A CONSIDERABLE AMOUNT of second language acquisition research has been done into characteristic features of the process of negotiation for meaning in NS (native speaker) and (NNS) non-native speaker dyads, and in NNS-NNS dyads (see Pica 1992 for a summary of this research). This research has been largely descriptive and has not often addressed explanatory issues regarding the relationship of the input features studied to claims about representation, and how changes in representations of target language features can be triggered through discourse interaction. Where models of the intake process have been put forward (e.g. Chaudron 1985) they have made reference to causal variables like attention, memory and processing constraints as possible features of explanations for how target language syntax comes to be acquired (Pienemann 1989; Schmidt 1992); the issue of lexical development, and changes in the representation of lexical form that result from negotiation for meaning—including the learner’s knowledge of such intensional features as sense relations and componential knowledge — has not been their main concern. It would seem plausible, however, that theoretical work on the propositional representation of lexical form (e.g. Wilensky 1990), possible world semantics (Stalnaker 1978), situation semantics (Barwise & Perry 1983), as well as relevance theory (Sperber & Wilson 1986) might provide starting points for theorising about the relationship of negotiated input to reorganisational processes underlying second language development since this work makes claims about the relationship of inferencing procedures to semantic representations. No theoretical work in SLA to date, though, has made reference to semantic theories like those cited above or attempted to model the
semantics of the intake process. My aim in this paper is to cover basic issues in semantic theory as a preliminary to specifying such a model by showing how semantic criteria can provide a point of departure for pragmatic decisions about which word to choose in interactive spoken discourse. My listing of these semantic criteria will not be exhaustive, as it is the relationship between them and their pragmatic operationalization in discourse that I hope to demonstrate. I will be particularly concerned with native speaker, non-native speaker conversations, and with drawing some conclusions from the interaction of 'semantic' competence and 'phonological' competence for pedagogy.

1. Semantic Competence and Sense Relations

Blum-Kulka and Levenston (1983) describe what they call features of a universal 'semantic competence' which enables second language learners to adopt strategies for expressing complex meanings using simple, minimal vocabulary. This competence includes knowledge of sense relations such as synonymy, superordinacy, antonymy etc.:

The learner’s need to simplify is thus explained by the complexity of acquiring command of all aspects of the native speaker’s semantic competence; his ability to do so derives from his own semantic competence in his own language. As a native speaker he will at times experience a need for paraphrase and circumlocution, for hyponymy and synonymy...(while) as a language learner he is compelled to reorganize semantic fields in the early stages, when he lacks vocabulary, and to do so according to the principles that govern his semantic competence as a native speaker. (1983:120)

Here is a diagram showing some of these sense relations:

- superordinate: (inclusion) fruit
- hyponyms: apple, pear, banana, etc.
- antonym: expensive ≠ cheap
- synonym: expensive = dear
As Hutchinson and Waters have shown, (1981) a knowledge of sense relations can be useful to learners in establishing sameness of meaning so they can restate or paraphrase in the absence of a word in the target language. For instance the meaning of 'ductile' can be restated using the simpler words, 'change' and 'shape', and the synonym 'stretch'. Consequently teaching materials tend to draw attention to sense relations in presenting and testing vocabulary (see Gairns & Redman 1986: Morgan & Rincvolucri 1986).

But all such relations are, of course, only provisional, — 'potentially' there, — a fixed semantic 'structure' from which to proceed as a 'starting point' in negotiation. The crucial question seems to be not how do we present learners with a static, monolithic system of sense relations to be fixed in declarative knowledge — but how do we develop the ability to act on this provisional structure procedurally: what areas of semantic knowledge are involved here?

2. Semantic Knowledge: Dependency Relations

What I have elsewhere called 'procedural' words (1989) are often used in place of other words, thereby achieving paraphrase or definition through establishing relations of simple synonymy or superordinacy (see Faerch and Kasper 1983 on 'achievement strategies'), they have an extensive relational capacity. For example:
Restatement through Synonyms:

What does acquire mean? It means to get something.

What is direction? It is a way to go somewhere.

Restatement through Superordinacy:

What is a rose? It is a kind of flower.

What is kerosene? It is a kind of fuel.

Which is the procedural word in this group, i.e. which would be most useful in defining other words in the group?

gobble, dine, devour, eat, stuff, gormandize
(an example from Carter 1986)

Could you define ‘dine’ using ‘gobble’? Hardly, but all of them can be defined or paraphrased using ‘eat’;

gobble — to eat quickly and carelessly
dine — to eat, usually at night, in formal surroundings etc.

In dependency theory (see Hudson 1984) a distinction is made between heads and modifiers, heads being the construction (in this case ‘word’) on which the modifier depends. I have shown this using the arrows in the diagrams above. So, eat, flower and fuel are the ‘heads’ in the sentences above, while they are ‘modified’ by the more specific words. This means, as heads, words like ‘eat’ can be used in place of modifier words like ‘stuff’, ‘gormandize’ etc. but the reverse is not possible, and this is because it
contradicts the semantic direction of dependency. This, then, is a 'unilateral dependency' (see Brown, Miller 1981 for a taxonomy of dependency types).

Some dependencies though are 'bilateral', i.e. both words can be seen as simultaneously heads and modifiers. For example;

You really stuffed that food down.
What do you mean?
You bolted it down in about two minutes...

This relationship is reversible. The difference between these relations in traditional propositional calculus notation is between implication (stuff ⇒ eat) and equivalence (stuffed = bolted) (see Lyons 1977:144).

3. Assertions and Presuppositions

Demonstrating the difference between the relata involved in this type of lexical dependency relationship (i.e. bilateral dependents) and between 'eat' and 'stuff' (i.e. unilateral dependents) can be also be done by referring to the assertion-presupposition distinction, as Hudson (1986:97) notes. I will introduce this distinction here as it is taken up later on. Firstly I am going to identify lexical items as the vehicles for assertions. Meanings are asserted through words which are propositionally complex. The meaning of an asserted lexical item, when it is a dependent, presupposes the meaning of its head, but not vice versa. Why is this?

a) Assertions

There are two points to make about assertions here which bear on a possible answer to this question.

3.i The first is semantic. Assertions have content, and this content is propositional (See Stalnaker 1978). Where what is asserted is the meaning of a lexical item this is made up of propositions derived from a knowledge of the semantic structure of the word. This structure can be expressed as a network of dependencies. The problems speakers
face here is whether they 'agree' upon the semantic facts about such structures i.e. the dependencies I have described above and those to be described in 4 below. This agreement constitutes an agreement as to the 'truth value' of the assertion. This involves an agreement that it has the 'meaning postulates' it is asserted to have, or the 'hierarchy of components' (described in 4 below) which are entailed by it.

3.ii The second point is pragmatic. Assertions also take place in contexts which constrain the interpretation of assertions. The problem speakers face here is whether they 'understand' what facts each is representing as the case about the utterance value of the proposition. In a later section 8, I will be showing how contextual information, in the form of a shared knowledge of the way some features of intonation structure interact with lexical choice, informs perceptions of lexical meaning. (Brazil 1985: McCarthy 1987). This is a part of the means for expressing what Lyons (1981) calls the 'subjectivity of utterance' (1981:240).

Point 3.i concerns the 'agreement' participants in discourse have about the semantic 'content' of an asserted lexical item. Point 3.ii concerns the 'understanding' they have about the 'context' of utterance. To what extent can the two be shown to overlap in establishing the 'possible words' speakers construct in offering and receiving assertions, or lexical meanings?

It is important to try to describe or represent the overlap in some way. Lyons describes the inadequacy of a semantics based solely on an analysis of the truth-conditional means of expressing propositional relationships resulting only in the 'agreement' on assertions described above in 3.i e.g. the relationships of $\Rightarrow$ and $\Leftrightarrow$. (1981:240–2410). Mason further argues for the need to, 'try to come to see the discipline of semantics as encompassing what is commonly held to be pragmatics'. (1986:187).

My aim later in Section 8 is to try and represent, by using a device based on the 'propositional' matrices used by Stalnaker (1978), the overlap or 'cohabitation' of content and context in determining the different 'possible worlds' constructed in offering and receiving asserted lexical meanings. In other words, this concerns the interrelationship of declarative 'semantic'
knowledge of relations like ‘synonymy’ with procedural knowledge of how they are negotiated in discourse. My concern is not to ‘fuse’ the two, (unlike Mason 1986) but to show their ‘cohabitation’. The possible ‘coreness’ of asserted meanings, or lexical items, will then be shown to have at least two dimensions. Not only the ‘semantic’ but also the ‘pragmatic’ dimension. These are present concurrently in the construction of ‘possible worlds’ which speakers attempt to bring to convergence through discourse. In this and the next three sections of this paper I will stay within semantics, decisions about what ‘truth value’ to attach to the content of an assertion, or lexical item — while in sections 6 and 7 I will turn to the dimension of context and the utterance value attached to lexical choice.

b) Presuppositions

Let us say that part of what is asserted is the meaning of ‘stuff’ in the sense of ‘stuff with food’ and that it takes place in the context of a conversation between a language teacher and a language learner. Each participant brings to bear on the conversation certain ‘presuppositions’. These are the propositions assumed to be true as the background to the conversation. If the learner questions the meaning that is asserted by the word ‘stuff’, the teacher, bearing in mind the learning context, will relexify the word as ‘eat’. Why not relexify as ‘bolt’, as in the example above? Because she presupposes the headword is more likely to be available to the learner than a word like ‘bolt’.

Why is this? One proposal has been that ‘eat’ is a core component of ‘stuff’ in the hypothetical, static structuralist lexicon, and that this constitutes a proposition that the teacher assumes is likely to be available to the learner; part of the ‘semantic base’ of subsequent negotiations. Propositions, and therefore semantic components, which are part of the definition of an asserted lexical item, can, as a result, be presupposed as part of its semantic structure. The headword is a core component which is treated as a proposition each party presupposes the other accepts as true, i.e. that it is implicated by its dependent. At this point I have to distinguish between presupposition based on the sense or intension of a term and on the denotation or extension it has.
c) Presupposition and Intension: Scalar Implicatures

The hypothetically static structured lexicon is the one presumed to be available in discussing the intension of lexical items which are inherently non-variable. For example, scalar implicatures are an example of the strict implicatural inheritance of properties or intensions of a lexical item. e.g.

1. All of the boys went to the party
2. Some of the boys went to the party

In this example 1, implies 2, but not vice versa. The two words 'all' and 'some' form an 'implicational scale < all, some > in which the right most member always implicates, via Grice's maxim of quantity, that the left most member does not apply. 1 entails 2, but 2 implies that 1 is not the case, otherwise, following Grice's maxim that speakers follow the obligation to "i) make your contribution as informative as is required for the current purposes of the exchange ii) do not make your contribution more information than is required" (Grice 1975) the speaker would have been bound to use 1 and not 2. Other examples of such scales are;

   < must, should, may >
   < always, often, sometimes >  (from Levinson 1983:134)


d) Presupposition and extension: Prototypes

However there is a sense in which core components are variable from individual to individual, and not static in the way the intensions of a term are. This is to treat components as 'criterial features' used in the formation of prototypes of the meaning of a word. Here we will be discussing the extension of word meanings in experience, as opposed to their intension in the static lexicon.

The notion of 'prototypes' has been extensively discussed in a variety of contexts — (Rosch 1973, 1974; Armstrong, Gleitman & Gleitman 1982; Smith & Medlin 1981) in relation to word-meaning and category formation: (Hudson 1980, 1983) in relation to sociolinguistic variation and linguistic structure: (Barret 1983; Robinson 1988a) in relation to vocabulary teaching and the early
acquisition of word meaning. A category is prototypical to the extent that it is represented by an exemplar which has a number or cluster of features which are regarded as ‘criterial’. Distance from the prototype, or lack of typicality is accounted for by pointing to the fact that a less prototypical category member lacks a number of criterial features. Prototypes, unlike scalar implicatures and intensions, are inherently variable. This is because they involve knowledge of the world. For example the concept of ‘fashionable’, the prototype representing a typically ‘fashionable’ person, changes to accommodate the changing criterial features which are added and dropped from the exemplars representing the prototype—flares, fishnet stockings, maxis, minis, Levi 501’s etc.

Prototypes allow us to accommodate changing knowledge of the world by adding or dropping criterial features to our categorial representations. This is also important in conversation. Grice’s maxim of relevance applies here. Although an initially offered comparison between two things may be first be unclear to one participant he will assume it is relevant and attempt to ‘see what the other means’.

Seeing what somebody means ‘by X...’ is largely a process of negotiating the criterial features of the concept, accommodating the others point of view about what the new exemplar should be. This involves participants in building conditional prototypes which are relevant to particular conversations and become the means by which participants bring discourse worlds into convergence. The convergence or agreement reached may be as much for the purposes of establishing ‘solidarity’ as it is for representing the world as it ‘really is’.

For example, if one person (B) describes Johnson as a ‘whale’, assuming that his ‘fatness’ established a criterial link between this person and the whale, then it is a shared criterial feature for him. (See Levinson on the feature transfer theory of metaphor 1983). e.g.
But the second party (A) may not make this link because 'fat' is not normally a criterial feature of his prototype whale. e.g.

A: 'How do you mean 'whale'?...
B: Fat......
A: Oh yes, he's fat......

(A) may disagree of course, but whether he does or not he has at least to see the 'possibility' that the other evokes by referring to Johnson's 'whaleness', i.e. that Johnson is fat, or further repair is necessary e.g.
A: 'How do you mean 'whale'?...

B: Fat.......

A: Fat, are whales fat?....

B: Of course they are...

A: Oh, O.K. then...'

Seeing the possibility, or constructing the possible world the other evokes, thus involves altering assumptions about prototypes which we have to do to accommodate newly negotiated information about possible criterial features relevant in a discourse which has, as its conversational goal, the convergence of the discourse worlds of the participants. The possible world may involve constructing a temporary sub-lexicon to incorporate the temporarily negotiated features.

e) Truth Maintenance: Monotonicity and Non-Monotonicity

To summarize the distinction I have made; presuppositions based on intensions, like scalar implicatures, draw on a knowledge of fixed implicatural relations which are non-variable. In this sense the truth value of a proposition is a function of the user’s shared, invariant knowledge of these relations. ‘Dining’ is always ‘eating’. ‘Some’ will always implicate ‘not all’.

Presuppositions based on extensions, however, the knowledge of what features are criterial to a particular exemplar which represents a typical category member, are variable and can be negotiated. That hat may not always be fashionable, to that person, in that country etc.

Both sorts of declarative knowledge are drawn on in procedures for overcoming breakdowns in communications. The first is drawn on as a means of ‘fixing’ the meaning of a word or phrase (for B) and does not involve recourse to (A’s) differential ‘knowledge of the world’ as part of the negotiation. The second is involved in ‘negotiating’ or ‘coming to see’ (A’s) viewpoint, and accommodating it (or not) within the framework of (B’s) knowledge of the world. Traditionally ‘fixing’ the intension and, ‘negotiating’ viewpoint are referred to as establishing ‘sense’ and ‘denotation’ respectively (See Lyons 81:60 and 160).
In Doyle’s terms (1979) the logic used in maintaining the truth of invariable propositions is ‘monotonic’, that used in maintaining the truth of potentially variable and revisable propositions is ‘non-monotonic.’ This is to accommodate the fact that sometimes we discover that assumptions we had taken to be true are in fact false and we have to rereason, as it were, our propositional world. Since sense is fixed it is maintained monotonically. Maintaining the truth of denotation, which I have suggested involves ‘coming’ to see the viewpoint of the other participant, may involve revising assumptions about prototypes so as to accommodate the other’s way of seeing. This revision is done non-monotonically.

To return for a moment to pedagogy, I suggest that the relexifications which are most usually apparent in NS-NNS discourse (see Blum and Levenston 1983; Robinson 1989, 1992) are of a type that draw on knowledge of the presuppositions based on ‘intension’ of the type described in Section 1 and 2) above. This is perhaps because NS interlocutors assume that the NNS’s knowledge of the world, or its wording in the L2, is insufficient for them to engage sufficiently well in non-monotonic reasoning, and consequently the negotiation procedures in d) above will tend to be underdeveloped or ‘avoided’ (Faerch, Kasper 1983). The NS, in short, will concentrate in relexification on imparting a declarative knowledge of the intensions of the static lexicon and not on developing non-monotonic reasoning. Consequently the negotiating procedures in d) above will tend to be underdeveloped or ‘avoided’ (Faerch, Kasper 1983). This is a ‘reduction’ (Faerch, Kasper 1983) strategy based on the NS’s perceptions of the processing limitations likely to be attendant on the NNS’s discourse ability. But if overused this strategy has dangerous consequences.

Firstly, the negotiating ability is never fully developed, and Wells has shown it to be vital to developing competence in the L1, (1981, 1985). Secondly, as White (1987) has recently pointed out, such carefully tailored input (‘comprehensible’ in Krashen’s terms 1982) lacks precisely that extra dimension, or n+1, which Krashen and others have suggested is vital to elaborating knowledge of the target language. In short, by consistently reverting to procedures based on intensional knowledge of the lexicon and so to monotonic reasoning, the NS is likely to be depriving the learner by failing
to give practice in the equally important dimension of non-monotonic meaning
negotiation. The result is that the learner will be possessed of a semantic ‘base’
lexicon, but unsure about how to construct provisional ‘discourse’ lexicons.
(see 8 and 9). Yet it is these ‘semantic contingency’ procedures which ensure
further learning, and the flow of input1.

I will now turn to another type of ‘relation’ underlying the language user’s
‘semantic’ competence.

4. Semantic Knowledge; Constituency Relations

‘Eat’ appears, from the examples in 2 above, to have greater procedural value,
and this is a pragmatic point about what it can be used for in teacher-learner
contexts, and depends on our ability to establish a dependency relation
between it and another word. ‘Head’ words like ‘eat’ can be used to replace a
greater number of words than words like ‘gormandize’. This is because,
perhaps, the heads constitute a sort of superordinate semantic node in the
network of conceptual relations.

Looked at in this way those words at the bottom of the trees ‘inherit’ the
properties of all those higher up, so that every ‘constituent’ inherits the
properties of higher nodes. We can show this using the isa notation from AI,
which moves up the tree, as in this often cited example:

```
HUMAN
+MALE -MALE
+ADULT -ADULT +ADULT
man boy woman girl
```

1 Snow (1977) has identified the importance of contingency procedures, which typically occupy
third moves in parent-child discourse, to L1 acquisition. The distinction between presuppositional
and propositional procedures which I make in section 9 of this paper could also be applied to the
analysis of how semantic contingency is demonstrated in parent-child discourse.
McCawley, referred to in Lyons (1977:603), claims that 'buxom' in the following example carries with it the presupposition that whoever it describes, and therefore the referent of 'my neighbor', is female.

My neighbor is buxom.

Presumably then, using the tree above we can add that it semantically presupposes the referent is +ADULT, +WOMAN and so on until ‘buxom’ is reached. In this way componential presuppositions are inherited from up, but not from down, the tree. How are the relations I have described acted on in discourse?

One point to make is that these hierarchical trees do not operate like scalar implicatures, by following the maxim of informativity as described above. They can be the bases for ‘semantic’ presuppositions about componential entailment, but not ‘pragmatic’ presuppositions about the implicatures that lexical choice can generate. For example, compare the scalar implicature in a) with the componential entailment in b);

a) <all, some>

b) <gormandize, dine, eat>

Here it isn’t the case in b), as it is in a) that the right most choice always implicates a left most choice is not true. i.e. whereas ‘gormandize’ appears to entail ‘dine’ and ‘eat’, in the same way that ‘all’ entails ‘some’, it isn’t the case that ‘I am going out to eat tonight’ implies ‘not dining’. In the first of these strings implicatures are generated by observing strictly semantic sense relations. In the second the basis of generating implicature depends on knowledge of context. Let me illustrate the second of these. Take the string <alsation, dog, animal> and consider Lyons ‘observation that sense and denotation are in a converse relationship i.e. the more specific the sense, as in ‘alsation’, the smaller the area of denotation, while the less specific the sense, as in ‘animal’, the larger the area of denotation. What would we expect to be the most neutral choice of specificity in generating implicature?
Cruse (1977) has pointed out that what Brown (1973) calls 'basic level concepts' are important in deciding on the neutral level of specificity form which to generate implicatures following the 'Quantity' maxim. E.g. in a choice between animal, dog and alsation, although 'animal' is the least specific choice it is not the most pragmatically neutral. E.g.

animal  
I think I'll take the dog for a walk.  
alsation

Choice of 'animal' here is an under specification which implies dislike, choice of 'Alsation' implies more than one dog. Cruse suggests, following Brown (1973) that 'dog' is in fact the most neutral term and can be called a basic level concept because it is more often the case that the fact that an alsation is a dog is more important than that it is an animal.

However we can well imagine a context in which it is the case that the fact that an alsation is an animal is more important than the fact that it is a dog. This is a world in which all animals, except human beings and three dogs, have died out. Surely now it is the fact that the alsation is an animal that is important. It is the last link with an almost extinct animal kingdom. To say 'animal' in this context would in no way imply dislike, as it would in present society.

The conclusion is then that there is no inherent fit, between the constituency type hierarchy of componential relations and the levels of neutrality or base specificity which are used in generating implicatures. These shift with the creation of new contextualizing 'possible worlds'. It is to characterizing these that I now turn.

5. Possible Words and Possible Worlds

In conversation, Stalnaker observes, "... it is part of the concept of presupposition that a speaker assumes that the members of his audience presuppose everything he presupposes. We may define a NONDEFECTIVE CONTEXT as one in which the presuppositions of the various participants in
the conversation are all the same. A DEFECTIVE CONTEXT will have a kind of instability, and will tend to adjust to the equilibrium of a nondefective context. Because hearers will interpret the purposes and content of what is said in terms of their own presuppositions, any unnoticed discrepancies between the presuppositions of speaker and addresses is likely to lead to a failure of communications. Since communication is the point of the enterprise, everyone will have a motive to try to keep the presuppositions the same...” (1978:322).

In Sections 3 and 4 I have described the dependencies which constitute the semantic knowledge speakers have of the presuppositions underlying the asserted meaning of a lexical item, (whether these are called ‘components’ or ‘meaning postulates’ is unimportant here). The restatements in Section 2 are therefore a way of clearing up, or bringing presuppositions into convergence so as to create a ‘nondefective context’.

As I said in Section 3.i this essentially involves participants ‘agreeing’ upon the semantic ‘facts’ about structural dependencies. In Section 3.ii I referred to another problem speakers have. This is the problem of ‘understanding’ what facts each is representing as the case in making an assertion. The distinction I am making is based on the two dimensional matrix for expressing the differences between ‘possible words’ used by Stalnaker (1978). Here is Stalnaker’s explanation of the first dimension of his matrix which I wish to suggest corresponds to that knowledge of a lexical item described in Section 3.i., the truth value which it has as a function of the ‘agreement’ about its componential structure.

‘Supposing for convenience of exposition that there is just a small finite number of possible states of the world, we might represent a proposition by enumerating the truth values that it has in the different possible words, as in the following matrix:

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i, j and k are the possible worlds — the different possible sets of facts that determine the truth value of the proposition.’ (1978:317)
Taking a conversation between a native-speaker teacher (i) and two learners (j and k) as our context we can use a similar matrix to express the different presuppositions they have about the truth value or componential structure of a lexical item. For example, (i) says, to a fourth party (x) about a fifth party (y), “She’s rather buxom”. T will be entered in the matrix under (i). Because (j) ‘agrees’ about the facts — has the same tree-like is a hierarchy of components as (i), — then T is entered under (j), but a third party, (k) disagrees about the facts, possibly because he lacks the word, or is mistaken about its components, thinking, for example, that buxom means ‘ugly’. F would then be entered under (k), giving us a matrix like this:

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It is important that we can express this agreement and disagreement because in semantic terms it would lead us to expect that (i) and (j) would agree on ‘synonyms’ for ‘buxom’ (e.g. ‘pretty’ etc.) whereas (k) would disagree with them, thinking perhaps ‘unattractive’ would be a synonym.

But this is not the entire story. There is another dimension to the matrix, that of context — or ‘understanding’ what was said (3.ii). In Sections 6 and 7 I will turn to the means of ‘identifying what was said’, the phonological options available to speaker-hearers, which contribute to their understanding of asserted lexical items on this dimension. Meanwhile here is Stalnaker’s explanation of the second dimension, to which I suggest 3.ii corresponds: “But there is also a second way that the facts enter into the determination of the truth value of what is expressed in an utterance: It is a matter of fact that an utterance has the content which it has. What one says — the proposition he expresses — is itself something that might have been different if the facts had been different; and if one is mistaken about the truth value of an utterance, this is sometimes to be explained as a misunderstanding of what was said rather than as a mistake about the truth value of what was actually said.” (1978:317): Stalnaker then gives an example of how the matrix can be filled out on these
two dimensions. 'Let me give a simple example: I (i) said 'You are a fool' to O'Leary (j). O'Leary IS a fool, so what I said was true, although O'Leary does not think so. now Daniels (j), who is no fool, and who knows it, was standing nearby, and he thought I was talking to him. So both O'Leary and Daniels thought I said something false: O'Leary understood what I said, but disagrees with me about the facts; Daniels, on the other hand, agrees with me about the fact (he knows that O'Leary is a fool), but misunderstands what I said. Just to fill out the example, let me add that O'Leary believes falsely that Daniels is a fool.' (1978:317).

Here is the resulting matrix.

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If we read columns DOWN the matrix we can differentiate between the different truth values each speaker attributes to the proposition (i) makes. For example to take the first line;

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(i) agrees with his own proposition so it is true, (j), O'Leary, disagrees that he is a fool, so we enter F. (k), Daniels, if he had heard the proposition uttered, would agree with its truth value, so we enter T.

Reading ACROSS the matrix we can differentiate between what each speaker heard to be said. To compare each speaker going across the matrix we have;
This shows that (i), being the speaker of the proposition heard himself correctly, so T goes opposite (i). (j) also heard the same as (i) so we put T opposite (j), however Daniels (k) misheard what was said, so we put F. To show that (i) and (k) both agree about the truth value of the proposition they have the same entry going DOWN the matrix:

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</tr>
</tbody>
</table>

To show (i) and (j) both heard what was said, they have the same entry going ACROSS the matrix.

This leaves T in the middle bottom line and it is explained by Stalnaker’s extra information that O’Leary (j) believes falsely that Daniels (k) is a fool. (i) and (k) both agree that this is false, while (j) thinks it is true.

Another way of reading off the matrix is to imagine the possible truth values agreed across the top as i (+fool j, –fool k) j (–fool j, +fool k) k (–fool k, +fool j) and then read these off as answers to propositions heard down the side i (fool to j) j (fool to j) k (fool to k).

I have given a correlate for the vertical dimension of this matrix, the semantic dimension. What of the second, horizontal dimension which concerns what was heard to be said. These dimensions correspond, I think to two different functions of attributing identity to signs. The first is essentially
symbolic’, the truth conditional dimension. The second is essentially ‘indexical’, the misunderstanding, or ‘misreferencing, misattribution or misindexing’ of what was said. These semiotic distinctions have consequences for the two ways words can be core.

6 Symbol and Index; Primes and Procedures

The second of these, we could say, is involved in decisions about the coreness of words in contextualized ‘utterances’, and this relates to their value for the utterer as ‘indices’ (for example in conveying the meaning of ‘ductile’ in the instance I gave previously): and the first is involved in decisions about the coreness of words in decontextualized ‘sentences’ and this relates to their value for the analyst as ‘symbols’ (for example distinguishing ‘boy’ from ‘girl’ by using +or –MALE in the example above).

Two distinct functions of the word as sign are therefore involved, as Widdowson (1983) has pointed out, those of the ‘index’ and the ‘symbol’. (Is Bolinger (1965) perhaps confusing these two when he raises doubts about the componential ‘primeness’ of ‘seal’ or ‘knight’? These words are unlikely to be of much ‘use’ because they lack a sufficiently broad range of meaning potential, but in principle any word can have value within a semantic system which seeks to ‘structure’ lexical differences in an idealized way, to define them in relation to each other regardless of their potential for doing things outside the system. See also Lyons (1981:65–66) for a related discussion of the two meanings of ‘basic’ words, and (1977:114–119) for the semiotic distinctions made here as well as Stubbs (1986:67) who discusses the two senses of ‘basic’ words in relation to their differential function as signs).

To reiterate the points I have made, there is an important difference between knowing ‘that’ a word has a conventionally accepted semantic meaning as a decontextualized initial starting point for these speaker negotiations (see also Widdowson’s distinction between ‘value’ and ‘signification’ 1979).

Similarly we must distinguish between the declarative knowledge that the abstract sense relations I have described exist between words and an ability to realize how these relations are being procedurally activated in discourse. In
other words we must distinguish the symbolic value that words contract with each other as tokens in decontextualized sentences from the indexical values they realize as instantiations of the meanings to be negotiated in utterances.

7. Pragmatic Competence: Synonymy vs. Equivalence

Let us take as an example of these differences the notion of a simple sense relation like synonymy. In its ‘absolute’ sense this is taken to mean that two words have the same meaning, and can be used interchangeably, in all contexts. The difficulty of finding synonyms that match these requirements is obvious and has long been acknowledged. (Ullman 1956: Lyons 1968).

Which of these pairs, for example, matches these criteria?

- tasty spicy
- spicy strong
- powerful fast
- quick

In fact, as Ullman notes, the extreme redundancy which absolute synonymy creates would probably result in one of the terms being dropped from the language as having nothing of use to contribute to it, "a luxury that language can ill afford", in his own words.

In contrast to this strict sense of synonymy Roget’s Thesaurus takes a looser view of the relation and offers, “various synonyms representing different shades of meaning of the word ‘nice’, including, savoury, discrimination, exact, good’ etc. However, as Roget’s preface acknowledges, these loose synonyms capture only ‘shades’ of a shared meaning, and can hardly be used interchangeably’ in all contexts. (see Lyons 1968:446 for a fuller discussion of these points).

In fact it is easy to construct scenarios where these words are not treated as synonyms;

The lasagne looks nice
Yes, but I fancy something savoury today
What about the rissoles then...

etc.
Such difficulties of deciding on the extent of synonymy arise as a result of decontextualising the relationship and treating it within semantics. Semantic competence' may mean we have a predisposition to establish and revise these working sense relations in actual communication, but as soon as they are 'activated' by being used they become 'open to interpretation' on the part of the users.

When treated within 'pragmatics' McCarthy has proposed that we relabel this relation 'equivalence' to show that a word's, "usefulness as an equivalent to another item is a local, existential value...which is different in kind from statements made in a decontextualized, structural description of the lexicon". (1987).

He examines the way speakers project their assumptions about equivalence in actual conversation. Typically one speaker chooses to mark a particular word with a prominent stressed syllable; e.g. 'want' below,

1. A: so you WANT to meet HARRY

and the second speaker is faced with two choices. he can accept the meaning chosen by the first speaker, as he does here,

B: YES and I'm dying to see BILL TOO

or he can choose to make a word he has selected prominent by stressing it, therefore indicating that he wishes to redefine the meaning offered by the first speaker in some way, e.g.

2. B: YES and I'm DYING to see BILL

In 1. the second speaker is accepting that 'want to' and dying to' are equivalent, while in 2. he is redefining or adding to the meaning offered by the first speaker. Possibly he wishes to show that 'dying to' carries and added dimension of eagerness than 'want to'.

We can identify 'eagerness' as a component of 'dying to' and show this using a componential grid (see Rudzka 1981, 1985; Channell 1981; Lindstromberg 1985):

<table>
<thead>
<tr>
<th></th>
<th>describes a decision about the future</th>
<th>could be a long time away &amp; pleasure</th>
<th>closer to the present eagerness &amp; duty</th>
<th>implies seriousness &amp; duty</th>
<th>implies</th>
</tr>
</thead>
<tbody>
<tr>
<td>want to</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>dying to</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>must</td>
<td>+</td>
<td></td>
<td>+</td>
<td></td>
<td>+</td>
</tr>
</tbody>
</table>

But this is only the result of a post facto analysis and reduces to semantics and 'signification' what in actual use is a pragmatically determined 'value'. (see Widdowson 1979:8).

Gairns and Redman comment on this as an exercise type (1986:40) that "The grid aims to bring into focus the features which distinguish one item from another, and shows in detail how items are not truly synonymous", but we might add that it fails to show how they can be treated as 'equivalent', as in 1. above. (see Robinson 1988b for further discussion of grids).

8. Building The Discourse Lexicon

As can be seen from McCarthy's example, the semantic relation of 'unilateral' dependency between a headword and its dependent which I attributed to semantic structure in Section 3 is paralleled by the creation of the relation between an item selected for sense (the head) and the existential paradigm of equivalents for which a second speaker may accept the negotiated sense (the dependents). As a result, one could say, a consequence of interpreting the 'equivalence' relations that are signalled and negotiated phonologically is that the actual tree like componential structure of the lexicons constructed by speakers undergo a temporary realignment or reorganization.
For example take the exchange;

A: He's a BIG man.
B: He's a whale.

If, say 'big' is marked a prominent, and 'whale' is non-prominent, then the second 'reifies' or supports the first speaker's initially selected sense paradigm. In Brazil's terms, 'whale' is an existential synonym. Semantically we can explain this by assuming that 'big' paradigmatically enforces the criterial feature of 'bigness' from the second speakers prototypical knowledge of 'whale-ness'. In other words the second speaker accepts the paradigm. Similarly, if the first speaker had said:

He's a huge WET.

and the same non-prominent existential synonym had been selected;

He's a whale.

Then this, too, could be explained semantically by assuming that the choice of 'wet' had found paradigmatic support from a similar criterial feature in the second speaker's prototypical knowledge of whales. This could perhaps be represented using the componential grid devices above. But say 'whale' is given prominence by the second speaker (in the first example); he is then heard to be redefining the initially offered sense. If could also be given high key and marked as contrastive.

A: He is a BIG man.
B: He's a WHALE.

Say that the man is 'rather' fat. This is part of the mutual knowledge they share about the man. The redefinition of sense offered by giving 'whale' is ambiguous, it could mean he is very large, but not unsightly, or it could mean
that he is very fat, grossly overweight in fact. High key would seem to imply the latter as it is more intensely contrastive than simply 'large'. (Brazil 1985).

Now whether the first speaker 'agrees' with the 'truth value' of either of these possible redefinitions depends on the knowledge he has of whales and the componential features it has in his prototype lexicon, i.e. 'large' or 'fat and unsightly'. Whether he 'understands' it is being offered as a redefinition depends on his hearing what was said, i.e. the fact that it was given prominence. These are the two dimensions in Sections 3.i and 3.ii and represented in Stalnaker's matrix in Section 5.

The interaction of these two dimensions is something which is overlooked in purely structural semantic analyses of vocabulary like those of Lehrer (1975:1983). Lehrer attempts to group wine words into related fields (1975) and then to further distinguish them using the features +positive, +negative (too much, too young etc.) and +negative (too little, too old etc.) Via this sort of analysis she hopes to be able to provide answers to two questions: "First assuming that some of the wine words mean anything at all, even if they are to be interpreted subjectively and evaluatively — what is the structural analysis of this vocabulary? Second, how do typical (non-expert) wine drinkers use these words, and what do they understand when they hear these words" (1975:901).

But by ignoring issues relating to the interaction of speaker/hearer perceptions of prominence and use of contrastive key, in the manner just described, and restricting her analysis to a semantic classification of the words, to what in other words, the participants may or may not 'agree' to be the case about the semantics of the words, she cannot hope to give an answer to the second question, how such words are used, understood and received; hence her conclusion...."My study of wine words has shown that people do not apply words to things in the same way. Is the domain of wine discussion an unusual one, or is it fairly typical of speaker's application of words? If the latter is the case, then speakers probably do not communicate with each other nearly as well as they think they do, since they have no way of knowing that others apply words differently. But perhaps they communicate well enough for their purposes, even without knowing". (1975:922)
Let me try to characterize the interaction of the semantic dimension, with information about what is 'understood' to be said, using Lehrer's analysis of the semantics of wine words describing 'acidity'.

**ACIDITY**

<table>
<thead>
<tr>
<th>Too much</th>
<th>Too little</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NEGATIVE</strong></td>
<td><strong>POSITIVE</strong></td>
</tr>
</tbody>
</table>

- acetic
- pricked
- sour
- (sour) acidic
- (sharp)
- (hard)
- tart
- crisp
- piquant
- lively
- zestful
- tangy
- flat
- (bland)
- (flabby)

(from Lehrer 1975:903)

Let us assume that each of the speakers below has the values either +positive or –positive and +acid for the wine under discussion. In addition, let us assume that speaker A and speaker B hear each other's contributions clearly, but speaker C mistakenly hears B's contribution as non-prominent and –high. This means C will not consider it selective for sense, and as offered 'equatively' to A's offer. The point at issue here then, is what should C say next — how should she continue the conversation. It is not simply a question, as Lehrer implies, of speakers 'agreeing' about the semantics of the words, it is also a question of speakers 'understanding' how the words are offered. The interaction of these two levels leads speakers to construe the possible worlds of the other in the way represented the matrix below.

A: a CRISP little vintage

B: it's certainly SHARP

C: __________________?
A offers 'crisp' believing the wine to be positive, and acid. B reselects for sense, disagreeing with the positive evaluation he considers 'crisp' to carry. C agrees with A but hears B's offer as equative. C, then, is in the position of hearing both 'crisp' and 'sharp' offered as synonyms. She may well entertain this possibility for the purposes of the conversation, although she in fact does make a semantic distinction.

\[
\begin{array}{ccc}
A & B & C \\
+pos & -pos & +pos \\
+acid & +acid & +acid \\
\end{array}
\]

A: 
+prom cont F T F
+high

B: 
+prom cont F T F
+high

C: 
–prom equat T F T
–high

My point here is that the componential knowledge, which may or may not be 'agreed' and the phonological information, which may or may not have been heard and so 'understood', interact to distinguish the possible discourse worlds of the participants. This can be represented in the same way that Stalnaker's matrix represents the factors contributing to the divergent possible worlds from which a discourse might be viewed by involved participants. The negotiation of meaning will involve participants in attempts to bring their worlds to convergence.
9. Defective and Non-Defective Contexts:
The Lexicon as 'Meaning Potential'

Such worlds are particular to each time-constrained discourse. Out of a shared concern to bring them to convergence speakers build, and share for a time, their own system of pragmatic presuppositions. To an extent then, one could say, we construct the lexicon afresh each time we speak, but using the semantic, decontextualized lexicon as a 'meaning bank', a point of departure for the creation of our own on-line, and short lived, discourse worlds. These are continually 'updated' in conversation in the manner described in Section 8 as new propositions one accommodated and added to the conversational record.

There is a final point I wish to make in closing. It concerns perceptions of who occupies the position of (i) in what might be called the 'conversational' matrix I have been describing. In Stalnaker's matrix, (i) is the privileged point of reference, the proposition maker who is always true, and who understands what is said. In a sense, in equal encounters is a shared native language, participants are always jostling for the position of (i). In another sense it passes each time to the latest contributor in the discourse. But in unequal encounters, say between native speaker teacher, and non-native speaker learner, where the proposition asserted is a lexical meaning, it is most often the teacher who assumes the role of (i), and the position is conceded to her by learners. The learners world is assumed to be defective. If worlds are not brought into convergence, if a learner, say, signals some difficulty in matching the truth values that are asserted of a lexical item by the teacher, the teacher will retreat to the presuppositions, or components underlying her use of the word. This is in a way, 'simplifying' the assertion, via a 'presuppositional procedure'. Another procedure is to demonstrate the propositional frame for the word: these procedures are illustrated in this example:
Learner (NNS English)  Interlocutor (NS English)

and the em video camera is supported by a tripod see, here

tripod?

... yes..em..three legs, see here..
tri means three, pod means legs..
three legs, it er holds it up, it’s

(presuppositional procedure) ⇒ a sort of stand...
(propositional procedure)  ⇒ ...the video stands on it...

Conclusion

To the extent that we are developing an awareness of these ways of accepting and redefining terms in conversation, then, we are adding to our learner’s ‘procedural’ knowledge — e.g. their knowledge of ‘how’ to project equivalence, which is different in kind from a knowledge ‘that’ words are synonyms. These production procedures are dependent on assumed-to-be-shared inferencing procedures , which themselves operate on propositional representations of lexical meaning. A large part of a model of how input is converted to intake will be concerned with specifying how production and inferencing procedures are related, how they lead to change in semantic representations, and what features available in the input are triggers for such change. In my examples I have looked at discourse intonation and stress, within the framework of a model proposed by Brazil (1985), as phonological features that may cause learners to adjust or restructure lexical representations during negotiation for meaning. This , I have claimed, is an area that has been neglected by those researchers interested in the way negotiated input can serve as a trigger to second language development.

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References


