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The semantics/pragmatics distinction: a view from relevance theory[*]

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Abstract

The assumption that sentence types encode proposition types was shaken by Donnellan's observation that a sentence with a definite description subject could express either a general or a singular proposition. In other words, a single sentence type could have different truth conditions on different occasions of use. Relevance Theory holds a strong version of this "semantic underdeterminacy" thesis, according to which natural language sentences standardly fall far short of encoding propositions or proposition types. The relevance-driven pragmatic inferential mechanism is part of our "theory of mind" capacity and functions independently of any code; it follows that linguistically encoded utterance meaning need be only schematic.

1 Orientation

Many different enterprises go under the title of semantics or semantic theory. For each of these, there must be a correspondingly different conception of pragmatics, at least in those cases where such a distinction is admitted. On the relevance-theoretic view, which is the primary focus of this paper, the distinction between semantics and pragmatics is a distinction between two types of cognitive process employed in understanding utterances: decoding and inference. The decoding process is performed by an autonomous linguistic system, the parser or language perception module. Having identified a particular acoustic stimulus as linguistic, this system executes a series of

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deterministic grammatical computations, or mappings, resulting in an output representation, which is the semantic representation, or logical form, of the sentence or phrase employed in the utterance. It is a structured string of concepts, which has both logical and causal properties. The second type of cognitive process, the pragmatic inferential process, integrates the linguistic contribution with other readily accessible information in order to reach a confirmed interpretive hypothesis concerning the speaker's informative intention. This inferential phase of interpretation is constrained and guided by the communicative principle of relevance, which licences a hearer to look for an interpretation which interacts fruitfully with his cognitive system and does not put him to any unjustifiable processing effort.

The decoded 'semantic' representation is seldom, if ever, fully propositional; it functions merely as a kind of template or assumption schema, which necessarily requires pragmatic inference to develop it into the proposition the speaker intended to express. The derivation of the proposition explicitly communicated is dependent on pragmatic inference, not merely in determining intended referents and intended senses of ambiguous expressions, but in supplying unarticulated constituents and adjusting encoded conceptual content (enriching and/or loosening it). Clearly, the concept of 'semantics' at issue in the semantics/pragmatics distinction as construed here, is not to be equated with truth conditions. According to this picture, a truth-conditional semantics cannot be given directly to natural language sentences but should take fully propositional thoughts as its proper domain. Before elaborating further on the relevance-theoretic view, I consider some other positions on the semantics/pragmatics distinction.

2 Some semantics/pragmatics distinctions

2.1 Formal semantics and pragmatics

At one extreme in the wide gamut of conceptions of semantics is the formal logical approach. A language (whether logical or natural) is viewed as an object consisting of a set of well-formed formulas which are evaluated for truth on the basis of the semantic values (individuals, sets) assigned to their primitives and the relationships among them imposed by the syntactic rules employed in generating the formulas. The extension of this approach to languages containing indexical terms was labelled "pragmatics" by Bar-Hillel (1954) and Montague (1968), because evaluating sentences with indexical terms for truth involves essential reference to the context of use of the sentence. Pragmatics so-conceived is simply a component of pure semantics. There is no hint of a pragmatic

principle, a conversational maxim, or any assumptions about communicative behaviour; such entities as conversational implicatures lie way outside the concerns of this truth-conditional, model-theoretic approach to natural language sentences. Montague would have taken these to belong to some quite other type of theory, utterance theory or communication theory, some psycho-social enterprise, remote from his formal logical interests.

This particular version of the semantics/pragmatics distinction is not now in much currency; evaluating indexical sentences for truth just is semantics. However, the idea that there are intrinsically 'pragmatic' lexical items and syntactic structures in natural language surfaces in other, more psychologically oriented, non-formal approaches. The lexical items thought of in this way are those whose linguistic meaning does not directly contribute a constituent to the representation which enters into the process of evaluating a sentence/utterance for truth, but which specifies a rule for use, words whose role is to anchor the truth-conditional elements of the sentence in some way to the act of utterance. These may include indexicals, but, more obviously, speech act indicators, and so-called discourse connectives, markers, and particles, some of which are discussed in section 5, under the title of 'procedural semantics'. The syntactic structures whose 'meaning' is conceived of as pragmatic are those which differ transformationally from the canonical declarative sentence type but without making any difference to truth conditions; these are considered briefly in the next section.

2.2 Internalist semantics and pragmatics

At the opposite pole to the formalist as characterised above, is the sort of individualist, internalist approach to language, according to which it is not a set of sentences (mind-external well-formed formulas) that are taken to be the object of linguistic study, but the cognitive computational structures which constitute a native speaker's tacit knowledge of her language (her idiolectal competence). These constitute but one, though an essential, component of her ability to produce and comprehend an infinite range of utterances of both sentential and subsentential linguistic forms. The investigation of this I-language (contrasted with the E(xternal)-language focus above) issues in a system of interacting computational principles which define levels of representation, phonological, syntactic and, in some sense of the word, semantic. Chomsky (1992) talks of an "internalist semantics" and cites Higginbotham (1989)'s work, in which a

representational level featuring a Davidsonian event variable plays a central role. For instance, the mental representation which captures a native speaker's knowledge of the meaning of the sentence in (1a) is that given in (1b), where the lexical entry for the verb 'walk' includes the semantic information that the verb expresses a relation *walk(x,e)*, which applies to a thing and an event if the event is an event of walking by that thing:

(1) a. John walks slowly.
b. Ee (walk(j,e) & slow(e))

One of the advantages of this sort of representation is the transparency of the logical entailments 'John walks' and 'Something slow takes place', knowledge of which is plausibly viewed as part of our linguistic semantic competence.

This is, of course, all firmly lodged within the head (the mind/brain); it is part of a system of mappings, which mediate between an impinging phonetic-acoustic stimulus and a meaning or understanding, which can interact with other meanings or understandings within the cognitive system of the receiver. The outside world does not enter into the account, except in so far as it is represented in the head; there are no extensions, no arbitrary models. Some would say there is no semantics here, that since this is merely a translation from one representation to another, all the real work of semantics remains to be done; that is, the work of explicating what is often taken to be the central semantic fact about sentences, which is that they make claims about the world. Chomsky himself is uneasy with the term 'semantics' used in an internalist way, and suggests that the I-semantic representation should properly be viewed as another syntactic level; it is some notion of a logical form, either his LF or a further syntactic object computed from it, the syntactic level which interfaces with the internal conceptual system.

Furthermore, Chomsky is sceptical about the possibility of an externalist, referential semantics and has suggested that natural language has only syntax and pragmatics (Chomsky 1995, 26). Fodor, on the other hand, does believe in a referential semantics (see Fodor 1987, 1998); in fact, he believes it is the only sort of semantics there is, standing with Chomsky on the view that all internalist representation is syntax. In his view, it is the language of thought that has a referential semantics, and that semantics gives the contents of our propositional attitudes (beliefs, desires, intentions, etc); natural language sentences can, at most, be thought of as inheriting this semantics from the beliefs, desires, etc. that it is used to express. Apart from Fodor's simplifying assumption that natural language sentences are isomorphic with the thoughts they

express, this view is consonant with the relevance-theoretic outlook: intentionality resides primarily in thought and that is the appropriate domain for an externalist truth-conditional semantics.

I leave aside now the issue of whether there is a 'real' externalist semantics to be given for natural language, or for thought, and turn instead to consideration of the conception of pragmatics that accompanies the internalist view. The first point to be clear about is that the domain labelled pragmatics by the formalists discussed above, is not pragmatics on the internalist story. Although the sort of internalist semantics outlined here appears to be like the formalist view in that it takes natural language semantics to be context-independent, it doesn't follow from this that in giving the semantics of a word or sentence no reference may be made to the notion of context or to roles like speaker, hearer, etc. Native speakers know (and know in a context-free sort of a way) that the pronoun *I* involves a reference to the speaker and that the pronoun *she* involves a reference to a salient female in the context; this is the inherent, stable meaning of these linguistic forms, so this is part of their semantics. Higginbotham (1988), following Burge (1974), employs a system of conditional normal forms to capture native speakers' knowledge of the meaning of sentences with indexicals and demonstratives. The consequent of the conditional gives the truth conditions (in standard T-sentence format) of utterances of sentences with a given structure, assuming that the antecedents are fulfilled. For instance, what a speaker knows when she knows the meaning of the sentence in (2a) is represented by (2b):

(2) a. She is lazy.
b. If x is referred to by *she* in the course of an utterance of (2a) and x is female, then that utterance is true just in case lazy(x).

In effect, what is going on here is that the T-sentence is made conditional on certain types of contextual parameters obtaining; these parameters are, of course, entirely abstracted from the specifics of particular contexts. Higginbotham (1988, 40) expresses the hope that this approach promotes semantic theory "without leading into the morass of communicative context".

So what is an internalist pragmatics about? According to Chomsky, in one of his few statements bearing on this issue, pragmatic competence is a component of the mental state of 'knowing a language'; he distinguishes the following: (a) *grammatical competence*: the computational aspects of language, that constitute knowledge of form

and meaning, and (b) *pragmatic competence*: knowledge of the conditions for appropriate use, of how to use grammatical and conceptual resources to achieve certain ends or purposes, (Chomsky 1980, 59, 224-225). The semantics/pragmatics distinction here is a distinction between two different types of knowledge about language: on the one hand, knowledge of meanings of lexical items and of LF structures, and, on the other hand, knowledge of how to employ those structures, including, one assumes, in communication. One of the few people to pursue this view of pragmatics as a competence system, a body of knowledge about language, is Kasher (1991, 1994). However, he ends up distinguishing different types of pragmatics in terms of Fodorian modular input systems and nonmodular central systems (Fodor 1983), so that his account is effectively given in terms of performance mechanisms and principles. My suggestion is that when it comes to internalist pragmatic theorising a shift from a competence to a performance perspective is virtually inevitable and the guiding pragmatic principles are not specifically linguistic.

However, there is a set of linguistic facts that has been claimed to constitute a domain for a "linguistic pragmatic competence" or a "discourse competence", as a component of linguistic competence. This is the domain of those distinct but truth-conditionally equivalent syntactic structures or referential options, which have quite different effects on understanding. For example, the two structures in (3):

(3) a. The children found Sally.
b. It was the children who found Sally.

Prince (1988) makes a strong case for a pragmatic competence, which consists of "the principles underlying a speaker's choice of a particular syntactic or referential option in a context and the principles underlying a hearer's understanding of it" (Prince (1988, 166-67)). She is surely right that native speakers know of the cleft structure in (3b) that it is appropriately used in certain contexts and not others. This is certainly linguistic knowledge and it is knowledge that concerns appropriate use, so it can be called discourse or pragmatic knowledge. However, it raises some of the same issues as Montague's use of the term pragmatics for the study of indexicals and, like that study, might as well be reckoned to fall within semantics, although it is plainly not a matter for a purely truth-conditional account. In this respect, these facts fall together with Grice's conventional implicature case (e.g. *but, moreover, therefore*); on the relevance-theoretic decoding/inference distinction, they all fall on the decoding side, though what they encode might be better thought of as a rule for use rather than a concept or

representational constituent. I return briefly to this issue in the last section where the idea of 'procedural' semantics is considered.

As long as one does not take the line that pragmatics is the semantics of indexicals or the semantics of any other sort of linguistic form, such as those that carry information about speech acts or appropriate context type, it seems that there is little forthcoming as a viable body of pragmatic *knowledge*. Moving to an account in terms of performance mechanisms, the semantics/pragmatics interface is the point of contact of the linguistic parser and the inferential mechanism(s). The parser, which employs the linguistic knowledge constituting grammatical competence, delivers a logical form or schema of some sort (whether a Chomskyan LF or some variant), which provides an essential input, along with relevant information from perceptual and conceptual sources, to the rationally constrained interpretive inferential processes. An account along these lines is pursued in section 3.

2.3 Philosophical semantics and pragmatics

2.3.1 Proposition types. As opposed to the formalists with their pure semantic concerns, philosophers like Frege and Russell, who have had considerable influence on work on natural language semantics, were primarily interested in something else and looked to semantics as a means in the investigation of that something else: thought, propositions, facts, or the structure of the world. So, for instance, the fundamental distinction between two types of proposition or thought, singular and general, is taken to be reflected in the semantics of natural language sentences. Pairing up sentence types with the proposition types they express, whether singular or general, has its motivation in an interest in those proposition types and in such epistemological matters as ways of knowing an object (whether by direct acquaintance or via a description) and the metaphysical issue of non-existent entities. On Russell's view, a sentence with a genuine referring expression as subject, say an indexical, expresses a singular proposition containing the individual referred to as a constituent; a sentence with a description, or some other quantifier, as subject expresses a general proposition. Understanding a sentence involves grasping the proposition it expresses, and if the proposition is singular it is only fully grasped by someone who is in the appropriate epistemic relation with the particular individual referred to. The sentence semantics proposed is, of course, much closer to the formalists than the internalists, as characterised above; the sentence expresses a proposition with

such and such truth conditions.

In this sort of semantical project, subservient to a bigger agenda, there is no discernible semantics/pragmatics distinction in evidence. The shift to considerations of language use and communication came with the reactions of Strawson and, especially, Donnellan to Russell's account of definite descriptions. In his discussion of the referential and attributive uses of descriptions, Donnellan (1966) passingly employs a semantics/pragmatics distinction. On the attributive use, a definite description sentence ("The F is G") expresses a general proposition; on a referential use, the very same definite description sentence expresses a singular proposition. In principle, every description can be used in either of these ways, quantificationally or referentially, and this is not, he says, a matter of **semantic** ambiguity but of **pragmatic** ambiguity. It's not a semantic ambiguity because it doesn't reside in lexical or syntactic ambiguity, that is, in the linguistic system itself. It is a matter of speaker use of the description, specifically of the sort of intention that informs the use. This is a particularly significant turn of thinking, since while the referential/attributive distinction is conceived of as a pragmatic matter, it appears also to be a truth-conditional ambiguity, in that different propositions are expressed on the two uses. This opens the way to a distinction between the semantics of a linguistic expression (a sentence), on the one hand, and the proposition expressed, on the other, the apparent gap between the two mediated by considerations of use, of speaker intention, of pragmatics.

The issue is extended by recent observations of Nunberg (1993) concerning sentences with referring expressions, such as indexicals or demonstratives, which seem to express general descriptive propositions rather than the singular ones predicted by the direct reference view:

(4) a. I am traditionally allowed to choose my last meal.
(spoken by a condemned prisoner, the night before execution)

b. Tomorrow is always the biggest party of the year.
(referring to the day before college classes begin)

Like Donnellan, Nunberg does not posit a linguistic semantic ambiguity here; the first person encodes just that rule or character that points to its speaker. Pragmatics interacts with linguistic semantics in determining the proposition expressed (whether singular or general). The Gricean gambit, of preserving the dictates of linguistic convention in a level of what is said, and treating all aspects of meaning due to communicative conditions as belonging to a distinct level of conversational implicature, cannot be

applied to (4a) and (4b). The attempt would result in incoherence at the level of what is said or proposition expressed; since the adverbs *traditionally* and *always* quantify over instances, both "I" and "tomorrow" have to be interpreted as referring to a recurrent property ("the condemned prisoner", "the day before classes begin") rather than to the individual who is the speaker or to the particular day that follows the day of utterance. It seems, then, that both sentences with descriptions and sentences with indexicals can express singular propositions, and both can express general propositions, though, clearly, their linguistic meaning is very different and the routes (pragmatic, inferential) to these interpretations commensurately different.

This is the beginning of a dismantling of the sentence type/proposition type correlation of Frege, Russell and (perhaps) Grice. It is not that there are not such proposition types, nor that there is not a distinction to be made between species of knowledge (by description, by direct acquaintance, etc), but that the relation between the expressive tools provided by the linguistic system (words, sentences) and what they can be used to express is one-to-many. The particular expressive relation on any given occasion of use is determined pragmatically.

2.3.2 Proposition expressed. Grice is something of a hybrid figure. He is rightly thought of as the founder of inferential pragmatics; his system of conversational maxims and his insistence on a rational inferential process of working out the non-conventional or conversational implicatures of an utterance are the basis for the bulk of work in current pragmatics, both linguistic and philosophical. Yet he is also very much in line with the Russellian tradition: his concept of 'what is said' by a sentence or utterance seems to be but a variant of the pairing of sentences and propositions, and the basic motivation for his interest in properties of rational discourse was to separate off *what our words say* from *what we, in uttering them, imply* (Grice 1986, 59). So among the uses to which he put conversational implicature was in defence of Russell's semantics for definite descriptions against the challenges from both Strawson and Donnellan; the idea is to maintain Russell's quantificational account at the level of what is said for all occurrences of definite descriptions. The existential presupposition standardly carried by both positive and negative definite description sentences is accounted for as a conversational implicature, dependent on a manner maxim concerning the rational presentation of one's information. A similar approach is taken to the communication, on the referential use, of a singular proposition; it too is a case of conversational implicature, worked out on the basis of considerations of relevance and/or

informativeness.

So how is the distinction between semantics and pragmatics drawn by Grice? It is not at all clear. The terms 'semantics' and 'pragmatics' don't appear in his work; his fundamental distinction was between 'saying' and 'implicating'. He seems to have intended 'what is said' to be the truth-conditional content of an utterance and 'what is implicated' to be the rest (i.e. non-truth-conditional). For those who take it that truth conditions are what semantics is all about, this might well look like just another set of terms for the semantics/pragmatics distinction. Yet "what is said" seems to be a concept belonging to the realm of language use, to the theory of utterances or speech acts, rather than to sentence semantics. Furthermore, for a full identification of what a speaker has said, one needs to know the identity of the referents of any referring expressions and the intended meaning of any ambiguous linguistic forms (Grice (1975, 44)).

While these two requirements, which go beyond the conventional or encoded linguistic meaning, are taken to be determined by context, they are apparently satisfied without the involvement of the conversational maxims, which are employed just in the derivation of conversational implicatures. There are two possible construals of this: (a) "what is said" just is semantics and, as Bach (1997) contends, there is an accompanying notion of semantic context, narrow context, comprising just those contextual features necessary for the determination of referents and 'operative meaning', or (b) disambiguation and reference assignment are pragmatic processes, involving considerations of plausibility, informativeness or relevance, and so pragmatics plays an essential role in the determination of the truth-conditional content of the utterance. The first construal, which it seems likely was intended by Grice, makes his 'what is said' a speech-act equivalent of the linguistic entity to which the formalists assign truth conditions. The second construal, on the other hand, forces a disjunction between linguistic semantics (conventional or encoded linguistic meaning) and truth conditions; in a much developed and extended form, this is the 'semantic underdeterminacy' thesis, a central tenet of relevance theory, or what Travis (1997) calls 'the pragmatic view' (to be discussed in the next section).

The Gricean picture is further complicated once we recall that there is a range of linguistic forms which apparently do not contribute to truth conditions, hence not to what is said, but which, assuredly, do encode meaning of some sort; in Grice's terms, they give rise to an implicature (that is, to an element of non-truth-conditional utterance meaning), not due to any maxims of communicative behaviour, but via a convention (a linguistic semantic convention, presumably). Among the particular cases he discussed are *but*, *therefore*, and *moreover*, whose conventional meaning does not bear on the

statement(s) made by an utterance in which they feature; they have a semantics, but that semantics is not truth-conditional. Grice's status as a speech act theorist, alluded to above, is especially clear in his treatment of these elements; while they do not contribute to the speech act of saying, hence not to the basic (central, ground-floor) speech acts of stating, telling or asking, they enter into higher-level (non-central) speech acts of commenting on the basic ones. For instance, an utterance of "P but Q" (where P and Q have been expressed by indicative sentences) may perform the two basic speech acts of stating (that P, and that Q) and a further higher-level speech act of contrasting these two statements. The truth value of the proposition expressed by this non-central speech act does not affect the truth value of the utterance, which is determined just by the values of P and of Q.

In strand five of his retrospective epilogue (1989a, 359-365), Grice puts up two types of utterance meaning as candidates for signification which is somehow central or primary: the *dictive* and the *formal*. Formal signification is all that meaning for which he elsewhere employs the term 'conventional', whether entering into what is said (truth conditions) or implicature. Dictive meaning appears to be another term for what is said, meaning which is usually some combination of (some of the) formally given meaning and of (some of the) contextually supplied meaning. This pull between two different notions of central meaning or primary signification in natural language use arises constantly throughout work in semantics; it is fundamentally a tension between semantics as truth-conditional content (what is said, the minimal proposition expressed), on the one hand, and semantics as what the formal elements that comprise a natural language encode, on the other hand.

2.3.3 The pragmatic view: two kinds of semantics. Charles Travis maintains that the question of truth does not arise for expressions of a language: any sentence 'may have any of indefinitely many different truth conditions', dependent on the way in which they are used and the circumstances in which they are used, and any word may 'make any of many different contributions to truth conditions of wholes in which it figures as a part' (Travis 1997, 87). On this view, truth-conditional semantics includes some pragmatic aspects of meaning (properties that arise through speaking), and the semantics of linguistic forms has little or nothing to do with truth conditions. This is a view that he has been defending for some time (see Travis 1981, 1985). Here is one of his many examples:

(5) The kettle is black.

Discussing what is meant by the predicate 'black' in (5), he considers a range of possible circumstances:

> Suppose the kettle is normal aluminum, but soot covered; normal aluminum but painted; cast iron, but glowing from heat; cast iron but enamelled white on the inside; on the outside; cast iron with a lot of brown grease stains on the outside; etc. (Compare a postage stamp, black on one side - a black stamp?, a 'yellow' labrador retriever painted to look like a black one - is the dog black? a 'black' narcissus, with a green stem; the North Sea [look at it from the deck on a normal North Sea day, then pull up a bucket of it and look at that].)
>
> (Travis 1985, 197)

The bearer of truth is not the sentence but the proposition or thought the speaker uses the sentence to express on the given occasion of utterance. One of the sources of these propositional differences in (5) is the property communicated by the predicate 'black', both what property that is (clearly visible black, a wider colour spectrum taking in various dark browns, invisible black and any other way of being relevantly black) and what exactly it is taken to apply to (the whole kettle, just the outside, or some other salient part of it).

According to this "pragmatic view", as Travis calls it, for any utterance, the contribution made by any, and potentially all, of the linguistic items employed is context-dependent, so that a statement of THE truth conditions of a sentence is not possible. As will be seen, the semantics/pragmatics relation entailed by this is highly consonant with the relevance-theoretic view, which is the focus of the rest of the paper.

In what follows, the usual order of consideration of the partners in the semantics/pragmatics distinction is reversed: I start with pragmatics. A pragmatic theory is taken to be an account of the cognitive psychological processes involved in understanding utterances (or ostensive acts more widely), and the appropriate conception of semantics follows from this.

3 Relevance-theoretic pragmatics

3.1 Cognitive basics: relevance-seeking and mind-reading

In this section, I outline a basic claim or assumption on which the relevance-theoretic account rests and put it together with a widely observed fact about the way humans interpret each other's behaviour. The basic assumption is that the human cognitive system is oriented towards the maximisation of relevance; that is, the various subsystems conspire together so as to tend to achieve the greatest number of cognitive effects for the least processing effort overall. The idea is that the perceptual input systems have evolved in such a way that they generally respond automatically to stimuli which are very likely to have cognitive effects, quickly converting them into the sort of representational formats that are appropriate inputs to the conceptual inferential systems; these systems then integrate them, as efficiently as possible, with some accessible subset of existing representations to achieve as many cognitive effects as possible. For fuller exposition, see Sperber & Wilson (1986) and Sperber & Wilson (1995, 261-66).

The widely observed fact about how humans interpret each other's behaviour is the following: if some behaviour we observe can be understood both in purely physical terms and in mentalistic (intentional) terms we will almost inevitably go for the latter (Sperber 1994, 187). That is, we attribute beliefs, desires and intentions, often of several orders of complexity to each other all the time; it seems to be built into our cognitive system for interpreting the behaviour of our fellow humans and we tend to extend it (erroneously) to the interpretation of the behaviour of some other species and certain human-made machines too. The mental faculty responsible for this is generally called our 'theory of mind' or 'mind-reading' capacity and there is now a huge psychological literature on its nature, its place in our overall cognitive architecture, how it develops in infancy, its impairment in certain pathological conditions such as autism and its manifestation in other primate species.

Utterances and other kinds of **ostensive** behaviours are explained by the attribution to their originators of a particular sort of intention, which Sperber & Wilson (1986, 50-64) call a 'communicative intention'. This is an intrinsically higher-order mental state, as it is an intention to make evident an intention to inform someone of something (to state, tell, ask, make known something). Naturally, the mind-reading capacity is employed in interpreting ostensive behaviour, which carries with it a presumption of a certain appreciable level of relevance (that is, of cognitive effects for minimal processing effort)

for the interpreter, by virtue of its overt demand for attention, something which does not accompany other (non-ostensive) behaviours. This is captured by the "Communicative Principle of Relevance": every act of ostension communicates a presumption of its own optimal relevance; that is, a presumption that it will be at least relevant enough to warrant the addressee's attention, and moreover, as relevant as the communicator is able and willing to make it. Processing by the addressee's cognitive system in line with this presumption is automatically triggered by an ostensive stimulus, irrespective of the actual intentions of the producer of the stimulus. There is quite generally a motivation for inferring the (informative) intention of the communicator, an incentive which is absent from other situations of mental-state attribution, so that it seems to have become an innately specified response. The presumption of relevance carried by ostensive stimuli gives rise to a comprehension procedure that hearers use in their interpretation: following a path of least effort, they look for an interpretation which satisfies their expectation of relevance, and when they find one they stop.

Most existing work within the relevance-theoretic framework involves applying it to some aspect of the understanding of verbal utterances, but, as regards the structure of the theory itself, linguistic expressions are not its most basic objects. The protagonists in the story are thoughts (private, unobservable) and ostensive acts (public, observable) which are performed in order to communicate thoughts. The communicative intention can be made manifest by a range of types of ostensive acts (winking, nodding, pointing, sniffing, nose-wrinkling, eyebrow-raising, eye-rolling, miming, etc. and a huge variety of different non-linguistic sounds) and these are frequently successfully interpreted despite the absence of any element of encoding whatsoever. The often considerable disparity between the thought(s) falling within the communicative intention and the information encoded, if any, in the ostensive act is bridged by the interpreter's pragmatic inferential powers. These inferential processes function in essentially the same way whether or not combined with coded information. Obviously, the use of a linguistic system, or some other code, for ostensive purposes provides the relevance-constrained inferential mechanisms with information of a much more fine-grained and determinate sort than is otherwise available, and so hugely facilitates communication. However, for communication to succeed, it is sometimes necessary for the relevance-oriented mind-reading capacity to overrule the determinate dictates of the linguistic system, and this it is often able to do. Key data for this sort of pragmatic theory are provided by a variety of linguistic mistakes, misuses and contradictions, such as the following:

(6) a. I enjoy Martial's witty epigraphs.
b. The penguins have eaten all our cabbages.
(spoken in an English garden) (example from Deirdre Wilson)

(7) Kato (of O.J. Simpson, at his trial):
He was upset but he wasn't upset.
[= He was [upset]' but he wasn't [upset]"]

Explaining these cases of (often successful) mind-reading is a basic task of a pragmatic theory concerned with actual processes of utterance understanding, a task the relevance-theoretic account is equipped to handle. As data for a semantic theory, they are of no particular interest and will be subsumed in that theory's general account of word and sentence meaning; on most accounts of 'what is said' by these utterances, something false, and in the last case necessarily false, is said, although this has no bearing on the interpretive process.

3.2 Cognitive pragmatics and the semantic underdeterminacy thesis

It follows from the sort of relevance-driven processing just outlined that the linguistically encoded element of an utterance should not generally be geared towards achieving as high a degree of explicitness as possible, but should rather take account of the addressee's immediately accessible assumptions and the inferences he can readily draw. A speaker who fails to heed this, or gets it wrong, causes her hearer unnecessary processing effort (for instance, pointless decoding of concepts which are already activated, or highly accessible to him), and runs the risk of not being understood or, at the least, of being found irritating and/or patronising, etc. So subsentential utterances, employing a phrase or just a single word, are often more appropriate than a complete sentence, and many fully sentential utterances involve unarticulated constituents which, given the hearer's available contextual assumptions, are immediately recoverable:

(8) a. Paracetamol is better. [than what?]
b. It's the same. [as what?]
c. He is too young. [for what?]
d. She's leaving. [from where?]
e. It's raining. [where?]

The examples in (8) are obvious cases of linguistic semantics (logical form) underdetermining the proposition expressed; they require a pragmatic process of completion before they can be judged as true or false descriptions of a state of affairs. However, they do not show that this is an inevitable property of linguistic communication, as I wish to claim, because, after all, a speaker could have used a sentence which encoded the missing constituent:

(9) a. Paracetamol is better than nurofen.
b. Ibuprofen is the same as nurofen.
c. Leonardo DiCaprio is too young to play the part of King Lear.

It has been argued that while the linguistic semantics of an utterance often does in practice underdetermine the proposition it explicitly expresses, this is just a matter of convenience for speakers and hearers, and another sentence which fully encodes the proposition expressed (an eternal sentence) could always be supplied if the occasion seemed to warrant it. This is one version of a strong 'effability principle', according to which each proposition (or thought) can be encoded by some sentence in any natural language.

The view which incorporates the effability principle, the notion of eternal sentences and the 'inessential but convenient' conception of pragmatics, can be called the 'semantic view', intended to suggest a contrast with Travis's 'pragmatic view' above. So, according to Katz (1972, 126): 'a [non-eternal sentence] ... can be expanded on the basis of the information in the context to provide another sentence that ... always makes the statement in question, no matter what the context of utterance. The expansion consists of replacing each indexical element by an expression that has the same reference as the indexical element it replaces but whose referent stays fixed with variations in time, place, speaker, etc.' In other words, the infinite set of sentences that a linguistic system generates can be partitioned into two infinite subsets, one consisting of the underdetermining non-eternal sentences, which speakers find a very convenient effort-saving means of communicating their thoughts, and the other consisting of the infinite

set of fully determining (i.e. proposition encoding) eternal sentences, which can be employed when total explicitness, leaving no room for interpretive manoeuvre, is called for.

A different view of pragmatic inference was suggested in the previous section, according to which this sort of inferential activity is an automatic response of receivers of ostensive stimuli; it is but a particular instance of our general propensity to interpret human behaviour in terms of the mental states (beliefs, desires, intentions) of the behaver, which, in its turn, is to be located within a bigger picture of general relevance-seeking information processing. According to this view, pragmatic inference is fundamental and the employment of a code (linguistic system) as an ostensive stimulus is a useful addition; it would not be reasonable to expect, nor would it be particularly desirable, that the forms supplied by the code should be eternal or even fully propositional. I have argued elsewhere that the effability principle, at least in its strong form above, and the accompanying claim that there are eternal sentences, are wrong (Carston 1998). Consider referring expressions. According to the quotation above from Katz, for each indexical expression of a non-eternal sentence used to express a particular proposition, its eternal sentence counterpart contains a referring expression whose referent is fixed and invariant across all contexts of use. But what do these referring expressions look like? The most likely candidates are proper names and 'complete' definite descriptions, such as 'the table Ken Jones is sitting at at t_1'. But any proper name can be used to refer to many different individuals and there are no linguistic forms which encode the sort of specific temporal reference represented lamely here by "t_1".

Furthermore, the reference of these expressions is relative to the domain of discourse, where possible domains are the actual world, a fragment of the actual world, someone's belief world, a fictional world, a fragment of some counter-factual world. Recanati presents the following sort of case: you and I know that Lucinda wrongly believes that Peter Mandelson is the Prime Minister of Britain in 1998. Knowing that Mandelson is in the next room, I utter (10) to you:

(10) If Lucinda goes into the next room she'll have the pleasure of meeting the current Prime Minister of Britain.

I am here using the definite description to refer to Mandelson rather than the actual PM, because I intend the utterance to be interpreted with respect to Lucinda's belief-world within which Mandelson is the Prime Minster in 1998. This relativity of reference can

be extended in a fairly obvious way even to cases of rigid descriptions, such as 'the cube root of 27'.

An example of the context-dependent nature of the truth-conditional contribution of natural language predicates was given above in section 2.3.3. Here is another case:

(11) A: Do you want to go to the party?
B: I'm tired.

Most of us are tired to some degree or other most of the time; what B communicates by the predicate 'tired' in this context is something much more specific, something paraphraseable as 'tired to an extent that makes going to the party undesirable to B'. Just how narrowed down this ad hoc concept of tiredness is will depend on other contextually available information, perhaps concerning B's general energy levels, her liking for parties, etc. The prospects for finding another lexical item or phrase which fully encodes the concept of tiredness communicated here, and still others that encode the innumerable other concepts of tiredness that may be communicated by the use of this word in other contexts, look dim. (For more detailed discussion of this example, see Sperber & Wilson (1997).) In other words, as well as not uniquely determining the objects they can be used to refer to, natural language expressions seem to be intrinsically underdetermining of the properties and relations they may be used to predicate of an object. Given the relevance-theoretic view of pragmatic inference, this sort of underdeterminacy is to be expected; all that is required of the linguistic code is that it aid or direct the independently functioning inferential mechanism, not that it should encode the proposition the communicator expresses.

4 The semantics/pragmatics distinction and the explicit/implicit distinction

4.1 Saying/implicating

Conversational implicature was seen as a very useful philosophical tool by Grice and other philosophers, for siphoning off non-central aspects of utterance meaning, leaving the core philosophical statement to be assessed for truth; that core 'what is said' is as close to encoded (conventional) semantic content as a truth-evaluable entity can be. But once we couple an explicit/implicit distinction with the semantic underdeterminacy view, it becomes clear that the Gricean distinction has to be abandoned or quite radically

reconstrued.

There are at least the following two possible revisions: (a) the concept of what is said has to be understood as involving much more of a pragmatic contribution than Grice acknowledged, a contribution which is as much driven by conversational maxims or communicative principles as is the derivation of conversational implicatures; (b) a very constrained, semantically-oriented concept of what is said can be maintained, but only at the cost of recognising a further representational level, between what is said and what is implicated. Bach (1994) adopts the second approach; he takes what is said to be determined by just encoded content, certain cases of indexical reference assignment and disambiguation, and accepts that it is often subpropositional (so not truth-evaluable). He posits a level of implic**i**ture (distinct from implicature), a propositional representation at which the linguistically given what is said has been pragmatically completed and, on occasion, enriched. However, his conception of 'what is said' seems to be redundant in a cognitive processing account of utterance understanding, since it plays no role in the interpretation which is not already played by the independently motivated level of logical form. I have discussed Bach's ideas in some detail in Carston (1998, chapter 3) and won't pursue them further here.

The first approach, a revision of 'what is said' so as to allow for a much greater input from pragmatics, has been developed within the philosophy of language by Recanati (1989), and it is the route taken within cognitive pragmatics by relevance theorists in developing the concept of explicature.

4.2 Logical form and explicature

The gap between linguistically decoded information and proposition explicitly expressed is not bridged just by the processes of reference assignment and disambiguation. First, there are the completion processes required by utterances of the sentences in (8) in order to arrive at anything of a propositional sort at all. Then, there are such pragmatic processes as identifying the domain over which the quantifier in (12a) ranges and the relevant relation between Mary and the picture in (12b); these may be examples of linguistically mandated pragmatic processes in that the logical form contains a variable indicating the necessity of contextual instantiation in the two instances (pragmatic saturation cases, in Recanati's terms):

(12) a. Everyone went to the party.
a'. Everyone in my pragmatics seminar went to the party.
b. I like Mary's picture best.
b.' I like best the picture that Mary bought from the exhibition.

However, the cases that really show the radical difference between a semantically oriented notion of what is said and the appropriate concept of what is explicitly communicated within a cognitive processing account of utterance interpretation are those where a minimally propositional (hence truth-conditional) representation is further elaborated in deriving that more informative or more relevant proposition which is the one the speaker can be reasonably taken to have intended to communicate. Consider the following:

(13) a. He took off his boots and got into bed.
b. She gave him a push and he fell over the edge.
c. Writing my essay will take time.
d. He hasn't had any lunch.

For each of these examples, the result of reference assignment and disambiguation is a truth-evaluable propositional representation; (13a) is true iff both of the following are true: X removed his boots at some time prior to the time of utterance, and X got into bed at some time prior to the time of utterance; (13c) is true iff the activity of the speaker's writing her essay Y will occupy a time-span (a couple of milliseconds, for instance). However, these are not the propositions intended by the speaker nor the ones understood by the addressee; the temporal sequence communicated by (13a), the cause-consequence relation communicated by (13b), and the concept of an appreciable length of time communicated by (13c) are all aspects of the explicitly communicated proposition.

These examples can be viewed as cases of conceptual expansion, of strengthening achieved by the addition of conceptual material; for example, 'he hasn't had any lunch *today*'. There are other cases where it seems that a lexical concept appearing in the logical form is pragmatically adjusted so that the concept understood as communicated by the particular lexical item is different from, and replaces, the concept it encodes; it is narrower, looser or some combination of the two, so that its denotation merely overlaps with the denotation of the lexical concept from which it was derived. A case of this sort of ad hoc concept formation was given earlier in (7), repeated here:

(7) Kato (of O.J. Simpson, at his trial):
He was upset but he wasn't upset.
[= He was [upset]' but he wasn't [upset]"]

As far as its linguistically supplied information goes this is a contradiction, but it was not intended or understood this way. The two instances of the word "upset" were understood as communicating different concepts of upsetness, at least one, but most likely both, involving a pragmatic enrichment of the encoded lexical concept UPSET; the second of the two concepts carries certain implications that the first one does not, implications whose applicability to Simpson Kato wants to deny. The proposition explicitly expressed here is true just in case O.J. Simpson had one sort of property at the time in question, but lacked another, related but stronger, property.

Briefly consider now (14a)-(14d), some potential cases of pragmatic loosening of a concept:

(14) a. The steak is raw.
b. Holland is flat.
c. Jane is a bulldozer.
d. Jane isn't a bulldozer.
e. Bill is a human being.
f. Bill isn't a human being.

In many contexts the property attributed to the steak in (14a) is not literal uncookedness, but a weaker one of undercookedness, which shares some but not all of the implications of the stronger one; similar comments apply to (14b) and (14c). The interest of (14d) is that although the linguistically encoded content of 'not a bulldozer' is literally true of Jane, it is a trivial, hence irrelevant, truth and what is understood as being denied is her having the property that is communicated by the loose use of the concept BULLDOZER in (14c). Example (14e) and its negation (14f) are the enrichment counterparts, in that the property predicated of Bill in (14e) is narrower than the encoded one that denotes a particular species, and this is denied in (14f). These pragmatic narrowings and loosenings of encoded concepts are entirely local, so can fall within the scope of negation. For further discussion, see Carston (1996, 1998) and Sperber & Wilson (1997).

Within the relevance-theoretic account of utterance interpretation, where the aim is to

delineate the set of assumptions that are communicated and the processes by which they are derived, these cases are viewed as showing further ways in which pragmatic processing mediates between logical form and the proposition explicitly expressed by (the explicature of) an utterance. What this entails is that not only do pragmatic inferences build on, and flesh out, logical form, but they may also result in the loss of some element of encoded linguistic meaning featuring in the logical form; this is the case for the loose uses in (14a)-(14d). For instance, the proposition explicitly communicated by (14a) is true just in case the steak in question is [raw*], where [raw*] does not entail uncookedness. This makes it very clear how distant the concept of the proposition explicitly communicated in this cognitively-based account of verbal communication is from the philosophically-based, semantically-oriented concept of 'what is said'. There is no role in the cognitive account for 'what is said' construed as the proposition literally and strictly expressed, so departing but minimally from linguistically encoded meaning.

The relevance-theoretic explicature/implicature distinction is a distinction among the propositional forms communicated by the utterance (the assumptions falling under the speaker's communicative intention, speaker-meant, in Grice's terms). It is a derivational distinction. An explicature is derived by inferentially developing the logical form of the utterance. All other communicated assumptions are implicatures; they are derived by inference alone, inference in which the explicature is one of the premises. Different token explicatures having the same propositional content may vary with regard to the relative contributions made by decoding and inference. That is, they may vary in degree of explicitness.

The overall picture here is of a semantic representation (of the syntactic logical form variety already discussed), which is the linguistic input to relevance-seeking pragmatic inferential processes, which eventuate in a set of communicated propositional forms, explicatures and implicatures, each of which could be given a truth-conditional semantics, but none of which is, or is encoded by, a natural language sentence.

5 Relevance-theoretic semantics

5.1 Two types of encoding: conceptual and procedural

Having given some idea of how pragmatics is conceived of on this internalist, cognitive processing (performance) view, it is time to return to semantics, keeping in mind that by 'semantics' what is meant here is a relation between bits of linguistic form and the

cognitive information they encode, rather than a relation between forms and entities in the external world. An important idea, initiated and developed by Diane Blakemore (1987, 1990, 1997), is that linguistic meaning can provide two quite distinct types of input to pragmatic inferential processes. On the one hand, linguistic forms may encode concepts. Concepts function as constituents of those mental representations that undergo inferential computations (i.e. conceptual representations), so the concepts encoded by the linguistic expressions used in an utterance make up its logical form and provide the basis for the development of explicatures (the fully propositional assumptions explicitly communicated). On the other hand, linguistic forms may encode procedures. Procedures are not constituents of conceptual representations, but rather function as constraints on some aspect of the inferential phase of comprehension. To illustrate, consider the following examples:

(15) a. Squirrels love peanuts.
b. Moreover, squirrels love peanuts.
c. They love them.
d. LOVE (SQUIRRELS, PEANUTS)

Most nouns, verbs, adjectives and adverbs seem to encode a concept, which bears logical relations with other concepts. For instance, the conceptual representation corresponding to the proposition expressed by an utterance of (15a) may consist of a structured string of the concepts encoded by the three words, something like (15d). (I say "may", since the encoded concepts might be adjusted by pragmatic processes of enrichment or loosening, as discussed in section 4.2). The sentence in (15b) contains the additional lexical item, *moreover*, which is standardly assumed not to enter into the proposition expressed. The claim here is that its encoded linguistic meaning does not appear in any conceptual representation at all, because it does not encode anything conceptual, but rather indicates the sort of inferential process the proposition expressed is to enter into. Moving now to the sentence in (15c), it too might be used to express exactly the same proposition as an utterance of (15a); the conceptual representation of that proposition will not include the encoded linguistic meaning of the two pronouns. As is generally agreed, pronouns and demonstratives encode a rule for, or constraint on, finding a referent (see Kaplan 1977/89). In short, expression of the proposition that squirrels love peanuts may be achieved by the utterance of any of (15a)-(15c); the meaning encoded by *moreover* and by the indexicals drops out of the picture.

The relevance-theoretic view is that both indexicals and discourse connectives encode a procedure rather than a concept. On the face of it, these may appear to be two rather disparate phenomena, but what unites them is that they can be characterised, negatively, as not contributing a constituent to any conceptual representation and, positively, as providing an instruction to the hearer to guide him in the pragmatic inferential phase of understanding an utterance. The difference between them is that indexicals constrain the inferential construction of **explicatures** and discourse connectives constrain the derivation of **implicatures** (that is, intended contextual assumptions and contextual effects).

Blakemore's focus has been on discourse connectives like *but*, *after all*, *moreover*, *therefore* and *so*, those cases that Grice classified as devices of conventional implicature, contributing to higher-level speech acts. For instance, consider the examples in (16):

(16) a. She can pay.
b. After all, she's rich.
c. She's rich.
d. So she can pay.
e. She's rich.
f. But she's generous.

According to Blakemore, the connectives in these examples do not contribute to any conceptual representation, whether ground-level or higher-level. Rather, they indicate to the hearer what type of inference process he should perform in deriving the cognitive (contextual) effects of the propositions explicitly communicated by the utterance. The use of *after all* indicates that (16b) is to be used as evidence in support of (16a); the use of *so* indicates that (16d) should be processed as a contextual implication of (16c); the use of *but* indicates that (16f) should be interpreted as contradicting and eliminating a possible implication of (16e). It is, of course, possible for the particular inferential interaction in each case to take place without any connective to direct the hearer; for instance, a hearer of (16b) might recognise it as providing backing for the statement made by (16a) without the encoded instruction provided by *after all*. What the use of these linguistic elements does is greatly increase the salience of a particular inferential relationship, so that, in those cases where the intended interaction is not already obvious to the hearer, the connective saves him the effort of trying to work out what sort of inferential computation he is to perform. Blakemore points out that these are just the sort of effort-saving devices you would expect to be provided by a code which is subservient to a relevance-driven inferential processing mechanism, a mechanism which is geared to derive cognitive effects at least cost to the processing resources of the system.

The notion of procedural encoding was initially applied just to cases of this sort,

linguistic expressions whose crucial property is that they do not affect the proposition expressed by, hence the truth conditions of, the utterance. The insight was later extended to linguistic expressions whose impact is felt at the level of explicature, including the proposition expressed by an utterance (Wilson 1991, Wilson & Sperber 1993). Among the pragmatic tasks at this level are disambiguation and reference assignment. Disambiguation is inherently constrained; the linguistic system supplies a restricted range of specific options for pragmatic selection. The task of assigning individual and temporal referents is a bit different: what pronouns and tense indicate is a broad constraint on the type of referent to supply, for instance, a singular female individual, or a time prior to the time of utterance, that is, they reduce the hypothesis space that has to be searched in arriving at the intended referent. Wilson & Sperber (1988) and Wilson (1991) further suggest that the information carried by non-declarative syntax (for instance, the imperative mood, interrogative word order, illocutionary devices such as *please, let's, huh, eh*) is procedural and functions as a constraint, not on the proposition expressed but, on a higher-level explicature which represents the speech act performed.

So a variety of inferential pragmatic tasks may be constrained and guided by encoded procedures: reference assignment, illocutionary force identification, and the derivation of implicatures. A further crucial job for pragmatics is working out the intended context, the set of assumptions with which the explicitly communicated assumptions are to interact in the search for relevance. A tentative initial hypothesis about (some of) the syntactic structures discussed by Prince (1988), such as clefting and preposing, whose contribution to truth conditions is identical to that of canonical declarative word order, is that they encode an instruction about the sort of context within which the propositional content is to be processed.

5.2 Conceptual encoding, indicating and truth-conditional semantics

In this final section, I return to the probably less controversial domain of conceptual encoding, focusing on a particular class of cases, sentence adverbials, including speech act adverbials such as *frankly*, and *confidentially*, and attitudinal adverbials such as *sadly* and *fortunately*. These are of particular interest because while speech act theorists have categorised them, together with conventional implicature expressions like *but*, as indicators, as opposed to describing expressions (see Austin (1962), Urmson (1963), Bach & Harnish (1979)), they are classed as conceptual rather than procedural by

relevance theorists (see Ifantidou-Trouki (1993), Wilson (1991)). Furthermore, they have been given a truth-conditional treatment by natural language semanticists who pursue that approach (for instance, Lycan (1984)), something not attempted for conventional implicature cases, as far as I am aware. So while they are truth-conditional, according to this tradition, they are non-truth-conditional, according to the speech act tradition. On the face of it, this is an odd state of affairs that calls, at the least, for some clarification. These adverbials strike me as a key case for teasing out the relation between the various different distinctions made in different approaches to semantics: conceptual vs procedural, truth-conditional vs non-truth-conditional, describing (saying) vs indicating.

First, given the conceptual/procedural encoding distinction, it is clear that they fall on the conceptual side. They do not function as constraints on pragmatic inference processes any more than the lexical items in the sentence *Squirrels love peanuts* do. Furthermore, they have synonymous manner adverbial counterparts which do contribute a conceptual constituent to the proposition expressed, as illustrated in (17a).

(17) a. Mary admitted to me confidentially that she is going to resign.
b. Confidentially, I'm going to resign.
c. Mary is going to resign.
d. The speaker of (17b) is telling the hearer confidentially that she is going to resign.

When we move to the distinction between the truth-conditional content of the utterance (the proposition expressed) and elements of utterance meaning which are not truth-conditional, it seems to be equally clear that the sentence adverbials considered here belong in the latter category. The proposition expressed, or what is said, by an utterance of (17b) is given in (17c). It is for this reason that speech act theorists take these adverbials to be indicating devices rather than describing elements; they contribute to the speech act performed (a 'confidential telling', in this case). Relevance theorists take them to contribute to what is explicitly communicated, but to a higher-level explicature rather than to the basic level one which constitutes the truth-conditional content of the utterance. An utterance of (17b) by Mary communicates a higher-level explicature along the lines of (17d).

So the speech act theorists' class of indicators includes both procedural elements and conceptual ones. This is, I think, the result of an exclusive focus on language use, on the speech acts performed by language users. Describing (or saying) versus indicating is not

a semantic distinction, in the sense of a distinction between types of linguistic encoding, but is a use distinction, separating out elements that contribute to the locutionary act from those that contribute to the illocutionary act. It follows from this that while the describing/indicating distinction correlates with the truth-conditional/non-truth-conditional distinction as applied to the content of **utterances**, the cognitive semantic distinction between conceptual and procedural does not. Some conceptual encodings contribute to the proposition expressed (e.g. *squirrel*, *love*), some do not (e.g. *confidentially*, *frankly*); some procedural encodings constrain the proposition expressed (e.g. indexicals, tense), some (perhaps most) do not (e.g. *but*, *moreover*, cleft structure).

Let's bring in the third group of players, which includes Lycan (1984), Higginbotham (1988, 1989, 1994) and many others, whose aim is to give a semantic account of natural language **sentences** (as opposed to utterances), and subsentential forms, in terms of truth conditions. A truth statement for the sentence adverbial *confidentially* might look something like that in (18):

(18) If an utterance of "*Confidentially, S*" is an act by X of stating that P to Y, then that utterance is true just in case X states in confidence to Y that P.

I make no claim of adequacy for this rough attempt; the account given by Lycan (1984, 148-152) is rather more complex. The point is that there is no principled reason why the sort of truth-conditional account outlined in section 2.2 should not be able to accommodate the sentence adverbials. This is of interest for two reasons, the first a clarificatory matter, the second potentially more substantive. First, the question whether or not a particular linguistic element is truth-conditional or not is ambiguous. The two distinct questions are: (a) Can the element be given a truth-conditional semantics, qua semantics of the **linguistic system**? (b) Does the meaning encoded by the element contribute to the truth conditions of the **utterance**? In the case of *frankly*, *confidentially*, *fortunately*, etc. the answer to the first is "yes" and the answer to the second is "no". In short, before we can answer the question "truth-conditional or not?", we need to know whether we are being asked about linguistic semantics or the proposition expressed by an utterance.

The more substantive issue concerns the relation between the conceptual/procedural distinction (a linguistic semantic distinction) and the truth-conditional specifications given by natural language semanticists like Lycan, Higginbotham, and Larson & Segal (1995) It seems clear that every encoding considered to be conceptual by a relevance-

theorist is treated as truth-conditional by them. What about the class of procedural encodings, where do they fit into the truth-conditional semantic story? Higginbotham (1994) and Segal (1994) concede that Grice's conventional implicature cases (hence Blakemore's cases of constraints on implicatures) are not going to be covered by a truth-conditional account. As far as I can see, the same goes for the non-canonical syntactic structures discussed above. Indexicals and other expressions whose semantic value is inherently context-sensitive are effectively set aside, so that the truth statement for sentences containing them can be given as if their value were fixed (see section 2.2). In other words, the set of procedural or use-conditional, as opposed to truth-conditional, elements gets a mixed treatment dependent on whether the element constrains the proposition a sentence expresses or not.

The last question is whether both a conceptual/procedural encoding account and a truth-conditional semantic account are needed in the final big picture, a picture which perhaps incorporates both an account of semantic **competence**, of what it is to know the meaning of expressions of one's language, and an account of the representations and processes involved in understanding utterances of expressions of one's language, a **performance** matter. I don't think this question can be answered at this stage.

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