the object term may properly refer to. *Murder* and *assassinate* clearly have identical satisfaction conditions, but differ preconditionally in that the object referent must be a person of public importance, and the killing must be related to that importance. On the other hand, *kill* and *murder* seem to differ in their satisfaction conditions, according to the threefold test for presuppositionhood given above: it is part of the satisfaction conditions of *murder* that the killing be unlawful and with malice aforethought. *Kill*, in its turn, differs preconditionally from *put to sleep* or *destroy* in that the latter two require the object referent to be animal but not human. And so forth.

Criticize and *praise* form a pair with, apparently, identical preconditions and different satisfaction conditions. Both have as one of their preconditions that the object term referent did what is mentioned in the prepositional *for*-object. But the satisfaction condition for *criticize* is that the subject referent gives as his opinion that what the object referent did should not have been done by him, or that it was badly or wrongly done. For *praise* the satisfaction condition is, again, that the subject referent gives his opinion on what the object referent did, but now the opinion is positive: it was right that the object referent did it, or he did it in the right way.

12 This analysis is, of course, incomplete and rough. Closer inspection will reveal further conditions, especially preconditions. Thus *bald*, *bare*, *kahl*, *kaal* require in addition that the typical covering should not be of the clothing kind, but for the latter three it may be of an ornamental nature. Yet, for *bare* only there is, again, the exception that the typical covering of legs and arms (and their parts), and heads, may be of the clothing kind: *bare feet*, *bare head*, *bare hands*. But we can hardly claim full lexicographical adequacy here.

In Fillmore's famous article (1971) the verbs *accuse* and *criticize* are compared, and Fillmore's main conclusion is that a crucial precondition and a crucial satisfaction condition of the one are satisfaction condition and precondition, respectively, in the other: they swap places, so to speak (1971: 381). This conclusion may be a little too simplistic, but it seems not too far removed from what is the case. It does indeed seem to be so that the satisfaction condition of *accuse*, that the object referent did what is mentioned in the *of*-object, is a precondition of *criticize*, as we have just seen (though *criticize* takes a *for*-object). But the other half of the equation is a little less straightforward: *accuse* carries the precondition that what has been done is criminal or at least morally bad, but the corresponding satisfaction condition of *criticize*, as we have seen, does not involve any criminal law, and if it involves morals, it does so in a much milder way than *accuse*.

It is not feasible to give more than a few examples here. The point of this paper is to encourage further study along these lines, and to see if theoretical lexicology, and perhaps also practical lexicography, can profit from an integration of the distinction at hand.

REFERENCES

- Chomsky, Noam. 1972. *Studies on semantics in generative grammar*. (Ianua linguarum series minor 107.) The Hague, Mouton.
- Davidson, Donald, Jaakko Hintikka (eds.). 1969. *Words and objections. Essays on the work of W. V. O. Quine*. Dordrecht, Reidel.
- Dixon, Robert M. W. 1971. A method of semantic description. In: Danny D. Steinberg, Leon A. Jakobovits (eds.), 436-471.
- Dixon, Robert M. W. 1972. *The Dyirbal language of North Queensland*. (Cambridge studies in linguistics 9,) Cambridge, Cambridge University Press.
- Erdmann, Karl Otto. 1910. *Die Bedeutung des Wortes. Aufsätze aus dem Grenzgebiet der Sprachpsychologie und Logik*. Leipzig, Avenarius.
- Fauconnier, Gilles. 1985. *Mental spaces. Aspects of meaning construction in natural language*. Cambridge, Mass., MIT Press.
- Fillmore, Charles J. 1971. Types of lexical information. In: Danny D. Steinberg, Leon A. Jakobovits (eds.), 370-392.
- Fodor, Jerry A. 1970. Three reasons for not deriving 'kill' from 'cause to die'. *Linguistic Inquiry* 1, 4, 429-438.
- Geach, Peter T. 1969. Quine's syntactical insights. In: Donald Davidson, Jaakko Hintikka (eds.), 146-157.
- Geach, Peter T. 1972. *Logic matters*. Oxford, Blackwell.
- Katz, Jerrold J., Jerry A. Fodor. 1963. The structure of a semantic theory. *Language* 39, 1, 170-210.
- Katz, Jerrold J., Paul M. Postal. 1964. *An integrated theory of linguistic descriptions*. Cambridge, Mass., MIT Press.
- Kiparsky, Paul, Carol Kiparsky. 1971. Fact. In: Danny D. Steinberg, Leon A. Jakobovits (eds.), 345-369.
- McCawley, James D. 1971. Prelexical syntax. In: Richard J. O'Brien (ed.), 19-33.
- O'Brien, Richard J. (ed.). 1971. *Report of the 22nd annual round table meeting on linguistics and language studies*. Washington, D.C., Georgetown University Press.
- Quine, Willard Van Orman. 1960. *Word and object*. Cambridge, Mass., MIT Press.
- Russell, Bertrand. 1905. On denoting. *Mind* 14, 479-493.
- Seuren, Pieter A. M. 1977. *Forme logique et forme sémantique: un argument contre M. Geach*. *Logique et Analyse* 79 (vol. 20), 338-347.
- Seuren, Pieter A. M. 1985. *Discourse semantics*. Oxford, Blackwell.

- Seuren, Pieter A. M. forthcoming. Presupposition. In: Arnim von Stechow, Dieter Wunderlich (eds.).
- Stechow, Arnim von, Dieter Wunderlich (eds.). (forthcoming). *Handbuch der Semantik*. Frankfurt/M., Athenäum.
- Steinberg, Danny D., Leon A. Jakobovits (eds.). 1971. *Semantics. An interdisciplinary reader in philosophy, linguistics, and psychology*. Cambridge, Cambridge University Press.
- Strawson, Peter F. 1950. On referring. *Mind* 59, 320-344.
- Trier, Jost. 1973. Aufsätze und Vorträge zur Wortfeldtheorie. (*Ianua linguarum series minor 174.*) Edited by Anthony van der Lee, Oskar Reichmann. The Hague, Mouton.
- Van der Sandt, Rob A. 1982. Kontekst en presuppositie. Een studie van het projektie-probleem en de presuppositionele eigenschappen van de logische konnektieven. PhD-thesis, Nijmegen University. NIS, Nijmegen.
- Van der Sandt, Rob A. 1987. *Context and presupposition*. London, Croom Helm.
- Vliegen, Maurice. 1986. Verben der auditiven Wahrnehmung im Deutschen und Niederländischen. Eine Beschreibung ihrer semantischen Struktur und syntaktischen Umgebung. PhD-thesis, Nijmegen University.