PRAGMATICS AND THE EXPLICIT - IMPLICIT DISTINCTION

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ABSTRACT

A conception of the semantics/pragmatics distinction as coextensive with a distinction between two types of cognitive process, decoding and inference, is defended. The main purpose of the thesis is to investigate a different but apparently related distinction, that between what is explicitly communicated and what is implicitly communicated. Views surveyed include Grice’s original saying/implicating distinction, certain subsequent adjustments to his conception, and the explicature/implicature distinction developed within the cognitively-based Relevance Theory approach to utterance interpretation, the approach adopted in the thesis.

A strong essentialist view of linguistic underdeterminacy is taken; that is, the encoded content of an utterance always and necessarily underdetermines the proposition it is used to express. It is argued that recovery of the proposition explicitly communicated by a speaker requires not only disambiguation, reference assignment and essential completion processes, but also adjustments (strengthenings and loosenings) of concepts encoded in the utterance and decisions concerning whether the speaker intends her utterance to be taken descriptively (as representing the external world) or meta-representationally (as representing some other representation).

This account has a range of consequences. One of these is that certain aspects of utterance meaning which have been treated as conversational implicatures by Griceans emerge as aspects of explicitly communicated assumptions. Another is that indeterminacy, recognised as characteristic of implicatures, is shown to be a pervasive feature of explicatures too. A third result is that within the sort of cognitive account employed here the explicit/implicit distinction is merely a derivational distinction; that is, it is a distinction between two means by which a hearer may derive utterance meaning: by developing an encoded logico-semantic form or by pragmatic inference alone. The properties of an utterance that have real import for the interpreter are the degree of strength with which particular assumptions are communicated and the locus of relevance (cognitive effects), both of which, it is argued, crosscut the explicature/implicature distinction.

In the course of developing these ideas, new semantic-pragmatic accounts of a range of key linguistic phenomena are given, including ‘and’-conjunction, negation (including metalinguistic negation), and loose (including metaphorical) uses of expressions.
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Could mortal lip divine
The undeveloped Freight
Of a delivered syllable
'Twould crumble with the weight.

Emily Dickinson (1894)

Communication is a more-or-less matter, seeking a fair estimate of what the other person said and has in mind. A reasonable speculation is that we tacitly assume that the other person is identical to us, then introducing modifications as needed, largely reflexively, beyond the level of consciousness. The task may be easy, difficult, or impossible, and accurate determination is rarely required for communication to succeed for the purpose at hand ...

Chomsky (1993, 21)

1.1 The scepticism of the great and the good

A pragmatic theory is not possible; communication and interpretation are not topics which submit to empirical enquiry. This appears to be the view of some formidably able minds; for instance, Noam Chomsky, Jerry Fodor, and Donald Davidson, to name but three. Davidson (1986) observes that ‘the interpreter’ includes everything that people might know and are capable of doing, so nothing sensible can be said about it. Chomsky (1992a) endorses this view, seeing the wish for a theory of the interpreter as tantamount to a ‘demand for a theory of everything’, the pursuit of which will lead to a theory of nothing. By a theory of ‘the interpreter’, both Chomsky and Davidson mean
something very much like a pragmatic theory: 'The interpreter, presented with an utterance and a situation, assigns some interpretation to what is being said by a person in this situation'. But this, the topic of successful communication, 'is far too complex and obscure to merit attention in empirical inquiry' (Chomsky 1992a, 103). It appears to belong in the realm of mysteries rather than problems, in Chomsky's view.

Similarly, Fodor (1983, 1986, 1987b) views utterance understanding as an achievement of the central systems of the mind, whose holistic inference processes are employed in belief fixation; utterance interpretation, that is, arriving at a confirmed hypothesis about what the speaker meant, is one kind of belief fixation. While the peripheral input and output systems, which mediate perception, including language perception, and execute motor routines, are fast, automatic processors, blind, deaf and dumb as regards much potentially relevant information, the central systems are intelligent and thoughtful, they consider the options. They are non-modular: not domain specific, not automatic and not informationally encapsulated, and as a result they are unlikely to yield to investigation. Fodor formulates this as his First Law of the Non-existence of Cognitive Science: ‘the more global a cognitive process is, the less anybody understand it’. His pet case is scientific hypothesis formation and confirmation, but clearly utterance interpretation is also a global process, albeit a much quicker, more spontaneous one, than scientific theorising. Of the processes involved in utterance understanding, those we may come to understand to some extent are those involved in delivering logical forms, because they are determined by the acoustic properties of speech (or graphological properties of writing) alone, that is, they are context-independent.

The big problem for non-modular mental processes is the Frame Problem, or, as Fodor calls it, Hamlet’s Problem. This manifests itself most vividly in Artificial Intelligence, where attempts to programme machines to perform the sort of decision making and belief updating activities that human intelligence performs apparently effortlessly run into seemingly insoluble difficulties. The problem can be thought of in two ways: (a) how to determine which subset of the whole database should be brought to bear on the construction and evaluation of particular beliefs/hypotheses; (b) how to track the consequences for one’s database (beliefs) of changes in the world, including changes caused by one’s own actions. For Hamlet the problem was how to know when
to stop thinking/assessing/agonising and start acting.

Here is a manifestation of this general problem in the specific area of utterance interpretation; consider what is involved in deciding what the referent of the italicized pronoun is in a sentence such as (1), followed by a sample of possible continuations:

(1) The city councillors refused to issue the workers a permit for a demonstration because they ...

- feared violence.
- were communists.
- were preparing for an election.
- were from out of town.
- applied too late.

In discussing this example, Pylyshyn (1987, viii) says it presents us with the problem of holism of reasoning: ‘... arbitrary knowledge of the world has to be brought to bear. Moreover, there is no way to exclude any fact in advance as being irrelevant, without considering all implications of that fact; because there just could be some consequence at the end of a long chain of inferences that bore directly on the assignment of the anaphoric referent.’

The problem about the processes of decision making, belief update and utterance interpretation for a theory of human cognitive activity is to explain why/how there is not a problem in practise; for the most part, we are not prey to Hamlet’s difficulty; for each of these rearrangements of our cognitive system, we consider some delimited set of beliefs/data and leave it at that. But these cognitive activities present formidable problems to researchers trying to model them or to construct artificial systems which can perform them (see articles in Pylyshyn (1987b)); the only way out seems to be to set arbitrary limits on the data consulted, a ‘solution’ that has little bearing on how humans manage these intelligent activities.

Sperber & Wilson (1986a/1995) have taken up the challenge presented by these sceptics and have set out to give an account of how hearers (interpreters) reach an interpretation of an utterance quickly and with relative certainty, despite the fact that there are, in principle, an indefinitely large range of possible interpretations, all
compatible with the linguistically encoded content. The question that has to be addressed is how it is that hearers do not get into ever lengthier chains of inference, searching for more and more possible interpretations and comparing them in a bid to find the 'right' one or the 'best' one.

Sperber & Wilson point out that, though fixing a belief about a speaker's informative intention is, in principle, a global inferential process, it differs from scientific theorising and even from other more mundane human decision-making processes in two ways. First, it typically involves a much shorter time-scale than scientific theorising and is also generally quicker than much non-scientific decision-making (what to buy mother for Christmas, whether or not to emigrate to New Zealand, how best to get on in one's career, etc). Utterance interpretation is very rapid and however much evidence might in principle be taken into account, in practice only a very small range is usually considered. Second, while the data for scientific theorising comes from impassive nature, which is not actively involved in helping scientists build correct theories, the data for utterance interpretation comes from a helpful source: speakers generally want their communicative intentions to be fulfilled and they shape their linguistic stimuli accordingly.

These two factors are reflected in their pragmatic criterion of consistency with the principle of relevance (see appendix 1). By virtue of the overt demand for a hearer's attention that a speaker's ostensive stimulus makes, the hearer is entitled to expect information which has a worthwhile range of cognitive effects for him and which requires no gratuitous expenditure of effort on his part in deriving these effects. So hearers construct and test interpretive hypotheses in order of their accessibility, and once they have found an interpretation which is consistent with their expectation of relevance they stop; to continue trying out further interpretations would not accord with the presumption carried by utterances (and other ostensive stimuli), the presumption that they are optimally relevant.

Consider example (1) in this regard. The two candidate referents for the pronoun 'they' are 'the city councillors' and 'the workers', and the different continuation clauses give different results. Let's take the first continuation, 'they feared violence', and assume that the two candidate referents are equally accessible to the hearer. So two referential hypotheses are tested in parallel - 'the city councillors feared violence' and
'the workers feared violence' - in a context which includes the proposition expressed by
the previous clause. As signalled by the connective 'because', the second clause is to
give an explanation for the councillors' refusal to sanction a workers' demonstration
(though, in fact, the account would run in essentially the same way in the absence of the
connective). The concepts encoded in the utterance, including 'city councillors',
'workers', 'demonstration', 'fear', 'violence', give the interpreter access to his
encyclopedic knowledge about worker demonstrations and the often opposing interests
of powerful authority figures and workers. An explanation in terms of city councillors
fearing violence is more easily integrated with existing assumption schemas than is an
explanation in terms of the workers fearing violence. It strengthens existing assumptions
about the behaviour and attitudes of both groups, while the other interpretation would
not connect up in any immediate way with such assumptions. So the pronoun is
assigned the referent 'the city councillors'.

It should be clear that the minimising of interpretive effort is crucial to this sort
of explanation. The factor of judicious allocation of limited processing resources will
play a central role (in interaction with other cognitive goals, of course) in any adequate
account of any type of human decision-making.¹

1.2 The personal and the subpersonal

The psychologist, William James, believed there were only two levels in discussing the
human mind/brain: the phenomenological and the neurological; he conducted most of
his psychological work at the upper level (the level of the whole person, the intentional,
the (potentially at least) conscious), this being, of the two, the specifically psychological
level of inquiry. Among current philosophers of mind, Searle appears to hold this
position; in his view, what is specifically mental is the conscious (and the potentially
conscious), and the rest is physiological (see Searle 1983, 1992, and some discussion in
section 2.6.1 in the next chapter). However, the current cognitive science paradigm (to
which he is opposed) works at a quite different level (situated between the other two).
This is the symbolic, computational level, which, it is claimed, is a psychological level,
a level of interacting subsystems, many of which are governed by autonomous principles
and are capable of only specific and limited interactions with each other. The processes
that are hypothesised to take place at this level are algorithmic (hence rule-governed) and unconscious (not accessible to consciousness even in principle).

Chomsky (1992b, 1995) stresses the importance of distinguishing those components, of the complex of systems involved in any human state or action, which might prove tractable to study, from those that won't. In the case of language use, which he discusses in these papers, they include the I-language (the internal computational procedure which interfaces with the phonetic system, on the one hand, and the conceptual system, on the other) and some performance systems, such as the parser. He points out the error of attributing to these systems, or to a complex of them, the achievements of ‘referring’ or of ‘understanding’:

‘People’ ... pronounce words, refer to cats, speak their thoughts, understand what others say, play chess, or whatever; their brains don’t and computer programs don’t ... just as it is persons who take a walk, not their feet.

(Chomsky 1992b, 213)

I think that the distinction Chomsky is drawing here is (or bears a close relation to) the distinction between the ‘personal’ level and the ‘subpersonal’ level, between that which is given a phenomenological description or a rationalising form of explanation and that which can be explicitly modelled and subjected to scientific testing. An example of a rationalising explanation of a human state or activity is the following: X picks up her umbrella before she goes out of doors because she believes it will rain and she wants to stay dry. This intentional (belief/desire) explanation makes her action reasonable or justified, makes it an intelligible behaviour. Sedivy (1996), referring to the work of Daniel Dennett and John McDowell (no specific references are given), says that the hallmark of such rationalising (person-level) explanation is that it is normative, it is given in terms of what ought to be the case: ‘to find someone intelligible as a person ... is to figure out what actions she is performing in terms of what actions she ought to be performing if she is rational, to figure out what she is saying [or understanding (RC)] in terms of what she ought to be saying [or understanding (RC)] if she is rational ...’ (Sedivy 1996, 4), where these norms (or ideals) of rationality specify standards of overall consistency and coherence. Subpersonal explanation, on the other hand, deals
in entities that stand only in causally efficacious relations, that is, can be shown to play a causal role in the action or behaviour, without standing in rational relations.

If I understand him right, what Chomsky is saying (and so also Fodor, in different terminology) is that while we can never come to a full scientific understanding of a person-level state or activity, we may be able to get some handle on some of the subpersonal components that are causally efficacious in particular person-level activities, such as seeing, referring and understanding utterances. So, for instance, the I-language system of the mind/brain is a crucial enabling component of the person-level abilities of speaking and understanding utterances. Davies (1996) has described the relation between the levels as one of interaction without reduction; discoveries about either one of the levels may affect one's view of and constrain one's theorising about the other. There is a relation of downward entailment, from the personal to the subpersonal, but the totality of facts at the subpersonal level doesn't add up to the personal level; there is always an explanatory gap. Accounts pitched at the subpersonal level offer partial explanations for whatever person-level ability we are focusing on. An implication of this picture, I believe, is that the personal level as such is not amenable to empirical study. Hypotheses framed at the personal level are testable only in so far as they can be broken down into some subpersonal components which can be examined scientifically (that is, naturalistically).

Taking this distinction on board raises some issues for pragmatic theorising. At which level is it (to be) conducted? Much discussion in pragmatics appears to be conducted at the level of the person (the intentional level): speakers form certain intentions on the basis of certain beliefs and desires, and hearers arrive at certain beliefs about speakers' intentions. The interpretation a hearer arrives at is explained (partially, at least) in terms of his having a certain set of assumptions and of his taking account of the speaker's capacities and preferences (see 'presumption of relevance' in appendix 1).

However, I believe that what is aimed at by relevance-theorists is a fully mechanistic account, an account in terms of explicitly described, interacting, subpersonal systems. Certain components, at least, of the theory are of this sort. In addition to the decoding system (the language module), there is the deductive device, the inferential system which blindly performs its computations on the input it is given, using the logical elimination rules which constitute its proprietary data-base. The account of encyclopedic
knowledge accessed via conceptual addresses looks amenable, in principle, to modelling as a complex subpersonal system.

The concept of 'accessibility', and degrees of it, plays an important role in the account, the accessibility of contextual assumptions being a crucial factor in the effort required to process an ostensive stimulus. Supposing that it could be modelled to a reasonable extent, then the question would be 'accessible to who or what?' We generally talk about accessibility to 'the hearer' (and about the speaker shaping her utterance in accordance with judgements she has made about the hearer's accessible assumptions). But perhaps we could talk differently; perhaps we could talk of 'accessibility to the ostension understanding system'. In recent work, Sperber (1994b, 1996) has moved the relevance-theoretic account further in the direction of a mechanistic subpersonal theory by proposing a comprehension module, a component of the mind which is domain-specific, in that it deals exclusively with ostensive stimuli and uses its own specific processing strategies and routines, in accordance with the second principle of relevance, itself dedicated to ostensive stimuli. At this early stage of theorising in this area, and given the scepticism attendant on the entire enterprise, it is not too surprising that discussion tends to move between levels: the subpersonal/computational, on the one hand, and the personal/rationalising, on the other.

There might seem to be another challenge to attempts at subpersonal explanation in the area of pragmatics, in fact in the study of meaning more generally. As Sedivy (1996) puts it, subpersonal level explanation deals with syntactic engines, while personal level explanation deals in propositional contents, that is, in the semantic, the intentional. There is no intentionality (no aboutness) at the subpersonal level, from which we might reason that explanation at that level will not yield us much in the field of semantics, nor, by extension, in pragmatics. It does seem that attempts to do semantics within the Chomskyan paradigm have either led its practitioners into giving up and heading off into Platonism (Katz 1981), or into delimiting the aims of semantics so as to keep it strictly within syntactic bounds.

Chomsky (1995) is highly sceptical both about the possibility of a naturalistic account of meaning and about the possibility of a theory of semantics. He rejects the idea that natural languages have a semantics, at least in the sense that philosophers understand it, the sense in which semantics is concerned with such concepts as
’denotation’ and ‘truth’, that is, with language as representing the world. He says: ‘As
for semantics, in so far as we understand language use, the argument for reference-based
semantics ... seems to me weak. It is possible that natural language has only syntax and
pragmatics.’ (Chomsky 1995, 26). He supports this view with a range of observations
about our everyday use of words such as ‘house’, ‘water’, ‘door’ etc. For instance,
ordinary use of the term ‘water’ allows for the presence of some impurities. As
Chomsky says, what counts as ‘impurity’ depends on human interests and concerns. For
example, if I fill a cup with water from a tap, it is a cup of water. If I dip a teabag in
it, it is not a cup of water but a cup of tea. Suppose, though, that someone has dumped
tea in the reservoir from which my tap water comes. When I fill my cup from the tap,
I have a cup of (impure) water, not a cup of tea.

Chomsky gives many examples of this sort to show that there is no specifiable
connection between words and the world, or even between words, concepts and the
world. While he uses these points against the likelihood of an ‘externalist semantic’
theory being a worthwhile empirical pursuit, I will call on these sorts of observations in
making a different point in the next two chapters: the claim that the linguistic
expressions we use (inevitably, necessarily) radically underdetermine what we mean
when we speak. It is in bridging this gap that our pragmatic resources play their most
fundamental role.

To return to the issue of subpersonal explanation in pragmatics, note that while
Chomsky rejects the possibility of an externalist semantics for linguistic expressions, he
appears to look favourably here on pragmatics. Given his general scepticism about the
feasibility of a theory of interpretation, it is not clear that what he means by ‘pragmatics’
here is what most current pragmatists mean by it. However, there is good reason to see
pragmatic theorising coming together with his syntactic theorising in so far as both are
utterly internalist, formal endeavours. An account of utterance understanding (as
opposed, perhaps, to a focus on what an utterance means) is an account of the mental
processes which take as input a certain sort of stimulus (ostensive and linguistic) and
yield as output an interpretation, in the sense of a set of cognitive effects (not in the
sense of a set of external semantic values). So the ‘semantics’ (if it can be so called)
that this story deals in is not propositional content, not intentionality which, it is
claimed, can only be captured at the person-level. Rather, it is an entity which is
construed only in formal, or syntactic, terms (something like Chomsky’s LF perhaps). The further (pragmatic) processes that transform this ‘semantics’ into a full and relevant interpretation, fall squarely within the domain of syntactic (computational) engines.

1.3 Types of inquiry and levels of explanation

There are further distinctions to be made, in fact a whole clutch of probably cross-cutting distinctions, concerning the types of question, the levels of explanation and the sort of theory/framework/account appropriate to a given intellectual project. Perhaps the first is that between scientific theorising, on the one hand, which is answerable to the empirical facts, the data (or some justified idealisation of the data), and the pursuit of constitutive questions, on the other hand, calling for conceptual analysis, a more philosophical activity (‘what is it to say that P?’ ‘what is it to possess a concept?’ etc).

I take it that ‘cognitive psychology’, within which Chomsky’s and Sperber & Wilson’s projects are located, is of the former sort, while ‘philosophical psychology’, which is how Grice characterised his own work, is of the latter sort.

Within empirical cognitive psychology, there are, of course, a variety of levels of explanation, including Marr’s well-known distinction between the computational level, the representation-and-algorithm level and the implementational or physical level (Marr 1982). And at a single level, say the computational level, there are different ways of construing a subject matter, such as, for instance, the human language capacity. Chomsky’s competence/performance distinction can be understood as holding at this level: both the generative procedure which is construed as a knowledge system (a competence) and such performance systems as the parser, which must employ the competence system, are given computational characterisations.

Some would say that the semantics/pragmatics distinction is the competence/performance distinction applied to the level of meaning: semantic knowledge is part of linguistic knowledge, while utterance interpretation is a performance which employs this knowledge together with a range of other competences (for instance, knowledge of logical principles/rules), general world knowledge, and special principles (say, the communicative principle of relevance). Within relevance theory, however, the semantics/pragmatics distinction is discussed as a distinction which is coextensive with
two types of cognitive process: decoding and inference, so that it in fact has more of the flavour of a distinction between two types of cognitive performance. Presumably, these could, in principle, be characterised at each of Marr's levels.

As already alluded to, semantics is studied by different people in many different ways: as an entirely non-psychological Platonist matter (Katz 1981); as a competence system but with variable psychological reality commitments, some looking for a system readily integrable with other psychological systems in an account of utterance understanding (e.g. Larson & Segal (1995), Kamp (1993)), and others less concerned with any direct usability for this purpose (Higginbotham (1988, 1993)); and there are other more 'procedurally' oriented approaches which are to the (truth-conditional) competence accounts much as the parser is to accounts of syntactic competence. Some of the implications of these different explanatory concerns in semantics are considered in section 2.5 of chapter 2.

Could 'pragmatics' be construed in competence terms, that is, as a body of knowledge? Some time ago Chomsky did talk this way; for instance, he listed some of the components of the mental state of knowing a language as follows:

a. grammatical competence (knowledge of form and meaning; the computational aspect of language);

b. conceptual capacity ('which permits us to perceive, and categorize, and symbolize, maybe even to reason in an elementary way')

c. pragmatic competence (knowledge of the conditions for appropriate use, of how to use grammatical and conceptual resources to achieve certain ends or purposes)

(from Chomsky 1980, 54-59, 224-225)

As far as I know, this is all Chomsky has said about pragmatic competence, but, on the basis of these few remarks, Kasher (1991a, 1991b, 1991c) has set about attempting to place pragmatics within the Chomskyan research programme. He has postulated a range of pragmatic 'modules' dealing in different facets of language use, including one for basic speech acts and another for elements of 'talk-in-interaction'. The picture is an uneasy melange of competence systems and Fodorian performance systems (modules and non-modular central systems). In addition to the components just mentioned, he
postulates the following: (a) central pragmatics, which is knowledge of general cognitive principles and general knowledge, involved in the generation of conversational implicatures, aspects of style and politeness; and (b) interface pragmatics characterised as 'knowledge which involves integration of data from the language module and other sources (e.g. perceptual) in, for instance, assigning referents to indexical expressions' (Kasher 1991b).

The domains of these two 'knowledge' systems essentially match the domain of relevance-theoretic pragmatics, which sets out to give an account of the principles and processes involved in the various subtasks of utterance understanding; these include disambiguation, fixing of referents, derivation of conversational implicature, all of which involve integrating linguistic knowledge with information from a range of other sources (perception, memory). However, relevance-theoretic pragmatics doesn't postulate a pragmatic competence in Chomsky's sense, a body of knowledge of how to use language, which would then have to be accessed by that system, whatever it might be, that actually did the interpretive work. It is a kind of cognitive performance theory, though, like any other empirical inquiry, it incorporates its own idealisations/abstractions away from the muckiness of actual data. It abstracts away from false starts, extraneous noise arising as a result of stresses and strains on the communicator or interpreter, negotiations about turn-taking, etc.

In the chapters that follow I shall often compare different accounts of some phenomenon; I shall try to exercise caution in doing this, since, as the discussion here should indicate, direct comparison is seldom possible. We have to bear in mind the questions each account is looking to answer, and the nature of the inquiry (whether philosophical/constitutive or scientific/empirical). Then within empirical psychological approaches, we have to be clear about the level at which the explanation is pitched and whether the account is conceived of in competence terms (as characterising knowledge) or performance terms (as actual computational processes performed on-line), since with each of these the issue of 'psychological reality' comes out rather differently.
Notes

1. Sperber & Wilson (1996) argue that Fodor has an idealised view of the ‘rationality’ of central processes of belief fixation. These processes don’t use all the relevant available evidence; considerations of processing costs and cognitive benefits enter into all ‘rational’ mental activity. Processing of newly impinging information stops when a satisfactory integration with the existing information system has been achieved or when the effort expended passes a certain threshold and is written off as sunk costs.

2. It may be that the two closely related concepts of ‘contextual’ effects and ‘cognitive’ effects, used within relevance theory, belong at the two different levels: contextual effects arise from the interaction of a set of assumptions (the context) and a stimulus (say an utterance); cognitive effects are effects for a whole cognitive system or individual, an entity capable of having cognitive goals and of having those goals furthered or hampered by the effects of an impinging stimulus (perhaps an utterance). If this is right, attempts to model a relevance-theoretic pragmatic system will have to focus on the formal notion of relevance in a context, a notion amenable to subpersonal explanation. Relevance (of a stimulus) to an individual will be explained in the rationalizing, normative terms of positive cognitive effects, that is, contextual effects that further a goal or enhance a function of the overall cognitive system (individual/person). See suggestive discussion in Sperber & Wilson (1995, 265).

3. Patterson (1996) argues very persuasively that Chomsky’s competence/performance distinction is not to be assimilated with Marr’s distinction between levels of explanation. Marr’s computational theories (level 1) and representation-and-algorithm models (level 2) are accounts of the same system, couched at different levels of abstraction. Competence models and performance models are theories of different things: the aim of an account of a cognitive competence is to describe and explain an internal knowledge system (such as I-language); the aim of an account of a cognitive performance is to describe and explain how a competence system or systems are put to use in real-time processing. Both competence and performance systems could, in principle, be explained at Marr’s two levels (and, of course, also at level 3, the physical level).

CHAPTER 2

PRAGMATICS AND THE SEMANTIC UNDERDETERMINACY THESIS

It is astonishing what language can do. With a few syllables it can express an incalculable number of thoughts, so that even a thought grasped by a terrestrial being for the very first time can be put into a form of words which will be understood by someone to whom the thought is entirely new.

(Frege 1923/77, 55)

... all that is required is that the properties of the ostensive stimulus [utterance] should set the inferential process on the right track; to do this they need not represent or encode the communicator's informative intention in any great detail.

(Sperber & Wilson 1986/95, 254)

2.1 Saying and meaning

It is a truism to observe that there is often a divergence between what a person says and what she means, between the meaning of the linguistic expression she uses and the meaning she seeks to communicate by using it. Some distinction or other of this sort is made by virtually everyone working in pragmatics and its reality is confirmed by our daily experience as speakers and hearers. I aim to do the following in this chapter: first, to chart the extent of this gap between linguistic meaning and speaker meaning; second, to examine why there should be such a gap and whether it is a contingent or necessary property of verbal communication; third, briefly to consider whether there is an analogous discrepancy between thought representations and their content.

Let us start with some phenomena which are obviously part of what is meant by the speaker but not part of what her linguistic string means, and move towards instances where the distinction is not so clear. The textbook case is irony and its standard characterisation is that of saying one thing while meaning the opposite. Though this is
certainly an inadequate characterisation, it is good enough for the immediate point. So a speaker may utter (1), when what she intends to communicate is that Joan has a very poor sense of direction, that she is bound to get lost and that it is laughable to expect her to arrive on time:

(1) With her excellent spatial sense, Joan is sure to find a shortcut and be the first to arrive.

Tropes, or figurative uses of language, in general, tend to exemplify clearly the saying/meaning distinction. So metaphor, metonymy and hyperbole, for instance, all involve saying one thing in order to communicate something else. All of these can be, and standardly are, viewed as cases where what is said is not even a part of what is meant, but is merely a vehicle for communicating what is meant.

There is another class of cases, where what is said is included in what is meant, but constitutes only a small part of what is meant and is, at least in some instances, not the main point of the utterance. Similes, understatements, and indirect answers provide such examples, so the speaker of (2) or (3B) means what she says, but she means a great deal more as well:

(2) Bill behaves like a three-year-old child whose teddy-bear has been taken away.

(3) A: Did you enjoy the evening at Bob and Sue’s?
    B: I’m not much of a party person.

The speaker of these intends them to be taken literally but also intends a hearer to draw certain further implications from them: in (2), implications regarding Bill’s behaviour, and, in (3), a rather negative answer to A’s question and, perhaps, further implications about the sort of person B is.

A property that both of these classes of saying/meaning divergences may exhibit is a kind of open-endedness in what is meant, while what is said is usually felt to be determinate and singular. So in (4), a metaphorical case, where the speaker does not mean what she says, what she communicates is an impression of the sort of behaviour,
demeanour and psychological state of Mary, which is typical of her when she is crossed.

(4) When she doesn’t get her own way Mary becomes a raging inferno.

It would be difficult to formulate this in terms of a small definitive set of propositions and there is room for differences across hearers as to just which implications they would actively entertain here. A similar point can be made about the more mundane example in (5), where the speaker does mean what she says, but would also standardly communicate a range of implications about her ability to function today, her readiness to get on with work, her improved state of mind, etc.

(5) I’m feeling better today.

Utterances which employ a subsentential linguistic expression are another sort of case again. The utterance in (6) employs just a prepositional phrase and the one in (7) just an adjective, but what is meant in each case is something sentence-shaped, presumably quite obvious in the context.

(6) On the top shelf.
(7) Higher.

When (6) is uttered by a speaker who realises that the hearer, making his breakfast, is looking for the marmalade, it communicates ‘the marmalade is on the top shelf’. From there on, the example is just like those of the second set above in that it may well have various further intended implications: the marmalade does not belong on the bottom shelf, I have moved it to its proper place, I am not trying to hide it from you, etc.

What these examples demonstrate is that, in addition to a speaker standardly meaning more or other than she says, the ‘what is said’ of the utterance may itself involve more than the meaning of the linguistic expressions used. So it looks as if we have to distinguish two notions which have so far been run together: there is linguistic meaning, the content encoded in the particular expression employed, and there is the thought or proposition which it is being used to express, that is, what is said.
there is a fair amount of variation in how this term 'what is said' is construed, it is generally agreed to be something sentence-shaped, fully propositional, semantically complete, truth-evaluable.\textsuperscript{1} It is this disparity, between linguistic meaning and the proposition expressed that I want to concentrate on in what follows in this chapter. That other major symptom and source of the disparity between linguistic content and what a speaker means, the intended implications (the implicatures or implicit import) of an utterance, will be taken up again in chapter 3.

While subsentential utterances are typical of much ordinary conversation among familiars, most of those linguistic productions that have the status of discourses or texts are supersentential, that is, they generally consist of more than a single sentence. There is a range of relations which may be understood to hold between sequences of sentences in discourse and these too are frequently not encoded by the linguistic expressions used:

(8)  
\begin{enumerate}
  \item He mistook his wife for a hat-stand; he wasn't wearing his glasses.
  \item Her life was in a mess. Her lover had left her and her electric toothbrush wasn't working.
\end{enumerate}

In (8a) the second sentence would be understood as giving an explanation for the state of affairs described in the first. In (8b) the second sentence would be understood as elaborating on or exemplifying the statement in the first. Sentential utterances consisting of more than one clause may also be understood as communicating a stronger relationship between the states of affairs described than is encoded by the element that connects them:

(9)  
\begin{enumerate}
  \item He wasn't wearing his glasses and he mistook his wife for a hat-stand.
  \item When she saw Mrs Simpson coming down the aisle she hid behind the breakfast cereals.
\end{enumerate}

In both of these cases a cause-consequence relation is understood to hold between the states of affairs described, though neither of the clausal connectives, 'and' and 'when', nor any other linguistic element in the utterances, encodes this. Whether these communicated relationships are part of what the speaker has said (the proposition she
has expressed) or are merely implications of the utterance will be considered in chapter 4.

Before looking more closely at ways in which linguistic content falls short of encoding the proposition expressed or what is said, there is another sort of case of the coming apart of speaker meaning and linguistic meaning which should be mentioned, if only to set it aside for the moment. This is the phenomenon of misuses and slips of the tongue. In all the above examples, including those where what is said is not part of what is meant, the speaker intended to express certain concepts as they are linguistically encoded in her utterance. So, although the speaker of (1) did not intend her hearer to take her to be endorsing the view that Joan has good powers of orientation, she nevertheless did intend her hearer to access those very concepts in the process of arriving at the intended interpretation. In the case of a slip or misuse, though, some of the meaning encoded in the utterance falls outside any intention the speaker has in producing the utterance. So a speaker of (10), who intends to communicate that Mary is a member of the upper classes, may succeed, but only if one or other of two special conditions pertain. Either the hearer is also mistaken, and in the same way as the speaker, in his understanding of the expression ‘hoi polloi’ (perhaps through a sound association with ‘hoity toity’), or the hearer, whose lexical item ‘hoi polloi’ maps "correctly" to a conceptual address for [common folk], recognises the disparity between its meaning and the speaker’s intention and, charitably, makes the appropriate adjustment.²

(10) Mary is one of the hoi polloi.

Arguably, the proposition expressed by this utterance, what is (strictly and literally) said, is that Mary is one of the common people, which is quite different from what is meant, and a poor vehicle for communicating what is meant. There are many types of example, with very different properties, to which these general remarks apply, including malapropisms, so-called Freudian slips, and various articulatory errors, such as spoonerisms, which are temporary malfunctions of the system, brought on by performance factors such as tiredness or emotional strain. What is particular to the type
of example in (10) is that what is said here lies beyond any intention the speaker 
COULD have in producing that utterance because the crucial encoding is not a part of 
her system of linguistic knowledge.

One might reasonably feel that the very fact that these are errors, that what is 
encoded (and so 'what is said') falls right outside the speaker’s intentions, makes them 
special and marginal. Certainly they bring an unclarity into the concept of what is said, 
since up to now we have been assuming that what a speaker says by an utterance is not 
at odds with what she believes her words to mean, even if she doesn’t in fact intend to 
be taken as meaning what they mean. However, an adequate pragmatic theory does have 
to account for these cases, in particular for how they can, sometimes at least, be cases 
of successful communication. I will return to these in the final chapter, when we have 
some finer distinctions at our disposal in order to assess whether, and how well, existing 
pragmatic theories accommodate them.

2.2 The underdeterminacy thesis

From the discussion above, I believe three levels of utterance meaning have emerged, 
though they all remain in need of considerable clarification: linguistic meaning, what is 
said and what is meant. I started out by treating the first two as if they were the same 
and distinguishing them from what is meant, but it soon became clear that what is said 
has to be distinguished from linguistic meaning. As a result, we have three possible 
underdeterminacy theses:

(a) Linguistic meaning underdetermines what is meant.
(b) What is said underdetermines what is meant.
(c) Linguistic meaning underdetermines what is said.

I do not think that anyone, apart, perhaps, from a rabid ‘language is all’ social 
semitician, would dispute the first two. I want to examine the third one, which I will 
call the linguistic underdeterminacy thesis or the semantic underdeterminacy thesis or 
just THE underdeterminacy thesis. What is meant by this is that the linguistic semantics 
of the utterance (that is, the meaning encoded in the linguistic expressions used)
underdetermines the proposition expressed (what is said). The hearer has to undertake processes of pragmatic inference in order to work out not only what the speaker is implicating but also what she is saying. My purpose here is to demonstrate the vast extent of this phenomenon, which has, until fairly recently, been little acknowledged. I aim to prepare the way for an investigation in the next chapter of the various notions of explicitness found in the semantic and pragmatic literature, including ‘saying’ and ‘what is said’, ‘making as if to say’, ‘proposition expressed’, ‘propositional form of the utterance’, ‘truth-conditional content’, ‘explicature’ and, unlikely though it may sound in a discussion of explicitness, ‘implicature’. All of these lie on one side of a divide, on the other side of which is ‘implicature’, the fairly consensus term for the implicit content of an utterance.

Before looking at some of the sources of linguistic underdeterminacy, I’ll make a brief terminological digression. Perhaps it is sufficiently clear from what has been said so far that the two terms ‘underdeterminacy’ and ‘indeterminacy’, are not synonymous, but there’s no harm in trying to be explicit about it. As far as I can see ‘indeterminacy’ is used with reference to several different phenomena. First, it is sometimes used in a contrast with ambiguity. Linguists tend to reserve the term ‘ambiguity’ for those random and arbitrary coincidences of bits of linguistic form which encode two or more distinct concepts, such as ‘bank’ and ‘visiting relatives’. Indeterminacy, then, is used of some of the other sources of the linguistic underdeterminacy of propositional form, so we see ‘referential indeterminacy’ used of indexicals and definite descriptions which require contextual determination of reference. It could be similarly used in the term ‘predicational indeterminacy’ or ‘conceptual indeterminacy’, though here we more often find the terms ‘vagueness’ or ‘generality of sense’, a matter of practice rather than principle. Then, stepping outside the linguistic underdeterminacy thesis and considering the implicit content of utterances, there is the indeterminacy of implicature mentioned by Grice (1975, 58) and given theoretical flesh by Sperber & Wilson (1986, 195-200)’s concept of weak implicature, to be discussed in chapter 3. Examples (4) and (5) above are cases where the implicatures actually derived may not have been specifically intended by the speaker; that is, there is indeterminacy regarding which of a range of possibilities falls within the speaker’s informative intention. Finally, of course, there is the much touted ‘indeterminacy of
translation/interpretation' thesis of Quine: according to this, there just is no fact of the matter concerning which of several hypotheses about the meaning of a linguistic expression or its translation into another language is correct; all of them may be compatible with the available evidence (the evidence allowed by Quine being restricted to observable features of the behaviour of the users of the linguistic expression). The common feature of these various uses of the term 'indeterminacy' is, I think, captured by the phrase 'no fact of the matter'; no conclusion can be drawn because there is none to be drawn. Linguistic 'underdeterminacy', by comparison, does not entail that there is no fact of the matter as regards the proposition expressed but rather that it cannot be determined by linguistic content alone. It may be that the proposition expressed by an utterance can also exhibit the property of 'indeterminacy' (a possibility considered in chapter 6) but that is a quite separate matter from the current focus on its linguistic underdeterminacy. End of terminological digression.

### 2.2.1 Sources of linguistic underdeterminacy

Now to some of the ways in which a linguistic expression may underdetermine the proposition expressed. First, there are linguistic ambiguities to be resolved and indexical expressions whose referents must be assigned; these two pragmatic processes are widely acknowledged, even by formal semanticists who set out to give natural language sentences a propositional (truth-conditional) semantics, and they are the two processes singled out by Grice (1967/1975/1989, 25) as necessary additions to conventional content in determining what is said. Formal semanticists tend to be uninterested in how these processes are effected and seldom go beyond acknowledging that the context of utterance of the sentence must play a role in determining the proposition it expresses on any given occasion:

(11) An utterance of 'this is green' is true iff the entity that the speaker refers to with 'this' is green.

To accommodate indexicality, Montague (1974), Lewis (1970, 1979, 1981) and others enriched the apparatus of truth-conditional semantics by allowing certain details of context to be drawn into the account, in the form of an index of coordinates, including
the speaker, the addressee, the time of utterance, the place of utterance, indicated objects, etc. The rights and wrongs of this approach won't be considered here, though the question of whether or not a truth-conditional semantics is an appropriate aim for natural language sentences is taken up shortly in section 2.5.

The way ambiguity is reflected in truth-conditional theories highlights the difference between this sort of semantic theory and the sort of cognitive processing account of utterance understanding that I am fetching towards: a semantics for an n-ways ambiguous sentence is complete once it has provided n different T(ruth)-sentences in the metalanguage, one for each sense of the natural language sentence. This is obviously not a trivial undertaking. But what our pragmatic theory must confront is the very different issue of how the hearer recognises (or 'alights on') the one (or, on the occasion of a pun, two) of these n possibilities the speaker intends on a particular occasion of use.

Grice himself does not go beyond acknowledging that reference assignment and disambiguation are necessary for a full determination of what the speaker has said. He does not say anything about how these processes are achieved. It seems reasonable to surmise from the omission of any reference to conversational maxims at this point (in a lecture/article which is primarily focused on these maxims and the work they do in communication) that he did not think they played a role in disambiguation and reference assignment, a point to be considered more thoroughly in chapter 3.

The second way in which linguistic content underdetermines what is said arises when the expression employed does not determine a full proposition even after all necessary reference assignments and disambiguations have taken place. Phrasal and lexical utterances, such as those in (6) and (7), are the obvious cases here. However, there are fully sentential utterances whose encoded content does not determine a fully propositional representation, that is, one which, in principle at least, could be assigned a truth value:

(12) a. Paracetamol is better. [than what?]
b. It's the same. [as what?]
c. She's leaving. [from where?]
d. He is too young. [for what?]
e. It is raining. [where?]
As the bracketed questions indicate, these examples require completion before they can be judged as true or false of a state of affairs. What they determine (given reference assignment, etc) has been variously described as a subpropositional logical form (Sperber & Wilson 1986, 188), a propositional radical or a fragment of a proposition (Bach 1994a, 269). The missing constituent which will bring them up to full propositionhood has to be supplied pragmatically. These sorts of cases were not described by Grice so we cannot know for sure what he would have said about them; since he seems to have conceived of ‘what is said’ as fully propositional (the truth-conditional content of an utterance) he might have agreed that a completion process was necessary and that the missing material would be readily contextually determined, again without any role for conversational maxims (but see discussion in section 3.3.3).

It is appropriate at this point to mention a principle that has been held fairly widely by philosophers, but which seems untenable in the light of the previous considerations. This is the Isomorphism Principle: "If a sentence expresses the proposition that P, then syntactic constituents of S express the constituents of P", taken here from Fodor and Lepore (1991, 333), who describe it as a perfectly universal feature of natural language. They do, however, acknowledge in a footnote that there are issues to be addressed here: 'suppose, for example, that you hold that (in a null discourse) the sentence "it's raining" expresses the proposition that it's raining in the context of utterance. Then either you must say that "it's raining" has more constituents than appear on its surface or that the isomorphism principle can be violated by pragmatically carried information.' Clearly, I opt for the second of these alternatives. However, as will be shown in the next chapter, there are those who argue for the first alternative (unarticulated constituents that are nonetheless, in some sense, ‘there’ in the sentence); still others, specifically Bach (1994a, 1994b), opt for such a strict and delimited sense of ‘what is said’ that the 'Isomorphism Principle' (labelled the 'Syntactic Correlation Principle', by Bach) is indeed observed and is in fact employed to help in deciding what is said when intuitions waver.

Most theorists, though (as the previous paragraph indicates) not all, would agree that the processes discussed so far are necessary supplements to the linguistic content for arriving at what the speaker has said (the proposition expressed). However, there are, at least, three more groups of cases I would like to mention about which there is
little consensus. First, there are examples which raise some tricky questions about the semantics of particular elements of the language. Let’s briefly take the case of negation.

(13) a. Everyone isn’t hungry.
    b. She didn’t butter the toast in the bathroom with a knife.
    c. The local witch didn’t put a spell on us.
    d. Bill didn’t eat some of the cakes; he ate all of them.

In (13a) there are two possible interpretations: ‘not everyone is hungry’ and ‘no-one is hungry’, which are truth-conditionally distinct. This is usually described as a scope ambiguity: either the negation takes scope over the universal quantifier or vice versa. This may be taken as a linguistic ambiguity such that the grammar gives the sentence two logical forms and a truth-conditional semantics for the sentence would assign it two T-sentences. Or it may be that the linguistic system gives the negation operator wide scope over the whole of the rest of the sentence and a pragmatic process of logical strengthening eventuates in the stronger interpretation ‘no-one is hungry’; then there would be but one T-sentence specifying the truth-conditions of the sentence. Or the linguistic system may dictate nothing at all about the relation between the quantifier and the negation so it is left to pragmatics to fix that relation; on such a conception it seems unlikely that any truth-conditional specification at all could be given for the sentence (an issue to be taken up below). At least these three positions have been supported at different times. On the first position, this example would simply present the pragmatic system with another ambiguity to resolve, a choice between two possible logical forms. On the last one a pragmatic process of scope fixing would be obligatory; that is, there would be no fully propositional representation until the process took place. The second position gives rise to an interesting situation: the sentence would express a full proposition (given pragmatic selection of the intended domain of the quantifier), say ‘not everyone at the party is hungry’, but in some contexts this would not be the proposition the speaker intended to express, it would be weaker than the truth-conditional content she intended the hearer to understand, namely ‘no-one at the party is hungry’. This is just one of a set of contentious cases where the proposition derived through the essential processes required to complete the encoded logical form is, arguably, not the proposition
the speaker expresses.

Other ambiguities have been claimed for negation. Example (13b) has six or seven interpretations depending on which constituent the negation is taken to apply to (e.g. ‘in the bathroom’, ‘butter the toast’, etc.) which would typically be indicated by the pattern of accentuation of the utterance; (13c) has been taken by some to be ambiguous between an understanding on which the negation operator is presupposition preserving (i.e. the entailment of the positive sentence, ‘there is a local witch’, is maintained in the negative sentence) and an understanding (less immediately obvious) on which negation is presupposition cancelling, since this sentence is compatible with a following utterance denying that there is a local witch. Finally, the negation in (13d) has been supposed by some to express an objection to an utterance rather than to function in the logical truth-value reversing way that it does in (13a). All, none or some of these differences in the interpretation of negative sentences might be a function of the language system itself, that is, different meanings encoded by the word ‘not’. Those that are not have to be accounted for pragmatically and would appear to be further strong candidates for pragmatic contributions to the proposition expressed (‘what is said’) by an utterance. The wide range of semantic and pragmatic analyses of negation that have been entertained are surveyed in chapter 5, and a particular analysis, within the precepts of a relevance-based cognitive view of pragmatics, is proposed and defended.

Some of the same issues arise for the analysis of ‘and’-conjunctions where it seems that a variety of relations between the conjuncts may be understood (including the cause-consequence connection in (9a) above). There are various rich semantic accounts which might be proposed to explain this, and there are more minimalist semantic accounts which leave it to pragmatics to supply richer connections, thereby raising the question of whether these connections are aspects of the proposition expressed or distinct implicated assumptions. Similar issues arise for scalar terms, which can have at least two different interpretations in context - for instance, ‘some’ may be understood as ‘some and possibly all’ or ‘some but not all’ - and for descriptions (definite and indefinite) which may have a range of interpretations, including the famous attributive or referential understandings. These cases (negation, conjunction, scalars) are quite different from that of, say, pronouns, which patently do not encode either their referents or uniquely identifying descriptions of their referents, so that the role of pragmatics here
is indisputable. It is not obvious with the phenomena just surveyed whether they do or do not encode the interpretations they may have in different contexts; they may encode several senses or a single strong sense or a single weak sense. For these cases semantic and pragmatic analyses must proceed hand in hand.

There is a second set of cases for which the situation of the second position on the negative sentence (13a) arises, that is, the situation where a pragmatic process is required to arrive at the proposition intended by the speaker, although the representation recovered without this process is fully propositional and could be argued, therefore, to constitute what is said by the utterance.

(14) a. Mending this fault will take time.
    b. The north island is some distance from the south island.
    c. Something has happened.
    d. I haven’t eaten lunch.
    e. I haven’t eaten frogs’ legs.
    f. There’s nothing on telly tonight.

Given reference fixing, each of (14a)-(14c) expresses a trivial obvious truth: any activity takes place over a period of time; there is some distance or other between any two islands; at any moment in time something or other has happened. The point is, of course, that these dull truisms are virtually never what a speaker has intended to express; in hardly any context will they be relevant. So some pragmatic process of enriching or adding conceptual material is necessary in order to arrive at what the speaker intended to express: perhaps, ‘mending this fault will take a longer period of time than such fault-mendings standardly take’, ‘the north island is further from the south island than you think’, ‘something bad has happened on the day of utterance [to x]’. It’s worth noting the negative flavour of these enrichments; the relevance of these utterances lies in their alerting the hearer that some state of affairs runs against prevailing hopes and expectations.

Some sort of temporal reference has to be assigned to (14d) and (14e) and the point of interest here is the difference that the object (‘lunch’, ‘frogs’ legs’) makes in
each case to the understanding of the identical verbs, both with the perfect aspect: in (14d) the most likely interpretation, across a wide range of contexts of utterances, is that the not having eaten applies to the day of utterance, while in (14e) it probably applies to the speaker's lifetime. Arguably, (14f) expresses a proposition (given reference fixing for 'tonight') and one which would be standardly false (there's always something on telly, however dire) and obviously so to the interlocutors. In order to arrive at the proposition intended by the speaker, the domain over which 'nothing' operates has to be narrowed down to something like 'programmes worth watching', and then it may well be true. Assuming these assessments of the proposition expressed ('what is said') by these examples is correct (and some arguments for this will be given in chapter 3), we have a large group of cases where pragmatic inference must augment linguistic encoding even though it is not strictly necessary for the derivation of a fully propositional form.

The third set of cases also demonstrate this property, but differ from the previous set of examples in that the pragmatic process required, arguably, involves not the adding of conceptual constituents but rather adjustments to linguistically encoded concepts. Here are some possible cases of this:

(15)  a. I'm tired.
     b. She wants to meet a bachelor.
     c. The path is uneven.

(16)  a. Her face is oblong.
     b. The steak is raw.
     c. The room was silent.

The idea here is that utterances in certain contexts of the examples in (15) involve narrowings or strengthenings of the concepts encoded by 'tired', 'bachelor' and 'uneven'. For instance, in (15a) the degree of tiredness might vary from a mild form to a much stronger condition which prevents the speaker from doing a range of mundane household tasks; the sort of 'bachelor' the 'she' in question in (15b) wants to meet may belong to a particular subset of the set of bachelors, the subset of those who are heterosexual, youngish, eligible for marriage, etc. The examples in (16) are intended
potentially to involve an opposite process of loosening or widening of a lexically encoded concept. For instance, (16a) requires a relaxing of the concept ‘oblong’ since her face is not likely to be literally oblong; in (16b) the concept ‘raw’ (encoding ‘not cooked’) is loosened so as to include foods that have had some but insufficient cooking.

Recall the discussion in the previous chapter from Chomsky (1992b, 1995) of the range of understandings of words like ‘house’, ‘door’, ‘London’, ‘water’. He presented these in his arguments against an externalist semantics; another way of thinking about them is in terms of linguistic underdeterminacy, as involving instances of concept enrichment and/or loosening. A final possibility to consider with regard to examples (15) and, more controversially (16), is that the lexically encoded concept in the logical form of the utterance is replaced by an ad hoc concept pragmatically derived from the lexical one and that this new non-lexicalised concept appears in the propositional form of the utterance. I will argue for this in chapter 6.

These last three sets of cases all involve a pragmatic process whose result is not required in order to secure full propositionality, but seems to be necessary if we are interested in finding that proposition which it is rational to assume the speaker intended to express. A natural language semanticist interested in giving a truth-conditional specification of these examples could feel entirely justified in ignoring these developments in a way that he cannot with ambiguity, indexicality and other features of a sentence that leave it subpropositional (semantically incomplete). These then are the most interesting and contentious cases when it comes to giving an account of ‘what is said’ (the proposition explicitly expressed) by the utterance, especially if this is equated with the truth-conditional content of the utterance, as it standardly is. Some would opt to rule these pragmatic developments out of any concept of ‘what is said’ and treat them at some other level of utterance understanding; others would prefer a concept of ‘what is said’ which incorporates all these processes and so would have to argue that the concept of THE truth-conditional content of the utterance is quite distinct from the minimal truth-conditional content that can be assigned to a natural language sentence.

It can be seen that much remains to be said about the concept of ‘what is said’ or the proposition expressed by the utterance; some of this will get said in later chapters. All I have tried to do in this section is to give a range of examples of ways in which
encoded linguistic content may underdetermine the proposition expressed by the utterance. These can be summarized in the following short taxonomy:

1. Multiple encodings (i.e. ambiguities)
2. Indexical references
3. Missing constituents
4. Unspecified scope of elements
5. Underspecificity or weakness of encoded meaning
6. Overspecificity or narrowness of encoded meaning

2.2.2 Underdeterminacy: essential or merely convenient?

The question which arises now and which the following sections will venture towards answering is: is linguistic underdeterminacy of the proposition expressed a necessary or contingent matter? It is presumably not logically necessary, since there seems to be no reason to suppose that there simply COULD NOT be a language system of some sort capable of encoding full propositions including all those that a communicator could want to express. The question must be: given the sort of linguistic systems that human mind/brains naturally develop, does linguistic underdeterminacy follow necessarily, or is it a feature of utterances which comes from some other source, say, a convention of linguistic usage or the outcome of some natural drive towards communicative efficiency?

There are at least the following views on this question:

1. The ‘convenient abbreviation’ view: while verbal utterances do, more often than not, evince linguistic underdeterminacy, this is merely a matter of effort-saving convenience for speakers and another sentence which encodes the proposition expressed COULD always be supplied.

2. Essentialist views:
   (a) The weak essentialist view: underdeterminacy is an essential property of the language/thought relation, but there are SOME sentences of the language system which do fully encode complete thoughts.
(b) **The strong essentialist view:** underdeterminacy is an essential property of the language/thought relation and no sentence ever fully encodes the thought it is used to express.

On the convenience view, for every underdetermining sentence (or subsentential expression) there is another sentence provided by the language system which does fully encode the proposition which the incomplete one, uttered in a particular context, was used to express. These determining sentences are called eternal sentences for reasons which are probably intuitively obvious but, anyway, will be explained in the next section. So each of the (non-eternal) linguistic expressions used in the examples above can be given an eternal counterpart. For instance, for each of the (a) examples below, which underdetermine the proposition expressed in one or more of the ways described above, there is a fully encoding counterpart. A likely candidate for this in each case is given in the corresponding (b) examples:

(17)  
   a. He went to the bank.  
   b. Simon Lewis went to a financial institution situated at 32 Tottenham Court Road in London between 2.00 and 2.30 on 18 May 1996.

(18)  
   a. It's the same.  
   b. Ibuprofen is the same in chemical composition as nurofen.

(19)  
   a. On the top shelf.  
   b. The thick-cut orange and ginger marmalade is on the top shelf of the cupboard facing the door in the kitchen of the attic flat at 75 Sunnyside Road, London N19.

Eternal sentences are usually longer and more complex than the underdetermining (non-eternal) linguistic expressions standardly used by speakers, as the (b) examples show; one might think here also of the terrible convolutions of many legal documents where the aim is full encoding. So speakers standardly choose to save themselves the mental (and physical articulatory) effort of formulating eternal sentences which fully encode the
propositions they want to express, since they can rely on the hearer’s inferential powers to map the non-eternal sentence or phrase uttered onto either a mental representation of the intended proposition or the eternal sentence which maps onto that mental representation (if there is a distinction between the two on this view of language and thought).

Essentialist views argue that although the (b) examples here encode more of the proposition expressed by the speaker than the corresponding (a) examples they are still underdetermining and, no matter how hard one tries to be fully explicit, by elaborating descriptions so that they may pick out unique entities and properties, one is doomed to failure - in the vast majority of cases, according to the weak essentialist view; across the board, according to the strong view. On the weak view, the following might be eternal sentences, but they are the exception rather than the rule in the linguistic system:

(20) a. Two plus two is four.
    b. The earth goes round the sun.
    c. All humans die.

I shall argue against the 'underdeterminacy as convenience' view and in favour of the essentialist views, inclining toward the stronger of the two, despite the more immediate plausibility, perhaps, of the weaker one. I think that public language systems are intrinsically underdetermining of complete (semantically evaluable) thoughts because they have evolved on the back, as it were, of perceptual and conceptual systems with an already well-developed capacity for forming hypotheses about the thoughts and intentions of others, unaided by coded signals. Formulating natural-language sentences of a progressively more determining sort may approach ever closer to full encoding of propositions, but the progression is asymptotic. However, before trying to make this case, let us consider the concept of eternal sentences and the 'convenience' view of non-eternal sentences in a little more detail.

2.3 Eternal sentences and effability
For the moment I'll assume that the THOUGHT directly expressed by an utterance is itself complete and determinate, and that thoughts quite generally, whether expressed or
not, are complete. The first of these assumptions is considered and questioned in chapter 6; the second lies beyond the scope of this thesis, though some of the discussion, in section 2.6 below, on the role of the Background applies to thoughts as well as to utterances. The point of departure here then is the view that the thought/proposition which an utterance expresses is truth-evaluable in and of itself, without reference to any considerations of context. In other words, the thought expressed is 'eternal': if it is true/false at this moment it has always been true/false and always will be true/false.

Now let us consider the concept of an 'eternal sentence', where by 'sentence' I mean, as always, a natural language sentence, one of those syntactically complete entities which has phonological and semantic properties, and which can be used by human beings to make their thoughts known to others. If we take expressed thoughts to be complete, then eternal sentences are 'complete formulations' of thoughts, as Wettstein (1979, 92) puts it. The 'convenience' view of linguistic underdeterminacy is the view that when a non-eternal linguistic expression is uttered (i.e. an incomplete formulation) what is expressed thereby can, in every case, be completely formulated by some eternal sentence. This idea was presented by Quine (1960, 193-4) and taken up by Katz (1972, 1977, 1978, 1981), who endorses Quine's view:

that 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. The usual indexical tense indicator will be replaced by such a referentially unique time designation, devised with respect to some appropriate calendar and clock; indexical nominal elements like 'I', 'he', 'it' and 'John' will be replaced by precise specifications of the individuals or objects ...

(Katz 1972, 126)

This is a spelling out of one way in which we could interpret the 'effability principle', a principle according to which (somewhat roughly at this point) thoughts or propositions expressed and statements made can be fully encoded by some public language sentence or other. 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 for 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. The relation between the shorthand type sentences and the eternal ones must be a many-to-many mapping, the particular mapping in any given instance being determined by the context within which the convenient abbreviation is uttered. Katz concludes his discussion of this view that languages provide a large stock of eternal sentences as follows:

The only alternative to [this view] is ... a form of mysticism that claims that some things to which we can refer by the use of indexical elements are, in principle, beyond the range of unique description.

(Katz 1972, 127)

He has maintained this view over the years as he has developed his Platonist view of language (Katz 1981), within which it sits comfortably. According to the Platonist view, languages (hence sentences) are abstract objects whose properties can and should be investigated independent of their instantiations in human minds. The analogy is with systems of mathematics (hence numbers) and logic (hence propositions), whose properties should be and have been extensively investigated independent of the mathematical or logical knowledge manifested by human mind/brains. The contrast is with Chomsky’s conceptualist (mentalist) view, according to which language is a natural object, the only reality it has being in the form of a, largely genetically programmed, system of knowledge, one component of a much more complex natural object, the human mind/brain. Katz (1981) presents some strong arguments for the Platonist view; however, it would be too great a digression for me here to review these or the various counter-attacks that have been launched (see Fodor 1981a, Chomsky 1986, and, for a recent sustained defense of a ‘naturalistic’ and ‘internalist’ approach to language, Chomsky 1995). Suffice it to say at this point, it probably makes better sense within a Platonist conception of language than within any other to posit the view that sentences, one kind of abstract object, map directly onto another kind of abstract object, namely propositions.

Let us go on now to consider some formulations of the principle(s) of effability.
There are probably two principles of effability (a stronger and a weaker) and two interpretations of the first one (a weaker and a stronger):

**First Principle of Effability:** "Each proposition (thought) can be expressed by some sentence in any natural language".

This is the principle presented and endorsed by Katz (1978, 209; 1981, 226). Similar proposals under different names have been suggested by another Platonist, Frege (1923), by Tarski (1956), and by Searle (1969, 19-21), whose 'principle of expressibility' states that whatever a speaker might want to communicate can be said explicitly. The two interpretations of Katz's principle, as pointed out by Sperber & Wilson (1986, 191-2), are the following:

(a) **The weak interpretation:** every thought/proposition can be expressed by some utterance of some sentence.

(b) **The strong interpretation:** every thought/proposition can be linguistically encoded.

As they say, the weak interpretation seems unobjectionable; it refers to utterances in context rather than to abstract sentences and makes no arbitrary stipulations about what the linguistic expression used must encode; it leaves open the possibility that much of the determining of the precise conceptual content of the thought is effected by means other than linguistic coding. Given no arbitrary limits on the richness of contexts or on ways in which contextually available material can be used to supplement encoded material, this effability principle does not raise too many problems. Of course, an individual speaker may not have the ability to verbally express a particular thought she has, but that does not touch on the claim in (a), provided the thought COULD be expressed (by a more able speaker) in some context. A more interesting consideration arises from the likelihood that there are propositions/thoughts that have not been actually thought (mentally represented) by anyone (yet) and so could not (yet) be expressed by anyone (except perhaps accidentally). This raises the question of whether or not it is the case that once a thought has occurred it is (by virtue of having been thought) expressible
by some linguistic string uttered in some context? I do not know the answer to this question and it would take me into deep and too distant waters to pursue it here. Furthermore, these sorts of psychological issues that the weak interpretation seems to raise simply do not arise within the Platonist framework, where a stronger interpretation is favoured. So let us move on to look at stronger interpretations of effability.

Putting together what Katz (1972, 125-6) has to say about the translatability of non-eternal sentences into eternal sentences with his discussion of effability earlier in the book (pp.18-24) makes it pretty clear that, even at this early (conceptualist) stage of his work, he has in mind a stronger interpretation of the principle than the one just discussed. This is underlined in Katz (1978, 216) by a reformulation of the principle he gives and clearly considers equivalent to the first: ‘Every proposition is a sense of some sentence in each natural language’. This interpretation entails the convenience view of linguistic underdeterminacy, so it is no surprise to find that Katz adheres to this: ‘it [underdeterminacy] allows speakers to make use of contextual features to speak far more concisely than otherwise. ... Pragmatics saves us from ... wasteful verbosity’ (Katz, 1977, 19-20). Thus our capacity for pragmatic inference is a useful add-on to our language capacity, not strictly essential in making possible the sort of expressive and communicative powers we have. A quite contrary view of pragmatic inference will be presented in section 2.4.

Recanati (1994) gives, but does not endorse, the following formulation of (the strong interpretation of) the first principle:

**Strong Interpretation of First Principle of Effability:** "Every entertainable thought may be expressed by means of an eternal sentence the sense of which corresponds exactly to that thought." (Recanati 1994, 157)

Sperber & Wilson (1986) have argued against this as follows:

It seems plausible that in our internal language we often fix time and space references not in terms of universal coordinates, but in terms of a private logbook and an ego-centred map; furthermore, most kinds of reference - to people and events for instance - can be fixed in terms of these private time and
space coordinates. Thoughts which contain such private references could not be encoded in natural language but could only be incompletely represented.

(Sperber & Wilson 1986, 192)

The force of this point is perhaps most vividly felt by considering thoughts one has about oneself; how I represent myself to myself must inevitably be quite different from the way you or anyone else represents me, and so it must be for all of us. The same holds for the way I mentally represent my spatial and temporal location at any given instant, that which I might express by the words ‘here’ and ‘now’; your representation of my here and now is likely to be very different from mine and my representation of your here and now is likely to be very different from yours. This is a function of the ‘ego-centred map’ referred to in the quote and it extends far beyond these self references. My mental representation of the woman who is my mother is doubtless a private one, probably not even shared with my siblings. This can be extended step by step to all of the people I have encountered in my life, and to all the activities and events I have taken part in or observed. My mental representation of the cup of coffee in front of me on my desk at this moment is determined by its relation to me, and it is that representation that enters into my current thoughts about it; it would be differently represented by another person sitting elsewhere in the room and to that extent at least the thoughts he might have about it would differ from mine.

Recanati (1993, 1994) endorses this line of argument. In his terminology, a de re thought (a thought about a particular object) involves a particular ‘mode of presentation’ of that object and that particular mode of presentation may be entirely private, that is, peculiar to a given individual. So the de re thoughts of two people predicing the same property of the same object are generally distinct from each other and may also be entirely private. These sorts of differences in representations of an object are not and cannot be encoded in natural language sentences. Imagine for a moment that they could be, perhaps by madly making up new audible or visible signals for each different psychological mode of presentation (assuming we have sufficient awareness of these). Such a process would be totally counterproductive since these signals could not be used for the very communicative purpose for which they were supposedly being invented; my public sign for the cup of coffee (which would have to change as my mental representations of it changed) would be meaningless to you; your
sounds expressive of your mental representations of the people around you would be meaningless to me. These 'signals' could not be used in the way that natural language referring expressions are used; they present an unsolvable coordination problem. So they would not in fact be 'linguistic' symbols, properly speaking; they could not acquire that status as they would have no hope of settling into the language system.

Recanati contrasts this very strong and clearly untenable principle with the following weaker principle of effability (which he also does not endorse):

**Second Principle of Effability:** "For every statement that can be made using a context-sensitive sentence in a given context, there is an eternal sentence that can be used to make the same statement in any context."

(Recanati 1994, 157)

Though not as strong as the strong interpretation of the first principle, this is considerably stronger than the weak interpretation of the first principle discussed earlier. The shift from 'entertainable thoughts' to 'statements made' secures this principle against the objections just considered. There are *de re* statements, that is, statements which predicate a property of an entity, but these are different from *de re* thoughts in at least one essential respect. They do not have private modes of presentation but rather linguistic, hence public and shared, modes of presentation of the objects they refer to. As Recanati puts it, 'such a *de re* statement corresponds to a class of [de re] thoughts'. So the *de re* statement made by an utterance of 'she is happy' or 'the coffee cup is green' corresponds to a set of thoughts, each of which may contain a different representation of the object or person the statement is about.

The version of the effability principle implicit in the first quote above from Katz (1972) seems to be this second one, given that he is explicitly concerned there with statements made by utterances. This carries through to his subsequent Platonist work where sentence senses are equated with propositions, propositions in the abstract sense, rather than mental representations of them, which may contain idiosyncratic elements. Since I favour the view that underdeterminacy is an essential feature of linguistic expressions I need to find counter-arguments to this second principle of effability. In the rest of this section I shall consider some arguments from Sayward (1968), Wettstein
(1979) and Recanati (1987, 1994) geared in that direction. In the following section, I will present a view of the mind which underpins the relevance-theoretic account of communication and interpretation from which, I believe, the essential nature of linguistic underdeterminacy follows.

Wettstein (1979) specifically addresses Katz (1972) and argues against his view that for any statement made by the use of a non-eternal sentence in a particular context there is an eternal sentence that can be used to make the same statement across contexts (or in the hypothetical absence of any context). Here is one of Wettstein's arguments: a crucial part of the process of 'eternalising' a non-eternal sentence is the replacement of indexical expressions by non-indexical expressions, but the object picked out by a given use of an indexical can be picked out by a range of non-synonymous non-indexical expressions. For instance, the pronoun 'she' in an utterance of (21a) can be replaced by a variety of non-synonymous descriptions which denote the woman in question, including those given in (21b) and (21c):

(21) a. She left in a hurry.
    b. The woman who was with Tony Blair at \( t_1 \) left in a hurry.
    c. The lady in the red velvet dress who was in the Islington Town Hall between \( t_1 \) and \( t_2 \) left in a hurry.

These cannot both (all) enter into the complete formulation of the statement the speaker made, and it is not clear that any one of these rather than any other, or indeed that any of them, formulates the statement the speaker made. Wettstein (1981) makes the same point regarding the attempt to eternalise patently incomplete descriptions like 'the table', 'the child', 'the president', etc.

These observations extend in an obvious way to subsentential utterances. Suppose two people are talking at a party and one of them, looking in the direction of a man near the door, says 'Tom's father'. As Stainton (1994) has shown, a speaker can use 'Tom's father' to assert of a certain man that he is, say, the father of Tom Adams. But, of course, the search for the "right" eternal sentence to encode what is asserted here is fairly unconstrained; any or none of the following might do:
The empty square brackets are there to indicate that these descriptions need considerable further filling in if they are to be constituents of eternal sentences (that is, if they are to pick out a unique referent across contexts), but that is a side point for this particular argument. As Wettstein would doubtless say about this example, it is not clear that any one of these eternal sentences, as opposed to the others, 'actually formulates what was asserted'. The issue cannot be resolved by referring to the speaker's intention, since very often she will have no determinate intention; if asked which of the various possible eternal sentences correctly formulates the statement she intended to make she will be unable to answer.

I am not entirely satisfied that these arguments do militate effectively against Katz or, more particularly, against the second effability principle. It is noticeable that Wettstein is arguing against these (alleged) eternal sentences being 'formulations of the statement made' by the speaker of the non-eternal linguistic expression in a particular context. But it is not clear to me that this was Katz (1972)'s claim, and it is very clear that the second principle does not require this. What is required is that there is an eternal sentence which 'makes the same statement' as the non-eternal sentence was used to make in the particular context. In short, there is some slippage between talk of 'formulation of the statement made' and talk of an eternal sentence which 'makes the same statement' as a non-eternal one. The absence from the language of any eternal sentence which formulates (fully encodes) the statement made does not preclude the possibility that there are eternal sentences which make the same (unformulable) statement as the original non-eternal sentence was used to make.

For the argument to threaten the second (weaker) effability principle, a further assumption needs to be made. This is the assumption that the several different sentences that Wettstein offers as possible eternalisations of the uttered context-sensitive sentence do not make the same statement (as each other); in other words, that the differences in the conceptual content in the descriptions ensure that utterances of the different sentences would make different statements. Given the range of views on whether or not
the conceptual content of referentially used descriptions enters into the proposition expressed (or the statement made) by sentences/utterances containing them, this is an assumption that needs to be argued for. Once the assumption is in place the argument goes through: there is no reason to suppose that any particular one of a group of non-synonymous eternal sentences is the one that makes the statement that was made by the utterance of the original indexical-ridden sentence.

Bolstered in this way, Wettstein’s argument does undermine the effability principle and supports an essentialist view of linguistic underdeterminacy (though we may also need to do a little juggling with the terms ‘proposition expressed’ and ‘statement made’). However, the argument (and, in fact, his whole paper) proceeds on the assumption that there ARE such things as eternal sentences and that the elaborated sentences given above are candidates, so, at most, these arguments support the weak essentialist view of linguistic underdeterminacy. Similarly, Sayward (1968) has shown that there is no eternal sentence equivalent of the proposition expressed in particular contexts by the utterance of a simple sentence like ‘It is 4.30pm’ or ‘It is raining’, but he too assumes that there are some eternal sentences in the language. The head-on attack against effability in any of its guises would be to deny the existence of eternal sentences altogether. Recanati (1994) would like to do just this. One of the important features of his discussion is that it extends beyond the usual concentration on referring expressions to some consideration of predicates, quantifiers and clausal relations. I will look here just at the arguments against the possibility of finding eternal referring expressions and eternal predicates.

2.3.1 Reference
A notable feature of the quotations from Katz (1972), given above, was the emphasis on indexical referring expressions and his contention that these can always be replaced by uniquely determining descriptions and that to deny this is to opt for some sort of mysticism. Wettstein sets out, in his discussion, to establish that any such process of substitution leads to a difference in the proposition expressed by the sentence/utterance, but he doesn’t question the existence of uniquely determining referring expressions. In fact he speaks of a continuum of descriptions, from ‘the table’ to more complete but still indefinite definite descriptions and finally to a uniquely denoting description, usually
containing proper names and precise temporal specifications, such as ‘the table Ken Jones is sitting at at t′’ (Wettstein 1981, 253-4).

Recanati (1987, 1994, 1995) suggests that there simply cannot be reference without a context, that reference is always a pragmatic context-dependent matter. To establish this generality the case has to be made for proper names and for complete definite descriptions. It would take some considerable time and space to do this in anything approaching a conclusive fashion, given the vast range of work in the philosophy of language on proper names and descriptions. I shan’t attempt that here. As regards proper names, the approach which treats them as a variety of indexical is intuitively appealing: just like pronouns, one and the same proper name may refer to different individuals in different contexts. The linguistic meaning of a proper name is some sort of rule or procedure or constraint, requiring that it refers to a bearer of the name. Recanati (1993, chapters 8-9) defends this view at length. Assuming it is correct, proper names are not eternal and nor are descriptions that contain them.

Recanati goes on to consider complete descriptions like ‘the Prime Minister of Britain in 1996’. Of course, the names of countries and nations like ‘Britain’ are presumably not essentially different from the names of persons and so are also indexical, although multiple use of these names is more studiously avoided for practical reasons. However, Recanati (1987) takes up a different line of argument: he sets out to show that the reference of a definite description always depends on the ‘domain of discourse’, what Fauconnier (1985) terms a ‘mental space’ and Barwise & Perry (1983) call a ‘resource situation’. The domain of discourse is ‘that with respect to which the speaker presents his or her utterance as true’ (Recanati 1987, 62). Possible domains of discourse are the actual world, a fragment of the actual world (say, the current political situation in Britain), 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 Michael Portillo is the Prime Minister of Britain in 1996. Knowing that Portillo is in the next room, I utter (23) to you:

(23) If Lucinda goes into the next room she’ll have the pleasure of meeting the Prime Minister of Britain.
I am here using the definite description to refer to Portillo rather than the actual PM, because I intend the utterance to be interpreted with respect to Lucinda’s belief-world within which Portillo is the Prime Minister in 1996. This relativity of reference to the domain of discourse extends to those complete descriptions which have seemed the least likely to yield to the general context-dependence thesis. These are cases of so-called rigid descriptions where the semantic value of the description is the same across all possible worlds, for instance ‘the cube root of 27’. The extension is obvious: 3 is the cube root of 27 in all possible worlds, but not in all domains of discourse, since Lucinda might believe that 9 is the cube-root of 27, and, as we have seen, Lucinda’s belief-world is a possible domain of discourse. Recanati (1987, 64-65) goes on to show that even when a domain-indicator like ‘Lucinda thinks that ...’ or ‘According to Lucinda ...’ is given explicitly, as a constituent of the sentence uttered, the domain of discourse is never fully determined by linguistic encoding but has to be pragmatically inferred. Even the ‘normal’ (some would say ‘literal’) understanding where the description is interpreted with respect to the actual world is a pragmatic matter, as it is dependent on the identification of the domain of discourse as the actual world.¹²

Not all subject noun phrases involve reference to particular entities; quantified noun phrase subjects like ‘everybody’, ‘some students’, ‘most films’, etc, are not referential. Of course, to be correctly understood these require a domain of quantification (e.g. some students doing the BA Linguistics at University College London in 1995/6) which is supplied contextually. Could the domain be explicitly described, that is, could the quantified phrase be made eternal? This seems highly improbable for the various reasons given above, such as the indexicality of proper names, etc. However, Recanati (1994) takes the issue a step further, arguing that even if the quantificational domain were given explicitly, the correct interpretation of the domain could only be made relative to the intended domain of discourse (mental space). Consider in this regard the phrase ‘some of the henchmen of the current PM of Britain’, interpreted relative to Lucinda’s belief-world as described above. It seems clear, then, that no quantificational sentence is eternal either.
2.3.2 Predication

The ineffability of reference provides perhaps the clearest argument against eternal sentences and principles of effability. However, the case can be extended to include the predication function of language, the assigning of properties and relations to the entities picked out by referring expressions. That this is so has been shown in some detail by Travis (1981, 1985, 1991). He considers simple examples like the following:

(24) a. The kettle is black.
    b. The table was covered with butter.
    c. Hugo is a sailor.

For instance, discussing what is meant by the predicate ‘black’ in (24a), 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 enameled 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 point he is making is that the sentence in (24a), like virtually all sentences, may be used to say any of indefinitely many distinct things, each of which is true under different conditions. The bearer of truth is not the sentence but the proposition the speaker uses the sentence to express on the given occasion of utterance. One of the sources of these propositional differences in (24a) 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 what exactly it is taken to apply to (the whole kettle, the inside, the outside, etc). Exactly the same issues arise for (24b) and (24c); Travis spins numerous possible ways in which butter might be conceived of as covering a table and Hugo might be conceived of as a sailor (that is, different sets of truth conditions for different occasions of use of the sentence). The impossibility of encoding all the possible interpretations is essentially the same problem as that of finding uniquely
denoting referring expressions. As far as I know, supporters of effability do not talk about eternalising non-eternal predicates, presumably because this source of multiple and unstable interpretation has not impinged strongly on them, indexicality being the more obvious source of variable interpretation.

The Travis examples above could be seen as cases of what Waismann (1951) has described as the 'open texture' of most verbally encoded empirical concepts. He seems to mean by this the lack of a complete definition which is characteristic of natural kind terms like 'cat' and 'gold' and of psychological concepts such as 'intelligent' and 'insecure', among many others. Here he anticipates observations and arguments of Fodor et al. (1980), and the system of logical entries (typically non-definitional) and encyclopedic entries (which are 'open', ever-evolving) for concepts outlined by Sperber & Wilson (1986, 86-93). This is in opposition to Katz (1972), whose semantic theory for natural language includes a comprehensive programme for decomposing lexical items into sets of defining concepts or semantic markers, an aim which is of a piece with his belief in the effability principle.

Here is an example of open texture discussed recently by Dan Sperber:

(25) 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 in other contexts, look dim. 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.

Following the well-known example of Austin (1962), given in (26a), Travis has
considered a range of examples which can be described as cases where the concept communicated (as opposed to the one encoded) depends on the standard of precision relevant in the particular context:

(26)  a. France is hexagonal.
    b. Fred weighs 70 kilos.
    c. This steak is raw.
    d. The fridge is empty.

These are cases where, arguably, the predicate is clearly defined and the definition is part of the native speaker's knowledge of the language; for instance, 'a hexagon is a geometric figure with six equal sides' 'something is raw if and only if it has received no cooking', etc. However, the proposition expressed on particular occasions of use might vary considerably depending on the degree of looseness the context allows or calls for. The addition of modifiers such as 'approximately', 'to some extent', 'more or less' will make it explicit that the following predicate is not being used strictly but, clearly, they will not effect a full encoding of the intended concept of hexagonalness, rawness, etc. Eternalisation does not look like a possibility here. In fact, as I will suggest in chapter 6, the proposition expressed (what is said) by these cases may in some instances be indeterminate; there may be no absolute fact of the matter; speaker and hearer may diverge in the propositional form they entertain, though in ways that are quite innocuous as regards the success of the communicative interaction.

In passing, it is interesting to note that Recanati does not carry over his application of the concept of 'domain of discourse' from reference to predication. Why not? Suppose we know that Lucinda believes that cats are primates, then I could say to you, of my ancient tabby, 'Dear old Fleabag is a primate', where the domain of discourse pertaining to my use of the predicate 'primate' is Lucinda's belief world. There seems to be something wrong with this. What is wrong might be clearer if we consider the case of a young child who calls all four-legged animals of a certain size 'dogs', leading me to say to you 'Fleabag is a nice dog', where 'dog' must be understood relative to the child's belief world. The problem, I think, is that both Lucinda and the child are talking a different language from the one that you and I know;
they assign a different ("wrong") sense to the words 'primate' and 'dog'. As far as I can see, the interpretations you would recover from these utterances are 'Lucinda thinks Fleabag is a primate', 'The child thinks Fleabag is a dog', where you would understand 'primate' and 'dog' in accordance with your knowledge of the language and not as communicating some different (wider) concept. This is quite different from the case of reference where recognition of the relevant domain of discourse plays a crucial role in picking out an intended referent despite the fact that the description used for the purpose does not pick him/her out in the actual world. In that case, the belief world called upon involves idiosyncratic beliefs about entities in the world (e.g. Portillo is the PM of Britain) rather than idiosyncratic linguistic encodings. The referring/predicating asymmetry manifests itself in other ways, one of which is discussed in chapter 6.

I conclude section 2.3 with an admission of an omission and a brief summing up. Any linguist worth his/her salt will have been muttering, possibly for quite some pages, 'declarative fallacy' or something equivalent. Yes, indeed. Anyone would think from what I've written so far that natural languages consist entirely of declarative sentences. What about interrogatives, imperatives, optatives, hortatives, subjunctives et al.? I would like to respond to this by simply waving my hands and saying 'mutatis mutandis'. In fact, the advocates of eternal sentences, generally logicians or philosophers of language who put a premium on the statement-making function of language, especially the stating of scientific truths, have not been much interested in interrogatives and even less in sentences in the other moods. Katz, as a semanticist of natural language, does not confine his interest in this way, and it seems clear from both Katz (1972), especially chapter 5 on the logic of questions, and Katz (1977), which explores the semantics of sentences used to express a range of illocutionary forces, that he intends the effability principle to apply across the board. A belief that indexicals can be replaced by uniquely denoting non-indexicals must apply to sentences of all mood types, and so too a belief that vague or open-textured predicates can be replaced by well-defined ones. An eternal sentence encoding the proposition expressed by an interrogative seems neither more nor less conceptualisable than an eternal sentence correlate of a non-eternal declarative sentence; for instance: 'I [Robyn Carston] request that you [Lucinda Lovell-Smith] tell me who [within a precisely specified domain] thinks Michael Portillo is intelligent [well-
defined term] at \( t_\ell \), where the interrogative form is taken as a genuine request for information. Of course, I don't believe that there are eternal question sentences any more than that there are eternal declaratives, but there is nothing more to this lack in the case of interrogatives than there is in the case of declaratives. The issue doesn't seem worth pursuing further.

Summing up: the position I've been arguing for is that there are no eternal sentences in natural languages, from which it follows that the linguistic underdeterminacy of the proposition expressed by an utterance is an essential feature of natural language. Neither the first principle of effability (on the strong interpretation) nor the second principle applies to the semantic structures provided by natural languages. This is not to say, of course, that linguistic expressions, though inevitably non-eternal, cannot be used in appropriate contexts to express most, if not all, the propositions which humans are capable of instantiating in thought. This may well be so. In the next section I will try to sketch a view of the human mind from which both this unbounded expressivity of thought AND the absence of eternal sentences in natural language follow, if not necessarily, very naturally.

2.4 Inference, metarepresentation, and relevance

In a series of talks, only some of which have eventuated in published versions (for instance, Sperber 1994a and 1996), Dan Sperber has emphasised the following fact about human mental representation: if an event we observe can be understood both in purely physical terms and in mentalistic (intentional) terms we will almost inevitably go for the latter. Imagine observing a scene in which a man slowly lowers himself, head and arms first, down into a hole in the ground while another man holds onto his legs. Very few observers will represent this scene to themselves as I have just described it and leave it at that; most of us will fetch around to find some plausible beliefs, desires and/or intentions that we can attribute to these two men, some set of mental states which will explain their behaviour. For instance, we may attribute to both men a belief that there is something worth retrieving down in that hole, to the first man an intention to retrieve it, to the second man a belief that the first may fall into the hole and hurt himself if his legs aren't held, etc. Then, suppose the second man, who is holding the legs of the first
and who, as it happens, has a bandage round his jaw, swivels his eyes leftwards in our direction and starts to jerk his head quite violently from left to right. Chances are we'll take him to be communicating something to us; we'll take the head movement to be not some involuntary tic he developed upon seeing us but rather a movement designed to make it evident to us that he wants our attention and has something to say to us. We might even hazard a guess at (infer) what the intended message is, something like 'for God's sake, give us a hand' perhaps. Note that this is achieved without any element of encoding whatsoever; the same type of head movement would be interpreted in quite different ways in different situations.

We can't help doing this sort of thing, that is, we can't help attributing intentions, with quite specific content, to others; 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. This capacity is more intelligent than one that assumes an intentional explanation is to be given for all observed outcomes of human action; it extends to a consideration of the sorts of intentions people are likely to have and those they are not likely to have. So if the second man loses his grip on the first man's legs and the first man emerges some time later covered in slime, we will recognise these physical happenings as undesirable to the men and so not to be explained in terms of any intentions they had. Or, if there is some desirable outcome to this behaviour but which the men could not reasonably be expected to have foreseen, we will not try to explain it in terms of their beliefs or intentions. In short, we attribute intentions when it seems relevant to do so; that is, when it will extend or confirm our existing understanding of how the world (including human minds) works (in other words, when it has a certain sort of cognitive effect). This capacity is not confined to one or two levels of attribution nor to attributions which involve but a single cogniser: you can attribute to me an intention to get you to believe that some third person does not want to go to a party. 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 (see, for example, Leslie 1987a, Astington, Harris, & Olson 1988, Premack 1988,

Given a representational view of the mind (which I am assuming throughout), a crucial feature enabling the attribution of a mental state, which may itself involve the attribution of a mental state, is the capacity for meta-representation, that is, the ability to represent not just states of the external physical world but also other representations, and representations of still further representations, etc, up to an order of at least five or six. This capacity makes it possible for us to reflect on our own mental states; for instance, to recall our former cognitive selves as consisting of beliefs, desires and hopes that may have been superseded. It makes it possible for us to hold reflective (embedded) beliefs, which may be at odds with basic factual beliefs which we hold or which may duplicate the content of factual beliefs; for instance, certain religious or mythical beliefs, on the one hand, and scientific or theory-embedded beliefs, on the other (see Sperber 1982/85, 1997). Most important in the current context, the meta-representational capacity makes possible the kind of communication which appears to be unique to humans: ostensive inferential communication. Sperber (1994a) claims that adult communicators employ at least fourth-order meta-representations and that utterance interpretation involves inferential processes over premises of several meta-representational levels, which hearers perform with ease.

Utterances and other kinds of ostensive behaviours, such as the head-waggling of the man described above, 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, hence requiring meta-representation, as it is an intention to make evident an intention to inform someone of something (to say, tell, ask, make known something). (See appendix 1 for a stricter definition of a communicative intention). The representation of the content of the lower-level (informative) intention may itself be meta-representational (some cases of such 'metalinguistic use' are discussed in chapter 5). Naturally, the mind-reading capacity is employed in interpreting ostensive behaviour; it would be very odd if it wasn’t, since this sort of behaviour carries with it a presumption of a certain appreciable level of relevance (that is, of cognitive effects) 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": ever fact
of ostension communicates a presumption of its own optimal relevance. Processing in line with this presumption is automatically triggered by the 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 has become an innately specified response. The presumption of relevance carried by ostensive stimuli gives rise to a criterion that hearers use in their interpretation: following a path of least effort, they look for an interpretation which is consistent with the communicative principle of relevance, and when they find one they stop. As Sperber & Wilson (1986a/1995) and Sperber (1994a) emphasise, consistency with the principle of relevance does not entail that the interpretation so derived really is one which gives the hearer a good crop of cognitive effects. Speakers are fallible and sometimes ill-willed, so that what the hearer must be satisfied with is an interpretation which the speaker could have expected to seem relevant to him. An example illustrating the meta-representational complexity that a hearer's conclusion might exhibit, given an inferential strategy that does not presuppose infallibility or good-will, is the following: you say to me 'I'm too tired' and, in a situation in which I believe that you have an ulterior motive for avoiding a particular party that evening, the conclusion of my interpretive inference may be: 'She intends me to believe that she intends me to believe that she is too tired to go to the party.'

Recall that although Katz (1977) recognises that, as a matter of fact, speakers rely on hearers' capacities to infer their informative intentions, his view is that this is just to save speakers the effort of (a) finding the natural-language sentence that fully encodes the proposition they want to express and (b) having to work their articulatory apparatus unnecessarily. According to this view, there is nothing fundamental about pragmatic inference. On his later Platonist conception, this issue presumably does not even arise, since questions about the role of pragmatic inference in utterance understanding can only be asked within a framework concerned with language as a property of the human mind.

We've already seen that the language system does not have the resources to encode the propositions speakers succeed in expressing, and what I am suggesting here is that there is a very good reason for this: that sort of expressive power is redundant.
A powerful 'mind-reading' capacity is employed in the interpretation of human behaviour quite generally, including those instances of ostensive behaviour which have no coded element (such as ostensive movements of parts of the face or body). The wide application of this capacity in human cognitive activity and its presence in a rudimentary form in apes, who lack a linguistic system, make it reasonable to suppose that the linguistic code evolved later than, or perhaps in step with, the capacity to attribute mental states. If it had been in place in the absence of an ability to attribute beliefs and intentions, it would have been largely functionally inert, at least for communicative purposes.\(^{19}\) If these somewhat speculative thoughts are on the right track, it seems that nature designed (speaking metaphorically, as we do) a linguistic code that has just the expressive resources that are needed to supplement an already pretty effective interpretive system. A linguistic system is undeniably enabling; it allows us to achieve a degree of explicitness, clarity and abstractness not possible in non-verbal communication (try communicating the proposition just expressed without using a language), but it is not essential for the basic function of referring, and the predicates it offers are but a tiny subset of the properties and relations that humans can think about and communicate.\(^{20}\)

A speaker's choice of linguistic form takes account of the hearer's immediately accessible assumptions, encoding just what seems to be necessary to direct the hearer's inferential processes to the intended interpretation; what the coded bits of an utterance do is 'set the inferential process on the right track'. A (very) rough non-psychological analogy might be with a constructed system of banks and trenches, which channel the inevitable downhill flow of a river in certain directions, diverting it from others it might go in if left to its own devices. Verbal communication, on this view, is not a means of thought duplication; the thought(s) that the speaker seeks to communicate are seldom, if ever, perfectly replicated in the mind of the audience; communication is deemed successful when it gives rise to a set of cognitive effects in the mind of the audience that sufficiently resemble those of the speaker. That communication is often successful in this sense is due partly to the channelling provided by the linguistic code, partly to our remarkable innate ability to attribute beliefs and intentions to each other and, crucially, given our constant cognitive bid for relevance, to the prevailing presumption of optimal relevance carried by utterances (and all ostensive stimuli).
Recall Katz’s charge, quoted in the last section, that the only alternative to ‘eternalisation’ is some kind of mysticism. Perhaps he would view the cognitive picture just outlined as some kind of mysticism. In my view, it is a thoroughly realistic and an empirically extremely well-supported view of human psychological capacities, within which the evident fact that utterances quite generally do not encode propositions is predicted. One of the concerns behind Katz’s formulation of the effability principle was to try to capture the essence of natural language, that which distinguishes it from artificial languages, on the one hand, and from animal communication systems, on the other. There are, doubtless, properties of the language code, such as the complexity and recursiveness of its syntax, which distinguish it from animal signal systems, but the sort of uniqueness that concerned Katz, the ‘expressive power of natural languages’, seems to follow not from the linguistic system itself but from the wedding of this system to the highly developed, virtually automatic, capacity for attributing intentional states of several orders of complexity.21

2.5 Underdeterminacy, truth conditions, and the semantics/pragmatics distinction

... if you just take a bunch of sentences ... impeccably formulated in some language or other, there can be no question of sorting them into those that are true and those that are false; for ... the question of truth and falsehood does not turn on what a sentence is, nor yet on what it means, but on, speaking very broadly, the circumstances in which it is uttered.

(Austin 1962, 110-111)

This quote from one of the most famous of the ordinary-language philosophers is, in effect, a statement of the underdeterminacy thesis. The designation ‘ordinary’ is to distinguish the focus of these philosophers from that of preceding generations whose energies had been directed towards the construction of ‘formal’ logical languages (Austin’s specific targets here are Carnap and Ayer). The aim of the formalists, I think, was to achieve the precise expression of scientific truths in a representation system which would wear its logic on its face, as it were; its logical implications would follow transparently from its form, as is indeed the case with the predicate calculus, for instance. Non-natural formal languages are set up so as to be free from all those features that make natural languages underdetermining of propositions: they contain no
ambiguous or vague predicates and no indexicals. Each well-formed formula of the language has context-free truth conditions and is either true or false, regardless of the context in which it appears.

However, using a Gricean sort of consideration (employed more explicitly in chapter 4), it seems quite clear that if these formal languages were for some reason pressed into use by normally functioning human beings in ordinary communicative situations, they would soon appear to lose their well-definedness. They would be used to communicate all sorts of propositions that, as originally constructed at least, they did not encode, that lay beyond their intrinsic (context-free) power of expression. Then, over time, if employed in this way, they would probably lose their original characteristic of being uniquely denoting: names would become indexical and predicates would lose their univocality, because it is communicatively convenient (makes for savings in the overall cognitive economy) to have forms that cause several senses to spring to mind or which have a quite general and open-textured sense. At least, it is convenient given that the inferential capacities of humans, with ready access to relevant contextual assumptions as they inevitably are, make them well able to choose among senses and to home in on a more specific interpretation of a general sense. However, even if the integrity of the original, precisely defined, system were somehow (artificially) preserved, the basic pragmatic fact about natural languages would carry over to the use of the formal language: communicators would succeed in expressing and being understood as expressing propositions that this language does not encode.

The linguistic underdeterminacy thesis is now fairly widely endorsed by philosophers of language and pragmatists, in some form or other, to varying degrees and for different reasons. The outstanding exception to this is Grice, who appears to want to keep ‘what is said’ as close as possible to conventional (encoded) sentence meaning (conceding only indexicality). His reasons for this are explored in the next chapter. As we’ve seen, Travis (1981, 1985, 1991) and Recanati (1989, 1993, 1994, 1995) hold strong essentialist positions on underdeterminacy, as do relevance theorists. Searle (1978/79, 1983, 1992) holds a radical underdeterminacy thesis which applies not only to language but to all intentional mental states (beliefs, intentions, thoughts); I will look at this in section 2.6.

Atlas (1977, 1984a, 1984b, 1989) makes remarks that indicate support for the
underdeterminacy view, albeit from the fairly restricted perspective of particular semantic analyses:

Meanings [of sentences] might be identified with mappings from points of reference into propositions, but not with the propositions themselves. If semantic representations represent meaning, they are not propositions or logical forms, though which proposition can be literally expressed by a sentence is determined by its semantic representation.

(Atlas (1977, 332-333)

The sense-generality of a sentence radically underdetermines (independently of indexicality) the truth-conditional contents of its utterances.

(Atlas 1989, 31)

His specific interest is in establishing his ‘sense generality’ thesis, as against appeals to ambiguity (multiplicity of sense), in the semantic analysis of several key areas of language, in particular negation (see chapter 5). Kempson & Cormack (1981, 1982) and Bach (1982) have taken similar lines on sentences with several quantifiers (that is, that sentence meaning is neutral as regards their relative scopes). Underdeterminacy follows from this semantic nonspecificity since there is an obligatory pragmatic process of scope fixing.

Within more linguistically oriented pragmatics, underdeterminacy has been noted by several authors (for instance, Fauconnier (1975, 1978, 1985), Dascal (1981), Green & Morgan (1981), Levinson (1988)), though not in the strong form I am advocating: ‘linguistically encoded meaning never fully determines the intended proposition expressed’. Levinson (1988) presents a huge range of data illustrating what he calls ‘pragmatic intrusion’ into the truth-conditional content of utterances. He finds this problematic since in his view it undermines the autonomy of semantics, which, following Gazdar (1979), he equates with truth conditions. It gives rise to an allegedly problematic circle because a crucial input to pragmatic inference is the semantic representation of the utterance, but pragmatic inference is necessary in order to establish that very semantic (truth-conditional) content (for disambiguation, reference assignment, supplying of unarticulated constituents, enrichment, etc). I shall suggest below and in the next chapter that the problem comes from an implicit equation of sentence meaning with ‘what is said’ (= truth-conditional content) and an accompanying assumption that
all pragmatic inference gives rise to implicatures.

2.5.1 A truth-conditional semantics for natural language?

The view that natural-language sentences typically do not encode a fully propositional meaning raises the question of how their semantics is to be characterised. A dominant view is that, notwithstanding indexicality, vagueness and incompleteness, sentence meaning MUST be given in terms of truth conditions. I mentioned briefly in section 2.2 the way in which indexicality and ambiguity have been accommodated by truth-conditional approaches. So the T-sentence for ‘I am happy now’ is not (27a) but (27b):

\[
\text{(27) a. 'I am happy now' is true iff I am happy now.} \\
\text{b. An utterance of 'I am happy now' is true iff the speaker is happy at the time of utterance.}
\]

This approach, which explicitly incorporates reference to elements of context (the speaker, the addressee, the time of utterance, the place of utterance, indicated objects, etc.) is generally known as "indexical semantics", though Montague referred to it as "pragmatics" (in a formal sense of the term, clearly different from the cognitive notion I am using). The assumption behind this is that the context-sentence pair will deliver the proposition expressed by the utterance (its truth-conditional content); that is, that for each indexical element of the sentence there is a rule or convention for picking out its referent in the context. An immediate and pressing issue is what such a formal notion of context amounts to and how it is to be delimited for particular sentences. Setting that aside for the moment, there is the remaining problem that the assumption does not seem justified for the main bulk of indexical terms. While it might seem reasonable for cases like ‘I’ (the speaker), and ‘today’ (the day of utterance), it seems much less so for third person pronouns, demonstratives and definite descriptions. Consider an example taken from Blakemore (1987, 10):

\[
\text{(28) A: Have you heard Perahia’s recording of the ‘Moonlight Sonata’?} \\
\text{B: Yes, it made me realize I’d never be able to play it.}
\]
Even supposing that both the entities referred to by 'Perahia's recording of the "Moonlight Sonata"' and 'the Moonlight Sonata' are included among the contextual coordinates, there is no rule attached to the word 'it' that will determine which is the one referred to on each of the two uses. That is, the sentence-context pair alone does not determine the truth-conditional content of the sentence uttered by B.

However, Lewis (1979) builds into his truth-conditional account such cognitive features as the comparative salience of candidate referents and criteria for the evaluation of utterance interpretations such as plausibility and informativeness. So reference assignment to the first instance of 'it' in example (28) might be effected as a result of the greater comparative salience of the recording of the sonata than the sonata itself and to the second instance by considerations of the overall plausibility of the interpretation. What he is proposing, in effect, is, in our terms, a combination semantic/pragmatic account on the basis of which a truth-theoretic account can be given ('truth in a context' as he repeatedly puts it). This is, of course, exactly what is needed, but for the purposes of a theory of the cognitive processes and representations involved in utterance interpretation this account ignores distinctions that are essential. Considerations of relative salience, context shift (what he calls 'accommodation') and the overall plausibility and informativeness of an interpretation are elements of the second (the pragmatic) phase of utterance understanding. The first phase, the automatic mapping of public linguistic forms onto mental structures (concepts or procedures), what relevance theorists call 'decoding', is a distinct type of cognitive activity effected by a distinct mental mechanism, the language faculty or module (following Fodor (1983)).

Higginbotham (1993, 1994), an advocate of a Davidsonian style truth-conditional semantic theory, contends that a theory of meaning for a language has to distinguish those aspects of meaning that are strictly determined by linguistic form from those that involve the speaker's choice, her free use of an expression to refer to a thing (given that there is always a range of expressions that could be used for this purpose). He refers to Kaplan (1977)'s argument that the sense of (an utterance of) a demonstrative, whatever it may be exactly, is irrelevant to the content of what is said. This is a reflex of the famous character/content distinction (similar to Perry (1977)'s distinction between the 'role' of linguistic elements and the information they reveal on a given occasion of use). The character, the linguistic rule or procedure, which is provided by 'this', 'that',

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'it', 'he', etc., does not enter into the truth-conditional content of an utterance of a sentence containing one of these elements; rather, the object referred to enters into the truth conditions and our knowledge that this is so is a feature of our semantic knowledge (competence). Higginbotham reiterates his earlier view (Higginbotham (1988)) that, since knowledge of sense is knowledge of conditions on truth and reference, what a person knows about a potential utterance of a sentence with demonstrative A can be captured by the conditional T-sentence schema (normal form) given in (29a). An instantiation of the schema is given in (29b):

(29) a. If u is an utterance of sentence S, and the speaker of u refers with her utterance of A to x, then S is true iff P(x).

b. If the speaker of 'this is green' refers with the utterance of 'this' therein to x and to nothing else, then that utterance is true iff x is green.

As he says himself of this sort of case, the speaker's perspective on what she speaks about - the object x - is left out of the account, 'so if we cannot be said to have understood the utterance without knowing that perspective then there will be aspects of understanding not covered by semantic rules' (Higginbotham 1993, 2). Note that the talk of speaker perspective is not of some private ineffable take on the object, but concerns whatever 'is involved in the speaker's use of demonstrative A to refer to x' and this includes the rule (or convention or procedure) that is encoded by the linguistic (hence public) indexical expression the speaker chooses to use in her utterance. Apart from the obvious substitutions (of 'that' for 'this', etc.), the statement of truth conditions given in (29b) for 'this is green' would be exactly the same for 'that is green', 'it is green', 'he is green', etc. Higginbotham's primary concern in this passage is to show how language effaces certain crucial distinctions amongst thoughts that we communicate. In the process he shows how this truth-conditional approach to natural language sentences effaces certain distinctions in linguistic meaning: our knowledge as native speakers of the differences in meaning among 'this', 'that', and 'it'.

It is not just the meaning of demonstratives that falls outside a T-theory as construed here. Higginbotham (1994, 98) discusses the case of the 'specific indefinite',

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'a certain F', which he compares with the simple indefinite description 'an F' in examples such as the following:

(30)  
  a. A politician rang me yesterday.  
  b. A certain politician rang me yesterday.

While there seems to be no truth-conditional difference between (30a) and (30b), hence no difference in their T-sentence specifications, there clearly is one when the simple sentence is embedded:

(31)  
  a. If a politician rings us today, tell him I'm out.  
  b. If a certain politician rings us today, tell him I'm out.

Segal (1994, 112) points out that this situation arises for a range of cases of what have been called conventional implicature, that is, cases of encoded meaning that appear to make no difference to the truth conditions of simple sentences. In similar vein, Gazdar (1979, 166-67) pointed out that different patterns of contrastive stress, while truth-conditionally inert in simple sentences, make themselves felt in more complex sentences:

(32)  
  a. JANE gave me the tickets.  
  b. Jane gave ME the tickets.  
  c. Jane gave me the TICKETS.

(33)  
  a. Jane gave ME the tickets by mistake.  
  b. Jane gave me the TICKETS by mistake.

Higginbotham (1994, 99-100) proposes the following move in order to pull these phenomena into the fold of his semantic theory: 'Suppose that the theory of knowledge of meaning gives us, not quite the truth conditions (or conditional truth conditions) of an utterance, but rather what a person who used the utterance to make an assertion would represent himself as believing.' Very often, truth conditions and what a person

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represents herself as believing coincide, but on occasion they do not; in the case of an assertion of (30b), a speaker would represent herself as believing of a specific person that he is a politician and that he rang her yesterday, that is, F(a) & G(a), as opposed to (Ex)[F(x) & G(x)], which is what a speaker of (30a) would represent herself as believing. Although these are clearly distinct beliefs, the hearer gets the same information in the two cases about how things must be if the world is as the speaker says it is.

Higginbotham believes that this move will mop up most, perhaps all, cases of implicature and presupposition triggered by linguistic form. He does not specifically address the stress cases in (32), but I see no reason, in principle, why the idea shouldn't extend to them as well. He concludes that nonetheless, despite this 'concession', truth conditions remain fundamental: 'it remains true that only truth conditional semantics has the properties needed for systematic semantic theory' (Higginbotham 1994, 100).

I won't try to assess this interesting proposal here, since it lies beyond the limited point I am driving towards in this section, which concerns the sort of conception of linguistic semantics we need for an inferential processing account of utterance interpretation. What the proposal highlights for me, though, is how distinct the two approaches to linguistic meaning are; the difference is at least one of explanatory levels - the one concerned with characterising a system of knowledge (a competence) in quite abstract terms, the other with finding a representational level (or levels) which an interpreter can use as input to his system for inferring the informative intentions behind utterances of the linguistic expressions. Higginbotham (1994) and Segal (1994) may well be right that 'knowledge of conditions on reference and truth is the backbone of a theory of meaning'; if so, it follows that the relationship between our cognitive account of utterance interpretation and the theory of meaning is not a simple one; the components of neither one of them translate into or correlate with, in any direct way, the components of the other.

Segal (1994, 1996) and Larson & Segal (1995) seem, however, to have a stronger I-language orientation than Higginbotham, emphasising the place of the T-theory within a wider view of interacting mental systems. Segal (1994, 112) discusses the employment of the T-theory by other cognitive systems, which take the T-theorems as providing an interpretation of natural-language sentences and use this in such linguistic
performances as understanding utterances and making judgements of meaning. So he, unlike most truth-conditionalists, is claiming that the T-theory is a component in the performance theory of verbal comprehension. This is still at one remove from an account which will actually run, as it were, an account in terms of representations and processes (computations) and, as already mentioned, Segal does concede that there is semantic knowledge a speaker/hearer must have which is not captured by the T-theory (so-called conventional implicatures).

2.5.2 A translational semantics for natural language?

Clearly, truth-conditional semanticists are not concerned with actual processes of utterance interpretation (and why should they be?); Lewis is content to build a huge amount of pragmatics into his semantic story; Higginbotham accepts that in maintaining the view that an account of sentence meaning is an account of conditions on truth and reference, the encoded meaning (character) of demonstratives and other indexicals is to be ignored.24 These are sophisticated and insightful theories, but they do not provide (nor have they set out to provide) the sort of distinctions we need for a cognitive account of utterance interpretation. On that sort of account, as Sperber & Wilson (1986a/95) argue at length, the distinction between semantics and pragmatics that is operative is a distinction between two types of cognitive process: decoding and inference. Characterising the role of the first of these (the 'semantics') calls for a systematic description of the elements of meaning that the linguistic forms give us, an account of which bits of conceptual representation and which inferential procedures are activated in the mind by which bits of phonological and graphological form; naturally, this will include distinct entries for each of the indexicals, including the problematic demonstratives, and for all those formal elements which have been set aside as cases of (non-truth-conditional) conventional implicature.

In the view of many truth-conditional semanticists you are simply not going to be saying anything of semantic interest if your characterisation of the meaning of sentences is not in terms of truth and reference. The familiar charge is that accounts that give the semantics of linguistic expressions in terms of a logical, or some other, notation are merely translating one representation (a natural language sentence) into another representation (a sentence of mentalese), and you can go on doing that sort of
thing ad infinitum without ever getting any closer to the essence of semantics, which is that it concerns a relation between representations and the non-representational external world they represent. The classic statement of this position is Lewis (1970, 18). A good response to this, I think, is to accept that giving an account of the encoded meaning of natural language sentences IS essentially a matter of translation into another system of representations, say the language of thought, but to agree that this latter representational system must be given a 'real' semantics, that is, it must be related to the objects and states of affairs in the world which it represents. This, in essence, is the view of Fodor (1981b, 1990) and it has been expressed often in the relevance-theoretic literature in talk of "two types of semantics": (1) a translational (or "quotational") mental semantics, whose statements take the form "abc" means (= encodes) "ijk", where "abc" is a public language form and "ijk" is an incomplete mentalese form; (2) a 'real' semantics, whose task it is to explicate the relation between our mental representations and that which they represent (so it must be "disquotational") and whose statements take the form "hjk" means (= is true iff) such-and-such. (See Sperber & Wilson (1986/95, chapter 4), Blakemore (1987, chapter 1), Carston (1988, 175-78), Wilson & Sperber (1988b, 134), Sperber & Wilson (1995, 257-8).)

This surely is unobjectionable (truth conditions have their place; translation stops and the connection with the world is made) and, in fact, essential if what you're about is the construction of an account of utterance interpretation in terms of mental representations and computational processes: you MUST posit something of a representational sort that the pragmatic inferential system can work with. On such a picture, it follows that many natural-language expressions have a real world truth-conditional semantics by inheritance; that is, given that they map onto parts of propositional thought representations they can be thought of as having the truth-conditional content that those parts of the thought representations have. This will, of course, standardly amount to considerably less than a full set of truth conditions, a determinate state of affairs, and it will leave out of account the role played by a range of elements which do not encode conceptual truth-conditional content.

However, this objection (that decoding or translation into mentalese is not semantics) continues to be made, and from within pragmatics itself, by Levinson (1988, 1989, forthcoming). He contends that the position of relevance-theorists (along with that
of Katz, of Jackendoff and of those GB theorists who investigate a syntactically
determined level of Logical Form) is one of 'semantic retreat' and constitutes 'throwing
in the sponge' (Levinson 1988, 59). Much that he says in this context is right: that this
sort of semantics consists of the algorithmic extraction of a semantic representation from
a syntactic representation; that the result of this is an extremely impoverished level of
representation with scope of operators undecided, metavariables for pronouns, etc; that
traditional sense relations cannot be captured at this level of semantic representation (or
logical form). But these points are presented as backing up the following assertion:
that relevance-theorists hold a 'Stichian' position on semantics and have given up on real
semantics (representation-world relations) altogether. I think this is false. Stich holds
a syntactic theory of mind according to which, ultimately, the scientific psychological
explanation of human behaviour will dispense with talk of intentional (semantic) states
such as beliefs (about the world) and desires (that the world be such and such);
explanation will be couched entirely in terms of the causal role of structured strings of
a mentalese (Stich 1983). Like virtually everyone who espouses a computational view
of the mind, Sperber & Wilson assume that cognitive processes are responsive to only
the formal properties (shapes and configuration) of mental representations (this is
variously known as "methodological solipsism", internalism, individualism). However,
as already indicated, they line up with Fodor rather than Stich on the ultimate semantic
issue: the structured conceptual complexes of the language of thought are representations
in the full sense, so as well as their intrinsic organism-internal properties, they have
relational properties in that their content (semantics) is determined, at least in part, by
their relation to the outside world. A full account of human psychology (including
generalisations about how we come to have the beliefs etc. that we do have and how we
come to act on our environment as we do) will require an (externalist) semantics of
mental representations, but this lies outside the domain of a theory of the cognitive
processes and representations involved in utterance understanding.

According to Levinson, the non-semantic notion of semantics which prevails in
the relevance-theoretic account of utterance understanding arises because 'the idea is to
yield matters of interpretation entirely to pragmatics' (1988, 59). I think there is an
equivocation in his use of the term "interpretation" between an internalist and an
externalist sense. On the internalist sense, an interpretation is a set of representations
in a proprietary vocabulary (we tend to think of it as conceptual); on the externalist sense, it consists of such entities as individuals, properties and states of affairs, which representations can be said to refer to or be true of. Consider the following, noting the different uses of the words "semantics" and "interpretation":

"Sperber and Wilson are Fodoreans, so they are forced into assuming that language is an input system delivering fragmentary, uninterpreted, logical forms to the central processor ... It follows that semantics, construed as part of the input system, has nothing to say about semantic interpretation, which actually belongs (like pragmatics and all nonspecialized processes) to the central processor. So virtually all the pre-occupations of modern theoretical semantics will lie outside semantics proper; indeed they will not be distinguished from general thought processes, let alone from pragmatics. This conclusion is not necessary, and it is not natural. ... We can maintain a systematic theory of meaning by adopting, as in garden-variety DRT, a level of representation to which both semantic and pragmatic modules can contribute, the whole being subject to semantic interpretation."

(Levinson 1989, 468-69, my emphasis)

The final approving statement here, with its two distinct uses of "semantics", is just as applicable to relevance theory (with its recognition of two types of semantics: linguistic and 'real') as it is to DRT. I take it that "semantic interpretation" in this final statement means the relating the resulting level of representation to the external reality it represents (that is, objects, states of affairs, etc). But the earlier points concerning the interpretive role of pragmatics and the lack of an interpretive role for the first type of semantics concern a wholly internalist notion of interpretation: this sort of semantics is a level of representation arrived at by computations which map one type of linguistic representation (phonetic) onto another (conceptual); the difference between this and pragmatics is just that the computations carried out by the latter are not algorithmic and include in their input mental representations whose source is not the linguistic expressions of the utterance currently being processed, that is, representations stored in memory, derived via perception or from earlier utterances. Both linguistic semantics and pragmatics are representational and computational, and both play an essential role in the
"interpretation" (i.e. understanding) of utterances.26

At most, there might be a case for a terminological change here. The term 'semantics' could be reserved for the account of the relation between fully propositional forms and the states of affairs they represent ('real' semantics). The output of decoding, which is the input to pragmatic inference, could be called something else: logical form, the level of conceptual interface, the semantically relevant level of syntax, a linguistically determined partial mentalese representation, or whatever. Once we know what we are talking about this is a matter of little interest; as is sometimes said of this sort of wrangle, it is merely a matter of semantics (in yet another use of the term).

I'll move on now to say a little more about the sort of linguistic semantics (internalist, translational) that a cognitive account of utterance interpretation such as relevance theory requires. Here I follow Sperber & Wilson (1986a) and Wilson & Sperber (1993a). Take a simple sentence: 'she hasn't called'. On any normal occasion of use, this will be understood as expressing a complete proposition in which it is predicated of a particular female that it is not the case that she has called (in some specific sense of 'call') some other particular person within some relevantly delimited time span up to the time of utterance. However, the sentence form itself encodes something much less specific, a non-propositional (non-truth-evaluable) logico-conceptual structure, an "assumption schema", which functions as a template for the construction of fully propositional (truth-evaluable) logico-conceptual structures. It is this schematic logical form that the initial (purely linguistic) phase of understanding delivers and which is the input to the pragmatic processes aimed at constructing the propositional form intended by the speaker, or one similar enough to it to have the intended effects.

Exactly how to represent the encoded logical form (or assumption schema) remains an open question with a number of subsidiary issues to be resolved, including how to represent the character of indexicals like 'she' and what the syntactic structure of a logical form looks like. Here is one, undoubtedly wrong, possibility, which might at least give the flavour of the idea:

\( \text{(34) NOT } [ \text{within } t, \{ \text{CALL}_1(X\{\text{singular, female}\}) \} ] \)

where \( t \) is a particular time span and \( \text{CALL}_1 \) is a particular sense of the verb 'call'.

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Most likely there is an unarticulated object-of-the-calling constituent here as well, which
would be recovered pragmatically; this may be marked in the logical form as a further
open slot, Y, in the second argument position if the logical entry for the concept 'call'
so specifies. What I intend to indicate by ‘X{singular, female}’ is the character of the
pronoun 'she' which, in line with Kaplan’s observations, does not enter into the logical
form as a conceptual constituent but which is instead a procedural indication to the
pragmatic processor of the sort of entity being referred to. Once the hearer has accessed
the referent, in the form of an individual concept, it fills the X slot in the evolving
propositional form, and the procedural features disappear, having served their purpose.
As argued by Wilson & Sperber (1993a), this distinction between procedural and
conceptual encodings is a cognitive processing correlate of the character/content
distinction made by Kaplan (though there are also some differences, which I won’t go
into here). On this approach, fully propositional conceptual representations, rather than
sentences or utterances, are the primary bearers of truth conditions. Intuitions about the
truth conditions of utterances are intuitions about the truth conditions of the proposition
the speaker intended to express.

Objections have been made to this way of looking at linguistic semantics by
people working within a representational approach. One already alluded to is that if you
do not assign something of a fully propositional nature (thereby admitting of truth
conditions) to natural language sentences, you cannot say anything about their semantics
(Levinson 1989). This is just false, as I hope the above considerations have shown.
Although Sperber & Wilson have not given a full account of the conceptual and
procedural encodings of natural-language words and sentences, their programme for
giving such an account is clear enough and relevance theorists have made many concrete
proposals concerning the semantics of particular natural language expressions (see, for
example, Blakemore (1987, 1988, 1989b, 1990), Blass (1990), Breheny (1996, in
1996), Žegarac (1991, 1993)). Work in other frameworks also shows that giving an
account of natural-language semantics in terms of an intermediate (conceptually oriented)
system of representations is very much a live option (see Katz (1972); Jackendoff (1983,
1990)).
A follow-up objection, which I have seen in unpublished work, is to insist that Sperber & Wilson are just mistaken in their view that the vast array of natural-language sentences do not encode propositional forms. Granted that a sentence seldom, if ever, fully determines the proposition that the speaker expresses by a use of it, still it doesn’t follow that the sentence does not encode any proposition at all. Some of Sperber & Wilson’s examples which I have seen discussed in this way are given in (35), and the propositions they are alleged to encode are given in (36):

(35)  
  a. She carried it in her hand.  
  b. Paul’s book is on the shelf.  
  c. It’s raining.

(36)  
  a. Some female entity in some domain carried at some past time something in that female entity’s hand.  
  b. The book that is in some relation to somebody called Paul is on the shelf.  
  c. It’s raining somewhere.

The procedure is simple (not to say simplistic): wherever you find an indexical you put in a phrase which spells out the indexical constraint in conceptual terms and wherever you spot an unarticulated constituent you use one of the family of ‘some’-indefinites (something, somewhere, sometime, etc.) to make it visible. The first problem with this is the assumption that the pairs are truth-conditionally synonymous; in the case of (35a) and (36a) this seems clearly false. Any of the well-developed truth-conditional theories around, such as Higginbotham’s mentioned above, would certainly assign these quite different T-sentences. (35a) would receive a conditional T-sentence of the canonical form given in (29a), while (36a) would, I assume, receive a simple (non-conditional) T-sentence since it has no referential elements. Second, each of the propositional representations in (36) cannot but be true (I don’t mean that they are necessary truths, but given the way the world is they are bound to be true). Take any book on any shelf, it will be in some relation or other with every person by the name of Paul in the world; for instance, it may be in the relation of being 62.34 miles northnortheast of someone called Paul Johnson. This is a ludicrous result. The idea has a further counter-intuitive
consequence. While the proposition allegedly encoded by each of the sentences in (36) is true, the proposition that a speaker may express by the use of the sentence in a particular context may be false; for instance, (35b) will be false when the particular book she refers to is not, as a matter of fact, on the particular shelf she refers to. In other words, the basic pragmatic process of reference assignment causes a change of truth value even though this is, on anyone's account, a perfectly literal use of the sentence.

There are more sophisticated versions of the idea that natural-language sentences encode a proposition, though usually of a highly abstract, non-representational, sort. In his discussion of the crucial role of domains of discourse (see section 2.3) in determining the proposition expressed by sentences of the form 'The F is G', Recanati concedes it is possible to state the truth conditions of these sentences independent of all contextual information:

We can, for example, say that a sentence of the form 'The F is G' has the following truth-conditions: it is true with respect to an ordered pair of (possibly identical) worlds iff there is an x which is uniquely F in the first world of the pair and x (or x’s counterpart) is G in the second world of the pair. On that view, the proposition expressed by a sentence with n predicate-expressions will not be a function from possible worlds to truth-values, but a function from ordered sets of n (possibly identical) possible worlds to truth-values.

(Recanati 1987, 71)

What this statement does is build in the possibility of variation in the domains of discourse of the two predicates (F, G), thereby accommodating the possibility of an utterance of, for instance, 'My sister is not my sister' being consistent in certain contexts. Recanati refers to this as a 'very abstract notion of proposition' but, as far as I can see, if one maintains the assumption that propositions are truth-evaluable, then what we have here is not a proposition per se but a propositional function, which generates a huge set of possible particular propositions, one of which will be expressed on a given occasion of use of the sentence. This point carries over to many other proposals for stating the truth conditions of sentences, as opposed to the truth conditions of an utterance (and is one which Recanati himself clearly endorses; see Recanati (1989a, 235).

There are various other abstract notions employed in accounts of linguistic
meaning, including 'diagonal propositions' (Stalnaker 1978, Recanati 1989a), 'external propositions' (Recanati 1993, 289-91) and, perhaps, 'created propositions' (Perry 1988), whose individual properties I cannot explore here. Most of these employ the concept of possible worlds and the set-theoretic notion of a 'function', and are patently non-representational; they are more mathematics than psychology (see Partee 1979, 1996). Let's suppose that one or more of them does provide an adequate semantics for natural-language sentences (that is, it correctly pairs sentences with a context-free, hence necessarily rather abstract, specification of truth conditions). Still, it is obvious that this sort of non-representational, abstract notion of a proposition cannot enter directly into the processing account we are trying to develop in cognitive pragmatics. I wonder if it would be too wild to suggest that the representational equivalent of these abstract propositional functions is something along the lines of the cognitive assumption schemas that Sperber & Wilson propose as the encoded meaning of sentences. This is a suggestion made with due trepidation and tentativeness; clearly, it requires much careful exploration, which I cannot give it here.

Setting aside the hopeless view, exemplified in (36), we have, broadly speaking, two ways of characterising the meaning encoded in natural-language sentences: (a) as a cognitive assumption schema with some conceptual material in place and some specified constraints on the material to be pragmatically supplied; (b) as an abstract proposition, a function from ordered n-tuples of coordinates (worlds, times, locations, speakers, addressees, etc.) to truth-values. Whether or not these can be shown to be in a close relation with each other across levels of inquiry (the abstract mathematical and the cognitive representational) or not, I suspect that there is a place for both conceptions, within different sorts of theories trying to account for different sorts of things (or for the same thing but from very different perspectives). For those of us working on a theory of the cognitive stages and processes involved in understanding utterances, set within a representational and computational theory of mind, something like the first option is essential.

Summing up section 2.5, given the concerns of a cognitive account of utterance interpretation, the picture as regards sentence semantics is as follows. Although they generally do not have a determinate set of truth conditions, sentences do have truth-conditional content (in a derivative sense) in that much of what they encode enters into
the pragmatically developed representation (of the proposition expressed), which does have a determinate set of truth conditions. However, most sentences have as constituents some linguistic expressions which, rather than encoding concepts that enter directly into the logical form, encode indicators (or characters or constraints) which function to guide the hearer in the pragmatic aspects of interpretation, including the all-important task of discerning the entities the speaker intends to refer to with her utterance.

2.6 Radical underdeterminacy and the Background

Perhaps what is inexpressible (what I find mysterious and am not able to express) is the background against which whatever I could express has its meaning.

(Wittgenstein 1931/80, 16e)

2.6.1 The Background

Searle (1978, 1980, 1983, 1992) seems to be a strong advocate of the underdeterminacy thesis:

The literal meaning of a sentence only determines a set of truth conditions given a set of background practices and assumptions. Relative to one set of practices and assumptions, a sentence may determine one set of truth conditions; relative to another set of practices and assumptions, another set; and if some sets of assumptions and practices are given, the literal meaning of a sentence may not determine a definite set of truth conditions at all.

(Searle 1980, 227)

In his most recent discussions of this (Searle 1992, 181; 1996, 131), he notes that the issue has been addressed by Recanati (1989/91) and by me (1988/91), where we discussed examples such as those in section 2.2 above, for which unarticulated constituents and other enrichments are required in order to arrive at the proposition expressed by the utterance. However, Searle feels that we have barely scraped the surface of the phenomenon. The problem that needs highlighting is that of the Background (with a capital ‘B’); this is fundamental to meaning and understanding, there is no literal meaning without it, there is nothing truth-evaluable without it. The force
of his position is best appreciated by considering a couple of his examples. He shows how the literal use of common verbs, like 'cut', 'open', 'close', 'clean', 'mend', 'play', 'bring', 'take', and 'make', determines different truth conditions as a result of different relevant parts of the Background coming into play. For instance, take different substitution instances of "X opened Y", keeping to human agents, concrete objects and a strictly literal use of 'open':

(37) a. Jane opened the window.
    b. Bill opened his mouth.
    c. Sally opened her book to page 56.
    d. Mike opened his briefcase.
    e. Pat opened the curtains.
    f. The child opened the package.
    g. The carpenter opened the wall.
    h. The surgeon opened the wound.

(adapted from Searle 1983, 145)

Though the semantic content (the encoded meaning) of the word 'open' is the same in these examples, it is understood quite differently in each case; the contribution it makes to the truth conditions of quite literal utterances of the sentence is different in each case. What constitutes opening a book is quite different from what constitutes opening one's mouth, which is quite different again from what constitutes opening a package, etc. Importantly, although it looks as if it is the semantic content of the expressions we substitute for "x" and "y", particularly "y", that determine the interpretation of 'open', this is only so given a Background of assumptions concerning what is involved in an x opening a y. That is, we could imagine a situation in which, say, a mouth had been stitched closed for some reason (to prevent some disease or to stop an obese person from eating, etc), and then the opening process would be quite different from the one we assume given our standard assumptions about mouths.

Furthermore, given our current Background we are unable to understand (assign truth-conditional content) to the following:
(38)  a. Bob opened the grass.
    b. Chris opened the fork.
    c. Jane opened a hair.

This is because, although we understand each word in these sentences and their syntax is unproblematic, our Background does not supply us with any know-how concerning opening grass or forks or hairs.

He also considers cases which are the most likely counter-examples to the generality of the thesis of the Background, that is, plausible candidates for eternal sentencehood such as the following:

(39)  a. Four plus five is nine.
    b. Snow is white.

The claim is that even these only determine a set of truth conditions against a background of practices and assumptions, which are so deeply entrenched that we do not notice them. Should arithmetic practices change, in the one case, or some fundamental alteration to the course of nature take place and our background assumptions with it, in the other, these sentences might determine different truth conditions from those they currently do, or perhaps determine none at all (Searle 1980, 229-231).

Before locating the Background within Searle’s wider account of intentionality, I want to mention two points which arise within the present narrower context of utterance interpretation. First, it seems that for Searle there is no distinction between utterance meaning and sentence meaning when the speaker means what she says; he takes it that the speaker’s knowing of literal meaning that it applies only against a particular Background is part of her linguistic (semantic) competence. So there is no sharp distinction between a speaker’s semantic competence and her knowledge of the world (Searle 1978/79, 134). This may ultimately prove to be the case (it has some formidable supporters, e.g. Chomsky (1995) (see footnote 7)), but I don’t think we have to accept it as a foregone conclusion on the basis of the facts about interpretation just considered. I find an equivocation in the way Searle talks of ‘literal meaning’. He says ‘the same literal meaning will determine different truth conditions given different
Backgrounds' (Searle 1983, 145), on the one hand, and then talks of the dependence of literal (sentence) meaning on context/background (Searle 1978/79, 134-5). That is, on the one hand, 'open' has the same literal meaning in each of the examples above, and, on the other, its literal meaning depends on context and so is different in each case. The first way of talking of 'literal meaning' leaves open the possibility that it can be given its own Background-free characterisation, though it cannot be applied (used, understood) except in relation to a body of Background assumptions/practices. In short, a principled semantic/pragmatic distinction is not ruled out by accepting, as I do, the fundamental and pervasive role of the Background.

Second, for anyone interested in an account of utterance interpretation, that is, an account of the hearer's interpretive processes and the representations he recovers, there is a pressing question here. I have suggested above that hearers recover unarticulated constituents of the proposition expressed by an utterance. So the question is how much of this great mass of contextual/background material goes into the proposition expressed? How do we distinguish between what the hearer must infer and build into his representation of the speaker's informative intention and what is left in the Background?

Recanati (1993, 260) quotes one of Searle's more grotesque scenarios in which he discusses the example 'I have had breakfast' from Sperber & Wilson (1986/95, 189-90). In addition to the narrowing down of the temporal specification (in most instances, to the day of utterance), which they give as an example of a pragmatic contribution to the proposition expressed, Searle points out that 'having breakfast' is interpreted as 'eating' breakfast and 'eating' breakfast is taken to mean putting it in one's mouth, chewing it, swallowing it, etc., as opposed to stuffing it into one's ears or digesting it through the soles of one's feet, though none of this is encoded in the phrase itself. Recanati agrees with Searle about this and concludes from it 'that "what is said" — the situation our utterance intends to describe — necessarily involves unarticulated constituents. No proposition could be expressed without some unarticulated constituents being contextually provided.' (Recanati 1993, 260). I agree with this conclusion but find it rather lame, since it runs together the deepest taken-for-granted unrepresented aspects of meaning (e.g. what's involved in eating) and other much less general, context-particular, features of understanding that a hearer will have to infer and represent if he
is to recover the speaker's intended message. I will return to this question in chapter 4, in the context of a discussion of the pragmatics of and-conjunctions, where I will consider some useful but inconclusive tests for distinguishing which among the unarticulated aspects of meaning must be recovered and mentally represented.

Searle's thesis of the Background should be situated within his overall view of the mind, which I will now indicate, in a very sketchy but, I hope, accurate way: we have intentional states, such as beliefs, desires, intentions; these are real, they are properties of human biology; that is, they are not convenient fictions and they are not reducible to something else, although they are, of course, caused by neurological processes in the brain; linguistic meaning is (one instantiation of) derived intentionality, that is, it is grounded in the more basic intentionality which is an intrinsic property of the mind/brain; consciousness (like intentionality) is an intrinsic and ineliminable feature of the human mind/brain; some, but not all, conscious states are intentional in that they represent something beyond themselves; some, but not all, of one's intentional states are conscious at any given moment but all are capable, in principle, of being brought to consciousness; without consciousness there is no intentionality (in fact, for a state to count as mental it must be potentially conscious)\(^{27}\); the workings of the (holistic) system of intentional states are wholly dependent on a massive set of capabilities, dispositions, know-how, that are not themselves intentional, that is, the Background.

Searle makes a distinction between features of the Background that are common to all human beings and features that are culture-specific. So, for instance, the basic know-how involved in walking and eating are aspects of the 'deep Background' while specific aspects of, say, conduct at meals, or the sitting and standing conventions at public gatherings would be elements of the 'local Background'. He makes a further distinction between knowing how to do things and knowing how things are; for example, we know how to walk and one aspect of our knowing how things are with the world is our taking it for granted that the ground won't shift around beneath our feet.

Searle admits that there is some obscurity in the concept of the Background, but he finds its existence an inescapable matter of fact and has a range of arguments for it, some of which, pertaining specifically to language understanding, have been alluded to above. I do not doubt the existence of some such body of capacities and assumptions, but I would like to try to think about it in a way that will mesh better with the
relevance-theoretic approach to utterance understanding that I will be employing. It is crucial to Searle that the Background set of assumptions/practices is not itself "intentional", since it is this that makes intentionality possible (the 'aboutness' of our beliefs and of the meanings of our utterances, etc); it is that without which intentional states would be indeterminate. The Background is, however, not to be construed as actual objects or states of affairs in the world; it is mental ("in the head" Searle (1991, 291)). I suggest that the concept of "manifestness" as characterised by Sperber & Wilson (1986/95, 38-42) is helpful here: an assumption is manifest to an individual at a given time if and only if he or she is capable at that time of representing it mentally and accepting its representation as true or probably true. They then define the concept of an individual's 'cognitive environment' as the set of assumptions that are manifest to him or her at a particular moment. Thinking of the Background as a set of manifest assumptions seems to answer to Searle's broad requirements that the Background does not consist of states of affairs in the world, on the one hand, nor of intentional states (representing the world), on the other, but is mental insofar as it is dependent on - would not exist without - the mind/brain.

There are several features of Sperber & Wilson's concepts of manifestness and cognitive environment that are relevant in applying them to the Background: (a) manifestness is a matter of degree, and the degree of manifestness of a given assumption in an individual's cognitive environment may shift from moment to moment depending on features of the external physical environment and on his/her internal cognitive states (for instance, where attention is focused); (b) some assumptions are such that once they are manifest to an individual they remain so thereafter, as stable elements of his or her cognitive environment; others are temporary and may be very short-lived, a function of where one happens to be, who one happens to be with, etc, at a particular moment; (c) an individual's cognitive environment overlaps to a greater or lesser extent with every other individual's cognitive environment: assumptions that are common to human existence (e.g. objects are solid and permanent, the earth does not recede beneath one's feet, etc.) are part of everyone's cognitive environment; other assumptions are shared by largish subsets of cognitive environments, such as those pertaining to practices and conventions taken for granted in a particular culture; close friends share a huge further range derived from their shared experiences, verbal and non-verbal. Some shared
manifest assumptions are in fact mutually manifest, that is, it is manifest to the sharers that they share those assumptions and with whom they share them.

We might usefully think of the Background as a set of assumptions and practices that maintain a fairly steady degree of (not very high) manifestness across time in an individual’s cognitive environment. A subset of the Background consists in assumptions/practices which make up the mutual cognitive environment of all nonpathological human beings (the deep Background); other subsets are the mutual cognitive environments of what can be loosely termed culturally defined groups of human beings (local Backgrounds). Most, perhaps all, Background assumptions and practices figure in some mutual cognitive environment or other. Some of these assumptions might be occasionally actually represented by the individual when he or she is confronted with ‘strange’ situations, situations with features which contradict some feature of the Background and so make that feature highly manifest to him or her, situations of shock. For the most part, though, the Background keeps its place, in the background, unrepresented, an essential foundation for thinking and understanding and, though not discussed here, action.  

This way of thinking of the Background may or may not do full justice to Searle’s conception; I suspect that I have not succeeded in fully capturing its bedrock nature. Some of the capacities, the know-how, the savoir-faire, that Searle refers to, do not seem appropriately thought of as sets of assumptions. However, I do not see any glaring problem in extending the concept of manifestness to a broader array of dispositional sorts of structures, like procedures, action schemas and processing schemas; these seem better suited than assumptions to be the vehicles of such aspects of the Background as how to eat, how to walk, what’s involved in behaving normally in a shop/classroom/someone else’s house/at home, etc. Constituents of these schemas could, in principle at least, be represented by an individual and held as true, for instance, ‘in order to eat x one places x in one’s mouth’. Anyway, given the limited use to which I will be putting the Background in this thesis, I think a characterisation in terms of manifest assumptions and procedures will suffice.
2.6.2 Radical underdeterminacy and 'expressibility'

Let's return briefly to the issue of linguistic (in)effability. Recall that Searle was one of those mentioned, with Katz and Frege, as espousing a principle of effability, though his is labelled the principle of 'expressibility': 'whatever can be meant can be said' (Searle 1969, 19-21). It might seem that anyone holding as strong an underdeterminacy thesis as is entailed by the thesis of the Background must be a supporter of the anti-effability view I took in the previous section. So is Searle being inconsistent? Did his development of the thesis of the Background put paid to his earlier advocacy of Expressibility? The answer to the second question is certainly 'no':

... there is nothing in the thesis of the relativity of literal meaning [to the Background] which is inconsistent with the Principle of Expressibility, the principle that whatever can be meant can be said. It is not part of, nor a consequence of, my argument for the relativity of literal meaning [to the Background] that there are meanings that are inherently inexpressible.

(Searle 1978/79, 134)

This emphatic denial is all we get from Searle on the issue. One way of trying to convince oneself that the two theses are consistent would be to reason as follows. The principle Searle endorses is something quite different from that of Katz and Frege with their assumption that, for each indexical and/or incomplete sentence paired with a context, natural language affords an eternal sentence which fully encodes the proposition expressed by the first. Searle's principle must be the innocuous truth that the human interpretive capacities are set up so that for any propositional content that a person might want to communicate in a particular context, there is some linguistic expression such that the truth-conditional content of an utterance of that expression will be that propositional content. An essential part of those interpretive capacities is, of course, the Background. However, a look at the formulation of the Principle of Expressibility makes it clear that this is not the way out:

For any meaning X and any speaker S whenever S means (intends to convey, wishes to communicate in an utterance, etc.) X then it is possible that there is some expression E such that E is an exact expression of or formulation of X. Symbolically: (S)(X)(S means X --> P(∃E)(E is an expression of X)).

(Searle 1969, 20)
Clearly, by ‘said’ he intends ‘encoded’. It seems, then, that the answer must lie with the concept of ‘what is meant’; just as what we say is relative to the Background so is what we mean, what we intend to convey, what we think, etc. Essential though they are to interpretation, I take it that elements of the Background do not fall within the scope of our communicative intentions (they cannot, since they are nonintentional). Then the fact that they do not enter into what is said (encoded) does not threaten Expressibility. The nonrepresentational Background underlies both the said and the meant, and so is not the source of any disparity between them. Thus there is no inconsistency in maintaining both the Principle of Expressibility and the thesis of the Background. This does not, of course, touch the arguments in section 2.3, on the basis of which Searle’s Principle of Expressibility, like Katz’s Principle of Effability, must be wrong.

2.6.3 Radical underdeterminacy and compositionality

Having considered the Isomorphism Principle briefly and the Effability Principle lengthily, I come now to the third and perhaps most cherished of theses held by philosophers of language. This is the Compositionality Principle: "The semantic value of an expression is determined by the semantic value of its constituents and the manner in which they are combined." This is usually attributed to Frege but is held, in variant forms, by virtually every semanticist. The principle is taken to hold for every type or level of semantics, so for Frege who distinguished between sense/content and reference/extension the principle holds for both these types of entity, and for those who make the further distinction between linguistic meaning (or character) and propositional (truth-conditional) content it holds also at that third level: the linguistic meaning encoded by an expression is determined by the encoded meaning of its constituent parts and their manner of combination.

Compositionality is generally deemed essential in explaining the productivity of natural language (finite means, infinite ends), which is itself a crucial component in explaining the expressive and communicative power of human utterances. But the Compositionality Principle (CP) is stronger than this; it embodies a determinacy requirement: the semantic value of a complex expression E must be "completely determined by the constituent expressions e₁ ... eᵢ ... eₙ of which it is composed. That is, any semantic property with which the complex expression is endowed, must be
traceable to one of the constituent elements, or to the construction itself" (Welsh 1986, 553-54). As Searle (1980) points out, given the thesis of the Background, the Compositionality Principle (CP) appears not to hold for the view that the meaning of a sentence is to be given as a specification of its truth conditions. In his terms, this is because the truth conditions of a sentence are not fully determined by the (literal) meaning of the sentence but are wholly dependent on the Background.

How weighty an issue this is, I am unsure. Certainly, the "completely determined" requirement is not met, though perhaps the CP could be relativized to the essential contribution of the Background and still play its essential role of accounting for the productivity of natural language sentences/utterances. The case for the truth-conditional content of an utterance meeting the CP looks more hopeless once the sources of linguistic underdeterminacy discussed in sections 2.2 and 2.3 are acknowledged (pervasive indexicality, unarticulated constituents, generality of sense, indefinite scope, etc). However, neither these considerations nor Searle's points about the Background touch the validity of the CP for an account of linguistic semantics in terms of encoded meaning. As argued in section 2.5, the semantic representation of a sentence is an incomplete conceptual structure with some empty slots for further conceptual material and some constituents marked as needing completion. The arrangement of conceptual constituents and slots reflects the relations encoded by the syntax (the combinatorics) of the natural language expression used, or in some instances, such as the scope of negation and quantifiers perhaps, leaves those relations to be fixed pragmatically.

It is often suggested that only an account of linguistic meaning in terms of truth conditions has the kind of systematicity that a semantic theory requires, that systematicity itself explained in terms of the constancy of the contribution of the primitives (words) together with the Compositionality Principle (see Higginbotham (1994, 97), Larson & Segal (1995)). Horwich (1997, forthcoming) disagrees with this: "the content of SEM (= linguistic meaning) is determined by the contents of its parts ... but this can be explained trivially - in a way that has nothing to do with truth conditions. It suffices to suppose that understanding a complex expression (i.e. implicitly knowing its meaning) is, by definition, nothing over and above understanding its parts and appreciating how they have been combined. If this is so, then the property in virtue of which a sentence possesses its particular content is simply the property of its being
constructed in a certain manner from primitives with certain meanings" (Horwich forthcoming, 20-21). His own account of meaning is in terms of conceptual roles rather than truth and reference, but his general point is that compositionality is accommodated (by the construction properties, i.e. the syntax, of language) without making any assumptions about the meaning properties of the primitives.

However, if Searle is right there may be reason not only to doubt that reference and truth conditions are essential to an account that explains how the meaning of a complex linguistic expression is a predictable product of its parts, but, more underminingly, to doubt that they are able to fulfil the requirements of the job. The truth conditions of a completely literal use of a sentence (recall the "opening" examples in section 2.6.1) seem not to be fully determined by the constant contribution of their constituent parts and their mode of combination but to be profoundly affected by a body of Background assumptions that inevitably permeates meaning/understanding. Searle's solution to this is to drop the axiom that the literal meaning of a sentence is a set of truth conditions, a position that has been advocated, for independent reasons, throughout this chapter. The view of sentence meaning as an incomplete logical form, a frame for building propositional forms on, as discussed in the previous section, seems to observe the CP more closely than those accounts which attempt to give a sentence semantics in truth-conditional terms.

Of course, Searle's observations raise the further issue of whether a truth-conditional semantics of sentences in Mentalese conforms with the CP. To the extent that the question is meaningful (are there really such things as sentences of Mentalese? what are the primitive components of thought? etc.), it seems that the thesis of the Background must lead to a negative answer here too. The syntactic (compositional) nature of sentences in the language of thought might explain their productivity and systematicity, but the truth conditions of a thought are dependent not only on the referential properties of primitives and their relations to one another (i.e. their composition) but also on the Background.32

That entity which clearly conforms to the Compositionality Principle, i.e. encoded sentence meaning, may never be mentally represented as such by a hearer processing an utterance. By the time the last word of an utterance is processed, the earlier parts of the string are already buried within the pragmatically supplied flesh of a fully propositional
thought. As the utterance is processed millisecond by millisecond (left to right, as it were), pragmatic processes come into play; indexical references are resolved, disambiguations performed, unarticulated constituents supplied and decoded concepts enriched as soon as they can be, and that is, standardly, before the whole utterance is heard and certainly before a whole sentence semantic representation is accessed.

2.7 Summary

To end this long chapter I will briefly and baldly state its main claims, which the rest of the thesis assumes:

1. Linguistically encoded meaning (character) underdetermines the proposition expressed by an utterance (its truth-conditional content).

2. Linguistic underdeterminacy is an essential feature of natural languages because there are no eternal sentences in natural languages.

3. The primary mental capacity underlying the communicative and interpretive powers of humans is the capacity to infer the mental states of others, and this runs to several orders of attribution.

4. All intentionality (mental and linguistic) is dependent on a massive background of weakly manifest (taken for granted) unrepresented assumptions and practices.

5. Linguistically encoded meaning is, then, doubly under-determining of utterance meaning; as well as its own inherent underdeterminacy it inherits the underdeterminacy of the intentional states it is used to express.

Finally, I should mention that in the chapters that follow I will sometimes try to give some sort of representation of the proposition expressed by an utterance, and this will often look like some attempt at finding an eternal natural language sentence. This will not be the intention. In fact, in most cases the given representation would fail
miserably as a candidate for an eternal sentence for the sorts of reasons surveyed in section 2.3; the point will usually be to alert the reader to those aspects of the proposition expressed that have been **pragmatically** supplied, so points of difference from the semantic representation encoded by the linguistic expression will be highlighted. Precisely because of the non-existence of eternal sentences, the propositional representations may contain numbers and other symbols (like the hopelessly inadequate but suggestive subscripted ‘t’s for temporal reference) in a bid to represent elements of meaning that natural language sentences cannot represent.
Notes

1. However, Bach (1994a, 1994b) is an exception to this. He ties 'what is said' as closely to linguistic meaning as one can without equating the two, so that for him 'what is said' need not be propositional. His views are discussed in chapter 3.

2. Of course, the matter of what gets called an error or a misuse is sometimes more a matter of power and authority than anything to do with language itself; see, for instance, Chomsky (1987, 29-30)’s discussion of ‘livid’ which most of us take to encode ‘red’ or ‘flushed’ while what it "really means" (i.e. what the dictionary tells us) is ‘pale’ or ‘greyish’. In such a case most of us will (mis)use the word very satisfactorily without anyone having to make any interpretive adjustment. Still, both miscommunication due to disparate encodings, and communication which is successful only because either the speaker or hearer recognises such a disparity and adjusts for it, are real phenomena and fall within the purview of a cognitive account of the processes of utterance interpretation.

3. All page references to articles by Grice are to the reprintings in Grice (1989).

4. Alternatively, as Davidson (1970, 182) suggests the theory could specify a single T-sentence with a disjunction of truth-conditions; for example:

‘The box was in the pen’ is true for an English-speaker x at time t if and only if either the box was in the playpen before t and the circumstances surrounding x at t meet condition c, or the box was in the writing-pen before t and the circumstances surrounding x at t meet condition c'.

The issue of whether or not this is a satisfactory way of capturing lexical ambiguity lies outside my concerns here (see Cohen (1985) for discussion).

5. This is not to say that the semantics of pronouns is a cut and dried matter; it is not. The point here is that we do not need to get the semantics of pronouns straight in order to convince ourselves that understanding utterances of them presents a task for pragmatics.

6. Katz was led to abandon the Chomskyan psychological conception of language, of which he had been a staunch supporter, by his philosophical interest in necessary truths and his belief that they are expressible in natural language. He claims that Chomsky’s mentalism denies the possibility of genuine necessary truth in natural languages, since the most it can offer is the concept of something’s being necessary relative to human cognitive capacities (Katz 1981, 4-6).
7. Katz (1981) notes conceptualist scepticism about the possibility of doing semantics; here is one of the examples he quotes 'It seems that other cognitive systems - in particular our system of beliefs concerning things in the world and their behaviour - play an essential part in our judgments of meaning [sense] and reference, in an extremely intricate manner, and it is not at all clear that much will remain if we try to separate the purely linguistic components of what in informal usage or even in technical discussions we call the "meaning of a linguistic expression". I doubt that one can separate semantic representation from beliefs and knowledge about the world.' (Chomsky 1979, 142). The same position is reiterated in more recent work, for example Chomsky (1995, 26). Little wonder then that Katz, the prime mover in developing the 'semantic component' of a grammar, prefers a Platonist conception. Recall Chomsky's scepticism regarding a theory of utterance interpretation, pointed out in the first chapter; the current quote indicates a deeper, more thoroughgoing, scepticism about the prospects for theories of meaning of even quite a narrow sort.

8. Katz (1978) is a sustained and meticulously argued attempt to defeat Quine's scepticism about meaning, in particular his thesis of the indeterminacy of translation, by showing its foundations in a discredited empiricism and accompanying behaviourist methodology. He seeks to establish the viability of semantic theorising given the rationalist, mentalist programme in linguistics and to argue that there is a fact of the matter regarding translation: a correct translation of a sentence is one with the same semantic properties as the original sentence. I find myself basically in agreement with Katz's aim and most of his arguments, while being uneasy with some of the theses he formulates along the way, which is a strong indication that there is much disentangling to be done. The place to start the disentanglement might be Katz's focus on an utterly decontextualised concept of 'sentence' translation, assessed in the light of Gutt (1991)'s discussion of the role of context in translation.

9. Searle (1992, 131, 155) too emphasises that every intentional (i.e. representational) state has an 'aspectual shape', by which he means to emphasise the first person perspective we cannot but have on the objects we perceive and think about. I take it that 'aspectual shape' is another term for 'mode of presentation'.

10. As Perry (1977) notes, Frege's view that each thought is the sense of some sentence (though there are sentence senses which are not thoughts because they are incomplete) was severely tested by indexicals like 'here', 'now' and 'I'. Having recognised the 'special and primitive way' in which we each present ourselves to ourselves (Frege 1918/77, 12-13), he could not but accept that there are incommunicable senses. It seems that even those most drawn to it, cannot hold the effability principle in its strongest form.

11. The role of the conceptual content of referentially used descriptions has been discussed by many people, including Donnellan (1966/91), Grice (1969), Bach (1981,

12. It might be objected that in fact the dependence of the intended reference on the domain of discourse does not affect the proposition expressed but comes in at some other level altogether, perhaps as an implicature. A quick rejoinder to this is to point out that a speaker does not contradict herself by uttering both "'The PM is in the next room' (where the domain for interpretation of "the PM" is Lucinda's belief-world) and 'The PM is not in the next room' (which is about the actual PM). Their truth-conditions are different. Recanati (1987, 66-73) gives a more extended defusing of the objection.

13. Dan Sperber, Deirdre Wilson and I have discussed a range of other cases where a process of pragmatic enrichment of a lexical concept eventuates in an ad hoc concept in the proposition expressed, a concept with stronger defining conditions than the original concept. See, for instance, Sperber & Wilson (1986, 188-90), Carston (1988/91, 1990/95, 1996), Sperber (1989) and Wilson (1993/94). The relevance-based account of concept enrichment is discussed briefly in chapter 6.

14. Dan Sperber, Deirdre Wilson and I have discussed similar cases where a process of pragmatic loosening of a well-defined lexical concept eventuates in an ad hoc concept, a concept which suspends defining features of the original concept (see Sperber 1989, Wilson 1993/94). In Carston (1996), I make the case for treating this as a constituent of the proposition expressed by the utterance.

15. An obvious (Gricean) sort of response here would be to say that the proposition expressed (what is said) by the utterance does contain within it the precise concept, which is linguistically encoded, even though what is meant is something looser. On this view, the speaker does not endorse ('mean' or communicate) the proposition expressed and in most cases that proposition is clearly false. The concept communicated would enter into some other level of overall utterance meaning. This is also the standard relevance-theoretic position (Sperber & Wilson 1986/1995, 232-235). In chapter 6 of this thesis I argue for a different relevance-theoretic account.

16. I am ignoring here crucial questions about what the interrogative and other moods actually encode. It does look very much as if a proper analysis of moods will reveal another area of intrinsic underdeterminacy in natural language (see Gazdar 1981, Wilson & Sperber 1988a, 1988b, Clark 1991, and some relevant remarks in chapter 6 on the notion of a literal speech act).
17. I do not propose to give a comprehensive outline here, or elsewhere in this thesis, of relevance theory; the theory has been established for over a decade now and there are numerous accounts of it in existence, both introductory (see, for instance, Wilson & Sperber 1986b and 1986c, Blakemore 1992, Wilson 1994) and more sophisticated (see Sperber & Wilson 1986 and the Postface to Sperber & Wilson 1995). I do, however, include an appendix listing the key concepts, distinctions and principles of the theory (see appendix 1).

18. There is a further fascinating issue here concerning how the mind-reading ability and the system for interpreting ostensive stimuli are situated in our overall cognitive architecture. Sperber & Wilson (1986a) and Wilson & Sperber (1986b), having adopted Fodor (1983)'s distinction between modular input and output systems, on the one hand, and non-modular central systems, on the other, take pragmatics to belong at the non-modular centre. However, in more recent work Sperber (1994b, 1996) puts the case for a thorough-going modularity of mind, within which meta-representation manipulating systems are modular, possibly including as two sub-modules the theory of mind and pragmatics. Smith & Tsimpli (1996) suggest that a concept of 'quasi'-modularity is more appropriate in the case of these and other systems dealing in conceptual representations. Carston (1997b) discusses, in a preliminary way, the idea of a pragmatics module.

19. Premack (1990) presents arguments for the coevolution of the human linguistic system and 'social modules', including the theory of mind. Sperber (1990) is a succinct demonstration that a linguistic system is 'of adaptive value only for a species already deeply involved in inferential communication'.

20. The issue of the language (or languages) of thought is clearly relevant here. Carruthers (1996) and Horwich (forthcoming) support an account of language and thought in which a person's mentalese just is their natural public language. Fodor (1975, 1987) is well-known for his view that the medium of thought, though syntactic like natural language is distinct from (and precedes, and enables, the acquisition of) a person's public language; however, he seems to assume a more or less one-to-one mapping between words and concepts (see Fodor (1975, 152-56), and Fodor & Lepore (1991, 333)). These views are incompatible with the underdeterminacy thesis. While any settled answers to questions about the nature of thought are a long way off, I suggest that the arguments presented here in support of a strong underdeterminacy thesis are just as much arguments against the view that thought consists either of public language sentences or of representations whose constituents are in a one-to-one relation with the constituents of natural language sentences.

21. The property of 'coherence and appropriateness to situations', which Chomsky frequently mentions as one of the properties that makes natural language unique (along with 'unboundedness' and 'freedom from stimulus control), strikes me as also explained...
by these wider cognitive capacities involved in ostensive communication (that is, language use) rather than as a feature of the language system (competence) per se. (See, for instance, Chomsky 1966, 4-5; Chomsky 1988, 5.)

22. I am setting aside here the issue of the adequacy of the pragmatic criteria proposed. They have obvious similarities to the Gricean maxims, as Wilson (1992, 171) points out. In that paper she assesses their adequacy and proposes a relevance-based criterion which seems better able to handle the full range of instances of referring expressions.

23. Gazdar (1979) also discusses here cases of embedded and-conjunctions where pragmatically inferred relations between the conjuncts seem to enter into truth conditions. I think it is important for an account of linguistic semantics that we keep a clear distinction between cases of encoded meaning, as when a formal (linguistic) element (a demonstrative, a pronoun, stress, etc.) is involved, and cases of inferred meaning, such as the enrichments of and-conjunctions (which are discussed in chapter 4). Interestingly, it looks very much as if all the cases of simple unembedded sentences that are problematic for a truth-conditional account of sentence meaning contain instances of what Wilson & Sperber (1993a) consider procedural encodings.

24. Kamp (1993) expressed the worry in the following way, seeing it as a problem for 'the procedural, interpretational aspect of semantics': '[in order to resolve anaphoric pronouns or definite descriptions] it is often necessary to subject the context, or a combination of the context with a tentative interpretation of the sentence in which the pronoun or description occurs, to inferential procedures, which check, say, for the consistency or plausibility of the provisional interpretation; and more often than not these procedures involve non-monotonic inference steps. But until these procedures have done their work the assignment of the semantic property of having a particular set of truth conditions cannot be completed. ... another encroachment of "pragmatics" on what has been considered the exclusive territory of semantics.'

25. Levinson says: "... the intuitive concept of entailment, in terms of which all the sense relations are defined, can't be stated over semantic representations: truth is a property of utterances with implicatures [i.e. pragmatic inference (RC)], and entailment is the concept of inference-while-preserving truth." I agree with this; while some entailments are in fact statable at this level (e.g. "She chased him" entails "she chased someone"), most are not. For Levinson this is an alarming feature of this level of linguistic semantic representation, enough in itself to invalidate it. In my view, it simply follows from the facts of linguistic underdeterminacy and has to be accepted. Natural language sentences do not encode complete senses; they only provide templates and/or directions for their recovery, so a thorough-going statement of sense relations, if they are to be stated at all, will have to be given at some other level. This is just one of those cases where the development of a theory has led to a shift in the conception of its
relevant domain; some of the pretheoretical data of linguistic semantics has been reallocated, perhaps to an account of the logic of human concepts.

26. The middle sentence, which refers to the "pre-occupations of modern theoretical semantics", indicates another dimension to Levinson's worry: the belief that there must be a (real, truth-conditional) semantics which is specific to natural language sentences/utterances, rather than generalised to conceptual representations (sentences in mentalese) as a whole. Truth-conditional semanticists do often conceive of their subject in this exclusive way (see the opening chapter of Larson & Segal (1995)), but when the focus is on the externalist significance of verbal representations it is far from obvious that sentences/utterances have a proprietory semantics, a semantics that is distinct from a general psycho-semantics.

27. This is what he calls the 'Connection Principle': mental features of brain states (as opposed to nonmental features such as axon myelination, for instance) are either conscious or potentially conscious (see Searle 1992, 155-161). From this follows his repudiation of an assumption held in current cognitive science: that we can have unconscious knowledge which is, in principle, inaccessible to consciousness (Searle 1992, 197-248), an assumption behind the Chomskian account of language, for instance. Both Searle and, following him, Nagel (1993) maintain that neither language nor visual perception are strictly speaking psychological; they each simply involve some physical (hardware) mechanism that functions in certain constrained ways. Chomsky (1994, 197-201) presents compelling considerations against the Connection Principle, the mind-body dualism it entails and the alleged non-mental nature of language. I cannot pursue this debate here, but I believe it is possible to take on board the thesis of the Background, or something closely akin to Searle's conception of it, without automatically having to accept these further claims.

28. It is not perfectly clear to me whether Searle intends his 'Connection Principle' to apply to everything he is prepared to call mental or just to intentional states (and, of course, qualitative states such as pain). The mental and the intentional are not coextensive on his conception, since the Background is mental though not intentional (Searle 1991, 290). As I've pointed out, it does seem that at least some elements of the Background can become intentional states when, for some reason or other, something hitherto "taken for granted" becomes apprehended or believed (see Searle 1992, 184-185) and so is presumably no longer part of the Background. It seems, then, that at least some aspects of the Background are accessible to consciousness. The concept of a 'manifest assumption' does as good a job as any of making sense of all of this.

29. In his early work on speech acts Searle (1969) made a claim that follows from this principle: the study of the full range of speech acts people can perform with linguistic expressions in contexts can be confined to the study of explicitly performative sentences. Gazdar (1981) shows that this is false: even explicitly performative sentences
do not always determine the speech acts they can be used to perform and it is not the case that for every speech act achieved pragmatically, there is a corresponding explicitly performative sentence.

30. Welsh (1986) discusses several distinct versions of the Compositionality Principle and questions some of the tacit assumptions that accompany its use in particular theoretical frameworks. She criticises the syntax/semantic homomorphism version, central to Montague semantics, as too strong; I take it that the version of the principle relevant to my discussion in this section does not assume homomorphism.

31. Of course, nothing is beyond question. Schiffer (1987) challenges the 'productivity' argument for a compositional semantics by presenting a hypothetical case of a person (Harvey) whose means of understanding language does not involve any compositional process. Kaye (1993) finds the case unconvincing.

32. Quite generally, the content of beliefs and other intentional states determines conditions of satisfaction/truth only against a Background. To this extent, then, thoughts share the property of underdeterminacy with natural language utterances. But setting aside this radical all-pervasive source of underdeterminacy, are any of the further sources of linguistic underdeterminacy, canvassed earlier in the chapter, also characteristic of thought or (not equivalently for all theorists) our thought representations. There is a large body of philosophical work which assumes that there are indexical thoughts, the most compelling cases being egocentric thoughts of the "I", "here" and "now" variety, (see, for instance, Castaneda (1966, 1967, 1989), Perry (1977), Kaplan (1977/89), Pollock (1990) and Recanati (1990, 1993)). Further, Perry (1986, 145) sees no reason why "thoughts that employ representations in the language of thought should not have unarticulated constituents, just as statements that employ sentences of natural language do." There may even be thoughts with constituents that look rather like instances of generality or indeterminacy of sense (see Giaquinto (1997) for a discussion that could be interpreted in this way). A full exploration of this fascinating issue lies beyond my scope here. I continue to assume that whatever properties of context-dependence and truth-conditional incompleteness our thoughts may have, the encoded content of natural language sentences takes underdeterminacy to a different level, both in sheer quantity and in range and type. For instance, while my thoughts about a particular woman may involve a psychological mode of presentation which is unique in determining her (perhaps having been caused by her), I cannot hope to find a natural language expression (a linguistic mode of presentation) with this property.
CHAPTER 3

THE EXPLICIT/IMPLICIT DISTINCTION

- I just think that some people tell lies.
- But I'm not a liar, Winnie, protested Joan anxiously. I'm not honestly.
- Some people, Winnie murmured, ...
- You're not fair Winnie Todd, quivered Joan ... I know you mean me.
- I didn't say so, did I? I just said - some people.
- Well you looked at me.
- Did I?

(adapted from 'Keel and Kool' by Janet Frame)

In the previous chapter I made the case for a strong essentialist linguistic underdeterminacy view. That is, what is said (the proposition expressed) by an utterance is inevitably not fully determined by the meaning of the linguistic expression used to convey it. The other, more glaringly obvious, evidence of utterance meaning outstripping linguistic meaning comes from the fact of implicatures, those propositional forms which are not constructed on the frame provided by linguistic meaning but are the result of inferential processes which take the pragmatically developed frame as a premise. In this chapter I shall consider ways in which the distinction between the proposition (explicitly) expressed by the speaker and the propositions she has implicated may be drawn. More broadly, I'll be looking at views on what can be called the explicit/implicit distinction in human verbal communication, most of which are currently held by someone in the field.

The work of Paul Grice is pivotal in any discussion of the explicit/implicit distinction, although he did not use this terminology; I will tend to see all the other theorists mentioned as endorsing, modifying or reacting against him. It is not, in fact, a binary distinction in everyone's view and it will become clear that, on the explicit side in particular, there are various other distinctions to be made. There will be some critical assessment in this chapter so that some positions can be removed from further consideration. If a view is inconsistent with the underdeterminacy thesis, I will treat that
as a reason for finding it inadequate. Then, in the following three chapters, I will consider the semantic/pragmatic analyses of several quite restricted areas of language data, including, at some length, 'and'-conjunctions and negation. In the light of those discussions and analyses, I will return, in the final chapter, to more theoretical issues concerning the semantic/pragmatic and explicit/implicit distinctions, and try to reach a final well-supported position on how this latter distinction should best be construed.

3.1 Semantics/pragmatics distinction

3.1.1 Truth-conditional semantics and formal pragmatics

The point of departure in a discussion of the explicit/implicit distinction in verbal communication is the semantics/pragmatics distinction. All the various ways of drawing the former will involve some relation to the latter. The relation has been held by some to be one of identity: linguistic meaning (semantics) gives you explicit content, and the residue of utterance meaning (pragmatically derived) is the implicit import (implicatures) of the utterance. Of course, this identity comes out in different ways depending on your characterisation of the semantics/pragmatics distinction. As I emphasised in the previous chapter (section 2.5), within the theoretical framework I am using, this is taken to be a distinction between decoding and inference. This seems like the right type of semantics/pragmatics distinction - a distinction between two sorts of cognitive process involved in the overall interpretation process - to interact with a distinction between ways in which assumptions are communicated through verbal utterances (that is, explicitly or implicitly). Looked at in this way, though, there is certainly not a neat correlation between the two. That possibility can be undermined from both directions: on the one hand, linguistic underdeterminacy, entailing extensive pragmatic input at the level of explicitly communicated assumptions, puts paid to a characterisation of the explicit in purely semantic terms; on the other hand, some of the encoded content of an utterance makes itself felt in constraining the implicit import (implicatures) of the utterance rather than contributing to the assumptions explicitly communicated. This latter point will be discussed more fully in section 3.3.5.

Work in pragmatics arising out of formal approaches to semantics has tended towards a view that can be summed up by Gazdar (1979)'s formula: \[ \text{pragmatics} = \]
meaning minus truth conditions. The assumption behind this, of course, is that truth conditions are what a semantic theory must deal in. Although Larson & Segal (1995) do not present such a crude formula, it follows from their characterisation of semantics that they too must hold a similar view of pragmatics. However, they locate their semantic work within a Chomskyan psychological competence view of language, which suggests that a complementary pragmatic theory will be similarly psychologically oriented. Gazdar’s (and others’, including Thomason and Montague) semantic theory is couched in terms of interpretation functions, whose values are sets, so it is an essentially mathematical rather than psychological theory. It follows that his pragmatic theory must be similarly formal and mathematical (as he himself explains (Gazdar 1979, 1-7)). I will give but a brief indication of what this means in practice: sentences (rather than utterances) have a range of potential implicatures (and presuppositions, but I leave them aside here); rules for generating these ‘implicatures’, as they are labelled, are given; (actual) implicatures are those implicatures that are left after a process of contextual cancellation has taken place; cancellation rules are given, so, for instance, an implicature which is incompatible with either a proposition given in the context or an entailment is cancelled. Dinsmore (1982) discusses some of the pitfalls that this sort of account is prey to, one of which is the following: ‘G’s system is strikingly circular. It generates implicatures and presuppositions as features of sentences, then allows these to be cancelled in contexts. But the assignment of implicatures and presuppositions itself reflects generalisations about implicatures and presuppositions in actual use’ (Dinsmore 1982, 47). Other considerations which make it clear that this approach cannot be carried over to a cognitive processing account are the formal pre-given notion of context it uses and the impossibility of extending the account to particularised implicatures (see the generalised/particularised distinction in section 3.2.3), which constitute the vast bulk of implicatures in communication.

For such formally-oriented pragmatists as Gazdar it is not surprising that the explicit/implicit distinction, psychological and communicative as it is, is of no interest at all. The index of his book on pragmatics contains no entry for it, not even for the relatively simple and formalisable distinction drawn by Grice between saying and implicating. However one might feel about the formal enterprise, it is at least all of a piece. Things start to get really messy when aspects of the formal truth-conditional
orientation and concerns of a communicative and cognitive processing sort are lumped together. I think that something of this sort is going on in Levinson (1983, 1988), where allegiance to the Gazdarian formula, together with an interest in a workable saying/implicating distinction and recognition of the linguistic underdeterminacy thesis are forced to knock about together. Problems inevitably arise.

3.1.2 Semantic/pragmatic circles

Implicit in Levinson (1983) and explicit in Levinson (1988) is an equation of 'what is said' (the explicit) with semantics and 'what is implicated' (the implicit) with pragmatics: 'the "said" can be taken to be truth-conditional content, the proposition expressed, the output of the process of semantic interpretation; the proper domain of a theory of linguistic meaning. The 'implicated' can be taken ... to include all the processes of pragmatic inference; it is the proper domain of a theory of communication.' (Levinson 1988, 17). This equation inevitably leads him to the view that some implicatures (the 'generalised' ones; see section 3.2.3 below) play a systematic role in the derivation of the truth-conditional content of the sentence/utterance (that is, its semantics). This is what Levinson calls the problem of pragmatic input to semantics. These implicatures are involved in necessary processes of disambiguation, indexical resolution, reference assignment, ellipsis unpacking and generality narrowing (enrichment). Let's look at a couple of his examples:

(1)  
  a. He's an indiscriminate dog-lover; he likes some cats and dogs.
  b. He likes [[some cats] and dogs].
  c. He likes [some [cats and dogs]].

(2)  
  a. He likes some-but-not-all cats.
  b. He likes some-but-not-all [cats and dogs].

The second sentence in (1a) is syntactically ambiguous, interpretable either as (1b) or (1c); in most contexts (1b) conversationally implicates (but does not entail) (2a), and (1c) implicates (but does not entail) (2b), but (2b) is incompatible with the content of the first sentence in (1a), so the correct structure is predicted to be the one in (1b). This
is indeed the preferred interpretation of (1a). It seems, then, that these implicatures, arising as a result of an adaptation of Grice’s first quantity maxim, are instrumental in the disambiguation process which is essential in arriving at ‘what is said’ by the utterance.

A second example involves reference assignment:

(3) a. John came in and he sat down.
b. Johnx came in and hex sat down.
c. Johnx came in and hey sat down.

The preference for the coreferential interpretation in (3b) over the disjoint reference in (3c) is explained, apparently, by the generation of the implicature, “‘he’ refers to "John’”, which is derived via a version of Grice’s second maxim of quantity, enjoining speakers to say no more than they must. Here ‘he’ is the minimal (least informative) referring term possible (compare: ‘the man’, ‘John’) and its use licenses the hearer to infer the ‘most obvious’ reference; that is, John.

He gives a further range of examples, involving what he calls ‘pragmatic intrusion’ into truth-conditions, based on examples from Cohen (1971) and Wilson (1975, 151):

(4) a. Driving home and drinking three beers is better than drinking three beers and driving home.
b. If each side in the soccer game got three goals, then the game was a draw.
c. She either got married and had a child, or had a child and got married; I don’t know which.
d. Because the police have recovered some of the gold, they will no doubt recover the lot.

(5) a. Driving home and then drinking three beers is better than drinking three beers and then driving home.
b. If each side in the soccer game got exactly three goals, then the game was a draw.

c. She either got married and then had a child, or had a child and then got married; I don’t know which.

d. Because the police have recovered some but not all of the gold, they will no doubt recover the lot.

The idea is that the truth-conditional content of each of the examples in (4) involves a pragmatic contribution (a narrowing or enrichment), which is highlighted in the corresponding representations in (5). Each of these pragmatic contributions is a (generalised) implicature, dependent on one or other of Levinson’s inferential heuristics which he claims follow from Grice’s quantity and manner maxims. This type of example, essentially involving the embedding of a key case in a comparative, a conditional, a disjunction or a factive subordinate clause, is of considerable interest and will be discussed again later in the chapter in another context.

What examples (1), (3) and (4) demonstrate is that disambiguation, reference assignment and enrichment are indeed pragmatic processes (not a matter which has ever been in much doubt) and that these pragmatic processes contribute to the recovery of the proposition expressed by an utterance (i.e. its truth conditions). I shall set aside the disambiguation case, though, since I don’t think it has any implications at all for a truth-conditional semantics (which Levinson supports) for natural language sentences. Such a semantics would simply treat (1b) and (1c) as distinct sentences of the language, as they surely are, and assign to each its own T-sentence. Disambiguation and its results are solely a communicative (pragmatic) matter. Confining myself to the reference assignment and enrichment cases, I’ll focus on Levinson’s insistence that: (a) the pragmatically derived material in each case is an implicature, and (b) that there is here a serious problem for the relation between saying and implicating, and so, correlative, for the relation between semantics and pragmatics:

Grice’s account makes implicature dependent on a prior determination of "the said". The said in turn depends on implicature: it depends on disambiguation, reference fixing, ... [etc.] But each of these processes, which are prerequisites to
determining the proposition expressed, themselves depend crucially on implicatures. Thus what is said seems both to determine and to be determined by implicature. Let us call this "Grice's circle" ....... the theory of linguistic meaning is dependent on, not independent of, the theory of communication.

(Levinson 1988, 17-18).

Let's consider first the last statement here, the charge that there is a relation of interdependency between semantics (the theory of linguistic meaning) and pragmatics (the theory of communication). On the conception of semantics and pragmatics advocated within relevance theory, this is simply false, because we do not equate sentence semantics with the proposition expressed by an utterance of that sentence (see section 2.5). Here I quote myself: 'we must distinguish two kinds of semantics, linguistic and truth-conditional, the former naturally figuring only in a theory of utterance meaning, the latter taking as its domain propositional forms, whether of utterances or unspoken thoughts. Linguistic semantics [encoded meaning] is autonomous with respect to pragmatics; it provides input to pragmatic processes and the two together make propositional forms which are the input to a truth-conditional semantics.' (Carston 1988, 176). Essentially, I would still make the same point, though with a slight shift in emphasis: given a semantics/pragmatics distinction of this performance-oriented sort - decoding/inference - a semantic autonomy thesis is maintained. This shift is a result of a widening of my understanding of how truth-conditional approaches to natural language can be pursued and perhaps be compatible with both the underdeterminacy thesis and semantic autonomy (Stalnaker's comments in endnote 1 are pertinent here).

Levinson's view that this position is one of effectively giving up on semantics was discussed (and, I hope, rebutted) in the previous chapter. His own 'bite the bullet' position seems to bear remarkable similarity to the relevance-theoretic position, while being rather less well worked out. This is what he says (the highlighting added by me):

To adopt a metaphor, in these theories [DRT and File Change Semantics, which he favours (RC)] there is a common slate, a level of propositional representation, upon which both semantics and pragmatics can write - the contributions may be distinguished, let's suppose, by the colour of the ink: semantics in blue, pragmatics in red! Semantics and pragmatics remain modular "pens" as it were: they are separate devices making distinctively different contributions to a common level of representation. The slate thus represents the semantic and
pragmatic content of accumulated utterances, and it is this representation as a
whole that is assigned a model-theoretic interpretation.

(Levinson 1988, 22)

I like this, but I am surprised that Levinson does. Note his consistent use of the term
'semantic' here; this blue ink is not truth-conditional semantics but something much
more like our notion of linguistic semantics as decoded meaning: it is subpropositional
(hence the need for the red contributions to the common level of propositional
representation) and, crucially, it is representational; that is, it's a translation from one
symbolic system into another, with this latter being given a 'real' semantics ('a model-
theoretic interpretation').

The lesson to take from the 'pragmatic intrusion' facts is clear enough: we should
not identify the proposition expressed ('what is said') and linguistic semantics. Once
these have been prised apart, it can be seen that Levinson's allegations of circularity
separate into two distinct charges: semantic-pragmatic circularity and saying-implicating
circularity. I hope the comments in the previous paragraphs have seen off the supposed
problem of the interdependency of semantics and pragmatics. But what about the
alleged saying/implicating circle? There is circularity if a couple of dubious assumptions
stay in place: (a) all pragmatically derived material is assumed to give rise to an
implicature, and (b) Grice's statement that implicatures follow from the saying of what
is said is to be taken as requiring that first we get the 'what is said' sorted out and then
on that basis, together with contextually available information and the conversational
maxims, we can set about inferring implicatures. Neither of these assumptions should
be maintained. The first goes once one takes the linguistic underdeterminacy thesis on
board. It would be absurd to assume that for every process of developing the decoded
logical form, reference assignment, recovery of unarticulated constituents, conceptual
enrichments, etc. a speaker communicates, and a hearer recovers, a discrete assumption.
Such 'assumptions' would often be 'metalinguistic', in the sense that they would involve
the mention of linguistic elements and represent the hearer's reasoning about the
speaker's intentions in using that element, as in (6a) and (6b):
(6)  
   a. 'He' refers to whoever 'John' refers to.  
   b. 'Tired' here means 'tired to degree x'.  
   c. The place where it is raining is Chicago.  
   d. What is on the top shelf is the marmalade.  

On the whole, assumptions of the sort in (6a) and (6b), containing mentions of the words used by the speaker are not the sort of assumptions that hearers are expected to construct as part of their interpretation of the utterance. In other cases, such as (6c) and (6d), the alleged implicature would, in effect, duplicate the content of the proposition expressed to which it is supposedly contributing. To treat it as an implicature would be to imply that the speaker is communicating the same proposition twice over. I shall assume from here on that pragmatic contributions to the propositional form of the utterance are generally distinct from those pragmatically derived assumptions that we call implicatures.

Still, there are some cases of implicature which, arguably, supply material which contributes to the proposition expressed; perhaps the best known of these are what are called bridging implicatures:

(7)  
   a. Kay went skiing in Italy. The snow was thick and soft.  
   b. The dinner was a disaster. The cassoulet was dry and the wine was sour.  

(8)  
   a. There was snow on Kay’s skiing trip.  
   b. There was a cassoulet served at the dinner.  
   c. There was wine at the dinner.  

The idea is that the process of assigning a referent to the definite descriptions 'the snow' in (7a) and 'the cassoulet' and 'the wine' in (7b) involves the derivation of an implicature such as those given in (8a) and (8b)-(8c). If this is right (see Clark 1977, Matsui 1995), and if the second of the dubious assumptions above is maintained (first 'what is said', then on the basis of that 'what is implicated'), we do seem to be in a bind.

However, whatever Grice may have intended, it is clear from much recent work,
not only by relevance theorists, but also by the philosopher Francois Recanati (1993, 1995), and pragmatists within artificial intelligence (especially Hobbs 1980, 1985; Hobbs & Martin 1986) that there are local pragmatic processes. All three of these approaches treat pragmatic inferences as actual processes in utterance interpretation, so as solving indeterminacies as they arise; disambiguation, reference assignment, adjustments of lexical content, possibly including those that arise from metaphorical uses, are made on the spot if they can be, whenever the guiding pragmatic principles (whether the maxims, optimal relevance, coherence) have enough contextual information to make a choice. There is no ‘waiting’, as it were, until the whole (left-to-right, extended in time) stimulus has been decoded; the two types of process are going on together throughout. They are much more finely meshed than Levinson envisages, and yet this interlocking carries no circularity with it; it is a function of a cognitive architecture which assumes a linguistic decoding module dealing in small units of linguistic form (words, morphemes) and delivering, bit by bit, an evolving logical form to the pragmatic inferencing systems.

Summing up, I find a variety of problems with Levinson’s view: (a) the equation of explicitly communicated propositions with sentence semantics; (b) the equation of sentence semantics with truth conditions, that is, ‘real’ non-representational semantics (with occasional implicit deviation from that view); (c) the equation of pragmatic inference with the derivation of implicatures. I’ll move on now to look at the views of the philosopher at the centre of all this, whose explicit/implicit distinction, which he called the saying/implicating distinction, was developed in the context of philosophical concerns rather different from those of developing a cognitive theory of utterance interpretation.

3.2 Grice: saying/implicating

3.2.1 Odd statements but true

[T]he precept that one should be careful not to confuse meaning and use is perhaps on the way toward being as handy a philosophical vade-mecum as once was the precept that one should be careful to identify them.

(Grice 1967/89b, 4)

In the lecture from which this quote is taken, the first in the set of William James
lectures collectively entitled 'Logic and Conversation', Grice's primary concern is to block certain applications of a pattern of linguistic argument employed by some ordinary-language philosophers against particular philosophical positions and questions. The analyses under attack from this group, whom Grice calls A-philosophers (is this "a" as in 'asymmetry', 'amoral', etc.?)\(^5\), tend to be of the constitutive philosophical kind, answering questions of the sort "what is it to ______?"; for instance, 'what is it to perceive a physical object?' and 'what is it to know that P?' One of these was Grice's own bid to reestablish the causal theory of the perception of material objects, which required as an essential part what he called 'sense-datum' statements of the form: 'x looks (feels, sounds, etc.) @ to A'. The objection, apparently raised by followers of Wittgenstein, was that the making of such statements in many of the most ordinary cases of object perception was incorrect. For instance, the statement 'it looks red to me' should not be made of a patently red British pillar-box a few feet away. It can only be correctly made in circumstances in which either it is false that the x in question has the property @ or there is some doubt about whether x is @. If this objection is warranted then the causal analysis of perception is threatened.

Here's one more example of this kind of linguistic objection. In advancing certain theses and proofs, Moore made a number of assertions involving the concepts 'know' and 'certain'; for instance, 'I know this is a hand' (indicating one of his hands), 'I am certain that I am awake at this moment'. Again, the idea was that the theses, in the establishing of which these statements were made, are undermined by misuses of the expressions 'I know' and 'I am certain'. Malcolm (1949)'s objection is that it is incorrect to use these expressions unless there is some question at issue, some doubt about whether or not the state of affairs described in the complement clause obtains. Since there is absolutely no doubt in these cases, Moore's use of the expressions is illegitimate.

Much hangs on what is meant by an incorrect or illegitimate use here; is it the case that the statements made are false or merely inappropriate, or is no statement made at all? It is not clear that the A-philosophical objectors made the sort of underlying distinctions between sources of meaning that are necessary for these questions to be answerable, since they were generally of the persuasion that once you had given an account of the ways in which an expression was properly used you had said all there
was to say about its meaning. Grice believed otherwise, and insisted in this lecture on making a distinction between the truth or falsity of a statement, on the one hand, and its aptness or oddity, on the other. Moore’s statements are true, however bizarre and pointless they may seem from the point of view of ordinary conversation, and so also are the sense-datum statements.

As the opening quote indicates, Grice is keen to distinguish meaning from use, but there are two, minimally though crucially distinct, things this could mean. The idea, of course, is to distinguish between the sense of the crucial word or phrase and the conditions under which it is appropriately used. Because the focus is on particular lexical items: ‘know’, ‘try’, ‘looks’, ‘voluntary’ and the natural language counterparts of the logical connectives, it seems reasonable to assume that the distinction at issue is that between semantics and pragmatics. And so it is, but it is even more centrally concerned with the distinction between what is said and what is implicated by the speaker of the sentence containing the particular word or phrase. In the end the question that concerns Grice (I think) is: what statement(s) can the philosopher who has uttered that sentence, as part of his thesis or proof or exposition of a problem, be held to be making? What part of the meaning that we find ourselves taking from the philosophical utterance pertains to its truth or falsity? What is it that the philosopher has said as opposed to merely implicated? The distinction is between ‘what is stated’ and ‘what is conversationally implicated’ or, as it is given in the second lecture, ‘the said’ versus ‘the implicated’.

It is true that this way of thinking about the points in this lecture (‘Prolegomena’) requires a reading of it on which it is more closely tied to the second lecture (‘Logic and conversation’) than is usual, at least in discussions of Grice within linguistically based pragmatics, where usually little, if any, overt tie-up is made. This is probably because the second lecture has provided the basic precepts for a general theory of utterance understanding, so has been hugely influential in pragmatic work within the fields of linguistics and communication studies, while the first lecture is more apparently exclusively philosophical. However, Grice is clear at the end of the first lecture that he intends the system discussed in the second to provide the tools for explaining the ‘incorrectness’ of use noted by the A-philosophers, thereby separating it off from the
more fundamental matter of the truth/falsity of the criticised utterances:

... inappropriateness connected with the nonfulfilment of such speaker-relative conditions is best explained by reference to certain general principles of discourse or rational behaviour. It is my view that most of the A-philosophical theses which I have been considering are best countered by an appeal to such general principles; but it has not been so far my objective to establish this contention ... it will be my hope that their utility for this ... purpose might emerge as a byproduct of their philosophical utility in other directions.

(Grice 1967/89, 20-21)

Let's take an example from the first lecture and see how Grice's principles of conversational use, given in the second, account for the inappropriateness of a statement while leaving untouched its truth (or falsity):

(9) a. It looks red to me.
    b. It isn't in fact red.
    c. It looks red to me and it is in fact red.

In many contexts an utterance of (9a) would communicate (9b). This is not because it is part of the statement made (what is said) by (9a), as the cancellation of it in (9c) shows; (9c) is not a contradiction as it would be if (9b) were part of what is said (that is, if it pertained to the truth of the utterance). The reason (9b) is generally communicated by (9a) is that it is very often only relevantly informative to utter (9a) when the speaker has reason to believe that the more informative 'it is red' is not true. The relevance and/or informativeness of statements is quite distinct from their truth, and in the case where the stronger statement is known to be true it follows that the weaker one must also be. In other words, the proposition in (9b), when conveyed by (9a), is conversationally implicated.

The Moore examples work in a similar way; he wanted some examples of obvious truisms as a stage on a bigger project (of establishing his 'proof of an external world'). What could be more obviously true than 'this is a hand' and 'this is another hand', said by a speaker holding up first one of his hands and then the other. Of course, in the vast bulk of ordinary conversational exchanges such utterances would be quite
bizarre, precisely because they don’t comply with standard expectations of relevance and informativeness. In relevance-theoretic terms, they do not interact fruitfully with contextual assumptions to give the hearer contextual effects. In Gricean terms, they would tend to carry the conversational implicature that there is some doubt around regarding their truth, an implicature which is clearly false. Using Searle’s concept, we can say that the propositions they express generally belong in the Background, so when they are brought into the foreground, through an utterance, they carry implications that something unusual is going on.

In fact, the concept of ‘what is said’, developed in the second lecture, is only minimally distinct in what it picks out from the concept of truth-conditional conventional content (that is, semantically-encoded meaning); the only points of adjustment required are displayed transparently by linguistic constituents in the sentence employed: ambiguous forms and referential indeterminacies. And in the fifth lecture, where a more systematic (though clearly not intended to be definitive) account of ‘saying’ is given, this difference is glossed over entirely; ‘what is said’ is characterised as that aspect of the speaker’s meaning (in Grice’s special reflexively-intentional concept of meaning) which coincides with the meaning of the sentence employed. Conventional implicature should be mentioned here, since it falls on opposite sides of the two divides (it is semantic and it is implicated). However, setting it aside for the moment (as Grice seems to have done when giving this analysis), the two distinctions - semantics/pragmatics and saying/implicating (conversationally) - seem to be essentially coextensive but operating at different levels. They are not so much different dividings up of the phenomena of utterance meaning as different ways of construing one and the same carve-up. The distinction between conventional truth-conditional content (semantics) and content which arises from conditions of communicative use (pragmatics) is a classification of types of meaning; the distinction between saying and implicating concerns two different sorts of things a speaker may do in producing an utterance (including a philosopher presenting a thesis), two different types of communication.

Linguistic underdeterminacy is not recognised by Grice, and would not serve his purpose of countering the A-philosophical views. For this reason, some feel that Grice’s strategy misfires, for instance Travis (1991). I will discuss this shortly (see section 3.4.1 below); for the moment, what I hope to have established is that one of the basic
motivations (perhaps THE fundamental one) for Grice's pragmatic system is this one of disposing of certain crucial applications of the 'illegitimate use' charge made by some ordinary-language philosophers.

A comment made by Grice in later years, when looking back over his work, makes it clear that he intended the meaning/use distinction in the first lecture to mesh more or less exactly with the saying/implicating distinction in the second one, or, at the very least, that the meaning arising from conditions of use is distinct from what is said: '... the idea of Conversational Implicature, which emphasized the radical importance of distinguishing (to speak loosely) what our words say or imply from what we in uttering them imply; a distinction seemingly denied by Wittgenstein, and all too frequently by Austin.' Grice (1986, 59). Conversational implicature was seen as an important and 'useful philosophical tool' by Grice and other philosophers in the seventies (for instance, Walker 1975). Its use in linguistic pragmatics, and even more so its treatment as a level of representation in an account of utterance processing, were later developments. It is possible that its character has altered somewhat in these different hands, a point I'll try to bear in mind when making comparisons between Grice's philosophical pragmatics and that developed within a cognitive processing account of utterance interpretation.

3.2.2 Contextual contributions to 'what is said'

The small gap between the conventional content that contributes to truth-conditional 'what is said', on Grice's conception (at least in the second lecture), is bridged by reference assignment and sense selection in the case of ambiguous words or structures. What, then, is his position on these two bare non-conventional essentials for extracting a statement from an utterance?

It seems that for Grice the correlation of 'conversational' maxims with 'conversational' implicatures was total. He did not envisage any role for conversational maxims in discerning 'what is said'; indeed, this was the whole point, since the statement made or the proposition expressed, the minimal truth-conditional content of the utterance, was to be distinguished from those aspects of utterance meaning that were a function of such considerations as its appropriateness, informativeness, relevance in a particular context (considerations that are irrelevant to its truth-evaluability). It follows then that the context-sensitive matters of reference assignment and choice of a sense in
the case of ambiguity were not seen as guided by conversational maxims. Neale (1992, 530) casts some doubt on this, finding in a passage from an early paper of Grice's indications that the Cooperative Principle and conversational maxims (especially the maxim of Relation) do play a role in the resolution of ambiguities and referential indeterminacies:

[In cases where there is doubt, say, about which of two or more things an utterer intends to convey, we tend to refer to the context (linguistic or otherwise) of the utterance and ask which of the alternatives would be relevant to other things he is saying and doing, or which intention in a particular situation would fit in with some purpose he obviously has (e.g. a man who calls for a "pump" at a fire would not want a bicycle pump). Nonlinguistic parallels are obvious: context is a criterion in settling the question of why a man who has just put a cigarette in his mouth has put his hand in his pocket; relevance to an obvious end is a criterion in settling why a man is running away from a bull.]

(Grice 1957/89b, 222)

This is a nice piece of textual excavation, but it is far from obvious that what Grice intended here bears any close relation to whatever he intended by his later maxim of Relation 'Be relevant'. The criterion here, as in the discussion of disambiguation and reference resolution in the second of the William James lectures (Grice 1967/75/89b, 25), seems to be the rather vague one of best contextual fit. If this is an early precursor of the conversational maxim of relevance, why is there no mention of the role of this maxim in these resolutions at the level of 'what is said' in the crucial 1967 lecture? This is the lecture in which there is a discussion of what is involved in grasping what is said by an utterance of 'He is in the grip of a vice', and in which the conversational maxims are set out and an account is given of the sort of work they do; they are presented as solely involved in the derivation of conversational implicatures.

As I remarked in the previous chapter, there is an interesting tie-up here with truth-conditional semanticists, who obviously see linguistic ambiguities and referential indeterminacies as lying within their purview (you can’t say anything about the truth conditions of a sentence/utterance without attending to these in some way or other). Conversational implicature, on the other hand, can be completely ignored, since it lies outside truth conditions and is entirely a matter of the pragmatics of use. It is interesting to note that even the recent and quite cognitively oriented truth-conditional
approach of Segal (1994) and Larson & Segal (1995) makes the following divisions among performance systems: 'The cognitive systems will include at least (a) a parser (b) a system that identifies the referents of indexicals and assigns them to the relevant parts of the sentence (c) a pragmatics system. ... ' (Segal, 1994, 112, footnote 3). Note the distinction between (b) and (c), which parallels Grice's distinction between the contextual identification of referents and intended senses of ambiguous words, on the one hand, and the work of the conversational maxims on the other. It seems that this is quite a widespread view on accounts which are not concerned with the actual processes involved in utterance understanding. 

Some other philosophers, however, made the point early on that the maxims, or at least the Co-operative Principle, must be involved in these; for instance:

Not everything that is M-intentionally conveyed with the help of the Co-operative Principle is to be accounted a conversational implicature. For one thing, in ordinary cases of ambiguity we rely on that principle to determine which sense is intended; if I say "The bank is mossy" I can usually rely on the accepted purpose of the talk-exchange to disambiguate my remark ... The Co-operative Principle often helps to determine to what item a speaker is referring when he uses a proper name or a definite description, ... It is the Co-operative Principle which enables the speaker to convey that the Tom he is talking about is the Tom we have both left, and that by "the candle on the dresser" he means the one we can both see and not some other candle on a dresser in Timbuctoo ....

(Walker 1975, 156-157)

Similarly, Katz (1972, 449) discusses a case of reference assignment involving the first maxim of Quantity and concludes 'Since identification of the referent ... can depend on maxims ... and on the pattern of argument for implicatures, determining what is said depends on the principles for working out what is implicated.' While Stalnaker (1972) suggested, along with most formally-oriented semanticists, that context alone can determine disambiguation, more recently he says 'the Gricean principles and maxims clearly play a role in resolving ambiguity and fixing contextual parameters as well as in generating conversational implicatures.' (Stalnaker 1989, 9).

From a more linguistically and psychologically oriented perspective, Wilson & Sperber (1981, 156-159) make the same point: 'hearers invariably ascribe sense and

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reference to utterances (within the limits allowed by the grammar) in such a way as to preserve their assumption that the conversational maxims have been observed'. And in this same paper they give their first statement of the wider role they see for pragmatic principles in determining the proposition expressed by the utterance.

As mentioned in the previous section, other linguistically-based approaches to pragmatics, such as Levinson (1988), have seen this point too, but apparently take this to indicate that these context-sensitive features of utterance understanding must therefore be treated as implicatures. Walker (1975) took this as so obviously not the case that it did not need discussion: 'one would not say that the intended sense was conversationally implicated' (Walker 1975, 157). It is all the more obvious within a cognitive account of communication and interpretation, among whose concerns is the articulation of the thought-level representations which are the end product of the understanding process, some of which are added to the interpreter’s store of assumptions. We do not communicate logical forms (though we do communicate via logical forms), and we do not remember logical forms; we communicate and remember assumptions/thoughts/opinions, which are fully propositional.

Sperber & Wilson (1986/95) rightly emphasise the importance of Grice’s work in initiating an inferential approach (as opposed to the all-out code model) to utterance interpretation. But the difference between the Gricean view and the one discussed in the previous section, on which the explicit/implicit and semantic/pragmatic are equated, is negligible. For Grice, the inferential work which arose from the use, as opposed to conventional content, of expressions was confined to conversational (and other non-conventional) implicatures (the implicit). When it came to what is explicitly communicated, Grice was pretty much of a code theorist.

3.2.3 Implicature: conventional and conversational

While ‘what is said’ is essentially determined by conventional (encoded) meaning it is not the case that all encoded meaning goes into determining ‘what is said’. I am alluding here to the well-known, though brief, discussions by Grice of what he termed conventional implicatures, cases of encoded meaning which do not contribute to the statement made by the utterance, its truth-conditional content. The cases he mentioned are the connectives ‘moreover’, ‘but’ and ‘therefore’ (at least on its parenthetical use)
(Grice 1967/68/89b, 120-121), and in his last work, 'on the other hand' and 'so' (Grice 1989a, 361-62). While the 'what is said' of an utterance is the propositional component of the basic (or ground-level) speech acts, such as asserting, telling, and asking, performed by an utterance, these implicature-generating elements of conventional meaning comment on or relate one to another the ground-level speech acts. That is, they indicate less central speech acts, such as contrasting, adding, or explaining, which are dependent on the more basic speech acts:

(10) a. Ben is nice but he drives a Ford Capri.
b. Ben is nice.
c. Ben drives a Ford Capri.
d. There is a contrast between (b) and (c).

The idea would be that an utterance of (10) would make the two ground-level statements, given in (b) and (c), and also the higher-level comment on those statements given in (d). As Grice puts it (about another example): 'The truth or falsity of his words is determined by the relation of his ground-floor speech acts to the world; consequently, while a certain kind of misperformance of the higher-order speech act may constitute a semantic offence, it will not touch the truth-value ... of the speaker's words.' (Grice 1989b, 362).

In short, the conventional or semantic content of an utterance comes in two types, the descriptive content, which affects the truth-value, on the one hand, and the merely indicative (as in 'indicating'), which generates implicatures, on the other. The account of encoded semantic content within relevance theory also makes a distinction between two types of meaning: the conceptual and the procedural, as briefly mentioned in the previous chapter. All the conventional implicature cases discussed here fall on the procedural side. However, this distinction is rather different in flavour, reflecting the representational and inferential (computational) picture of cognition within which the theory is developed; it is discussed in section 3.3.5.

Moving to the pragmatic side of Grice's view of utterance meaning involves a move to conversational implicature. The crucial feature of these aspects of speaker meaning is that they are dependent on the assumption that the conversational maxims,
or at least the Co-operative Principle, are being observed. Grice was adamant that they be calculable/workable out: ‘for even if it can be intuitively grasped, unless the intuition is replaceable by an argument, the implicature (if present at all) will not count as a conversational implicature; it will be a conventional implicature’ (Grice 1967/75/89, 31). He gave a rough working-out schema which was to serve as a model of the inferential process, taking as premises what is said, the maxims (including the CP) and contextually available information. Some (for instance, Grandy 1989, 519) have taken this to be a requirement on the theorist rather than on the hearer of the utterance, for whom intuitive grasp is sufficient. Others are of the view that Grice’s requirement was the stronger one, that an account must be given of how the hearer arrived at (worked out) the implicature (Neale 1992, 527). On the relevance-theoretic view it is, of course, assumed that a central aim of the account of utterance interpretation is to explicate the non-demonstrative inference process the hearer carries out in arriving at an interpretation, which, naturally, includes conversational implicatures.

Problems with Grice’s working-out schema and with other features of his account of conversational implicature, in particular the concept of maxim flouting allegedly involved in the derivation of a range of cases, have been pointed out. Of the many issues that could be pursued here I limit myself to two, which will bear on the analyses pursued in the next chapters: (a) the absolute nature of the distinction between ‘what is said’ and ‘what is implicated’, and (b) the lack of theoretical import in the distinction Grice made between generalised and particularised conversational implicatures.

It is clear that Grice intended the distinction between ‘saying’ and ‘implicating’ to be sharp. As we’ve seen with the philosophical problem cases of ‘This looks red to me’ and ‘I know this is a hand’, the statement made is true while the conversational implicature in each case is false. The opposite situation arises in another case discussed by Grice, that of the referential use of mistaken definite descriptions:

(12) Jones’ butler mixed up the hats and coats.

Grice (1969a, 142), says: ‘if the speaker has used [referential] a descriptive phrase (i.e. "Jones’ butler") which in fact has no application, then what the speaker has said will, strictly speaking be false ... but what he meant may be true (e.g. that a particular
individual [who is in fact Jones' gardener] mixed up the hats and coats)'. On this account of the referential use of descriptions, the singular proposition, according to which the property of mixing up the hats and coats is predicated of the particular individual the speaker has in mind, is implicated, while the proposition expressed (what is said) is a general Russellian proposition. So in the case of a mistaken description, what is implicated is true while what is said is false.

The examples in section 3.1.2 of so-called pragmatic intrusion into the proposition expressed cannot be construed as cases of implicature as Levinson treated them. While Grice did not recognise the facts about linguistic underdeterminacy which give rise to these pragmatic contributions to the explicit level, he did confront a similar problem in his attempt to give conditionals a semantic analysis which maintained their truth-functionality. The details of the analysis are not to the point here, but his reaction to the apparent involvement of implicature in the truth-conditional content of a conditional (what is said) on this analysis is; he saw this as a definitive problem for his analysis: 'I am afraid I do not yet see what defense, if any, can be put up against this objection' (Grice 1967/1989, 83). I maintain a sharp distinction throughout the thesis (though I will reassess its significance in later chapters): utterances communicate a bundle of propositions; some are explicitly communicated and some are implicatures. If it seems that a conversational implicature is contributing to the truth conditions of an utterance, I will take this as a reason to consider the pragmatically inferred material to be an aspect of the proposition expressed and not an implicature at all.

Conversational implicatures were described under two headings by Grice: generalised and particularised. Particularised implicatures are those 'in which an implicature is carried by saying that P on a particular occasion in virtue of special features of the context, cases in which there is no room for the idea that an implicature of this sort is normally carried by saying that P' Grice 1967/75/89b, 37). One example should suffice:

(13) He has been going up to Scotland every weekend.

In different specific contexts this could implicate 'Bill's mother is ill', 'Bill has a girlfriend in Scotland', 'Bill gets as far away from London as he can when he can', 'Bill
still hasn’t gotten over his obsession with the Loch Ness monster’, etc.

Generalised implicatures, on the other hand, are characterised as follows: ‘the use of a certain form of words in an utterance would normally (in the absence of special circumstances) carry such-and-such an implicature or type of implicature’ (Grice 1967/75/89b, 37). The only examples Grice gives at this point are the following, where an utterance of the (a) sentence would normally (in the absence of any particular defeating features of context) implicate the proposition in (b); (14b) supposedly arises due to an apparent violation of the first maxim of quantity at the level of what is said; Grice doesn’t say which maxim is involved in the case of (15) but others (Horn 1984b, Levinson 1987a) have taken it to be the second maxim of quantity or relevance.

(14) a. X is meeting a woman this evening.
   b. The woman X is meeting is not his wife, mother, or sister.

(15) a. I broke a finger yesterday.
   b. The finger was my own.

In a later paper Grice (1981) returned to the particularised/generalised distinction and said of the latter ‘These are the ones that seem to me to be more controversial and at the same time more valuable for philosophical purposes’ (Grice 1981, 185). He gives the example in (16) as an illustration, where it follows from the manner maxim of orderliness that the actions described took place in a certain sequential order.

(16) a. He took off his trousers and he got into bed.
   b. He took off his trousers before he got into bed.

The rest of that paper is devoted to using this ‘philosophical tool’ to defend a Russellian analysis of definite descriptions on which (17a) is true (because there is no king of France) against a presuppositional analysis which finds this sentence truth-valueless (this is discussed a little more in chapter 5). Omitting details and motivation here, the idea is that an utterance of the sentence in (17a) gives rise to the generalised implicature in (17b); its cancellability, shown in (17c), is taken as evidence that it is an implicature and
the account of its derivation is in terms of a manner maxim of 'conversational tailoring'.

(17)  

a. The king of France is not bald.
b. There is a king of France.
c. The king of France is not bald because there is no king of France.

Many of the examples that bothered the A-philosophers would also, I take it, be explained in terms of generalised implicature: 'It looks red to me' would quite generally implicate that there is some doubt about its redness', etc.

So it seems that Grice distinguished this class of conversational implicatures because they are the ones that served his purpose in defeating the A-philosophical views. Because they hold very widely across different contextual conditions it is easy to confuse them with aspects of the conventional (encoded) content of the linguistic expressions used. Some linguistically-oriented pragmatists have taken the generalised/particularised distinction as absolute and as involving different sorts of pragmatic theory. Levinson (1988, forthcoming) has developed a taxonomy of types of generalised implicatures and a system of default inference rules which are attached to particular lexical items, such as partitive 'some', 'looks', 'know', 'and', 'the', etc. On this outlook, the theory of generalised conversational implicatures is a theory of preferred interpretations. I have suggested elsewhere that this is a wrong turning in the development of pragmatic theory (Carston 1990/95).

Various people have denied that there is an absolute distinction among conversational implicatures: from a computational, AI-based perspective, Hirschberg (1985/91) in her study of scalar implicature, says that while the cases called generalised are more context-independent than particularised ones they are still context-dependent; within a relevance theoretic framework, I have argued for a continuum of cases from those that are once-offs through various degrees of context-dependence to those that arise in the vast majority of contexts and require quite particular contexts to prevent them going through; from within the philosophy of language, Neale (1992, 524, footnote 18) claims the distinction was 'theoretically inert (for Grice)'. On all these views, all conversational implicatures involve the same inferential mechanisms and are guided by the same principles of rational communicative behaviour, whether they arise across a
range of contexts or are restricted to very specific contexts.

Individual cases of what have been called generalised implicature do have some interesting properties, however. For instance, all of the cases discussed by Grice seem to involve the implicature that a stronger proposition than the one expressed by the speaker does or does not hold:

(18) a. X is not meeting his wife/sister/daughter.
b. I broke my finger.
c. He took off his trousers before he got into bed.
d. There is a king of France and he isn’t bald.
e. It is \( \not{e} \) red.

And it is worth noting that all of the reanalyses of cases of Gricean implicature as cases of pragmatic contributions to the proposition expressed, in accordance with the underdeterminacy thesis, involve cases of generalised implicature, as will be illustrated in chapters 4 and 5 on 'and'-conjunction and negation. This is not to say that everything dubbed a generalised implicature should be so reconstrued.

The Gricean picture can be summarised in the following branching diagram, where S is a speaker and where the concept of 'meant' here is that which Grice analysed in terms of a complex of intentions on the speaker’s part. There is one proviso, which is that, if I am right about the lack of any real distinction between generalised and particularised implicatures, the bottom level should drop out of the picture.
Penultimately, a minor issue (which may, however, prove to have wider significance than it first seems): whether or not entailments and conversational implicatures are mutually exclusive categories. Neale (1992, 528-9) says: 'Intuitively, it seems desirable that no proposition be both an entailment and a conversational implicature of the same utterance.' Two questions arise: why is this desirable and is it what Grice intended? The second of these raises the usual problems of Gricean textual exegesis and I have seen and heard both 'yes' and 'no' responses to it. Bach (p.c.) maintains that there is nothing in Grice's writing to preclude entailments being implicatures. Neale (1992) and Deirdre Wilson (p. c.) take the contrary view. I tend to the latter interpretation of Grice. One reason for this lies in an answer to the first question, concerning the desirability of distinguishing entailment from implicature. As discussed in the previous section, one of Grice's aims in introducing the 'useful philosophical tool of implicature' was to stave off certain ordinary-language arguments against particular philosophical theses by distinguishing the matter of the truth or falsity of clauses of these theses from the matter of their appropriateness/oddity. Clearly, the entailments of what these theses say/state pertain to their truth/falsity rather than their (in)appropriateness. Second, the diagnostics that Grice gives for conversational implicature at the end of the second lecture (Grice 1967/75/89, 39) weigh heavily against the possibility of implicated entailments. First, they are cancellable without giving rise to contradiction, surely not a property of an entailment and, second, 'a conversational implicatum will be a condition that is not included in the original specification of the expression's conventional force'.

Less compelling, but suggestive, is the complete absence of any examples, among the many examples he gives of conversational implicatures, where the implicature is also an entailment. In this respect, Grice (1981)'s account of the existential implication (presupposition) carried by definite descriptions is interesting:

(19) a. The king of France is bald.
    b. The king of France is not bald.
    c. There is a king of France.

In both the positive and the negative cases, he takes it that the existential implication in
(c) is, in some sense, backgrounded and he introduces a new maxim (of 'conversational
tailoring') to explain this: the speaker's choice of the abbreviated form 'The F', rather
than the expanded Russellian conjunctive form, effects this backrounding. Maintaining
the Russellian semantics for the definite description and assuming wide scope of
negation at the level of what is said, he explains the preferred narrow scope
understanding of (19b) as the result of the existential implication arising as a generalised
conversational implicature. Why is this not also seen as an implicature in the positive
case in (19a), where the manner maxim accounts for the backgrounding effect? The
answer seems to be: it can't be an implicature because it's an entailment.

So although I stand with Sperber & Wilson (1983) and with Bach (p.c.) on not
in fact wishing to rule out the possibility of an entailment, whether of encoded linguistic
meaning or of the proposition expressed by an utterance, being implicated by a speaker,
I find no evidence that Grice himself envisaged this possibility and some evidence that
he wished to rule it out. In a cognitive account of utterance interpretation, a rather
different enterprise from Grice's, there is nothing undesirable in a proposition which is
a (semantic) entailment being also a (pragmatic/conversational) implicature; the terms
belong to different sorts of theories. In section 3.3, where I look at the relevance-
theoretic use of the term implicature, examples of implicated entailments will be
mentioned.

This section can be usefully rounded off by a quick look at Grice's last thoughts
on this general area. In his retrospective epilogue, Grice (1989a, strand 5) addresses the
issue of whether there is any 'kind, type, mode, or region of signification which has
special claims to centrality' and he finds two possibilities: the dictive and the formal,
which, as far as I can see, are the 'what is said' (the truth-conditional content of an
utterance) and the semantic (what is given by the linguistic forms employed). Naturally,
this gives rise to four categories of meaning: (a) the formal and dictive: for instance,
'Ben is nice' in example (11); (b) the formal and non-dictive: the conventional
implicatures indicated by 'but', 'moreover', etc; (c) the non-formal and non-dictive:
these are all cases of conversational implicatures, which are not semantically encoded
and do not contribute to truth-conditional content; (d) the non-formal and dictive. What
lies in here? For me this would be all those contributions to the proposition expressed
by the utterance which have been pragmatically (that is, non-formally) derived; those

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symptoms of linguistic underdeterminacy. What sort of thing does Grice have in mind? It might be thought that the only elements he could include here are the results of reference assignment and disambiguation, but I doubt that he would want this, given his conception of these and the fact that they are so clearly linguistically (that is, formally) indicated. The examples he in fact gives are very interesting and, perhaps, show a development in his thinking about the relation between conventional content and what is said. One of them is 'Heigh-ho' uttered in a suitable context, thereby saying something like 'Well, that's the way the world goes', though this is not part of the conventional meaning of the words used. The other example I save for later (chapter 6).

3.2.4 Saying, meaning and 'making as if to say'

Grice seems to have wanted two things from his concept of 'saying': (a) a saying/implicating distinction which differs minimally from a semantics/pragmatics distinction; (b) a "what is said" which constitutes truth-conditional content, where the concept of truth-conditional content at issue seems to be the minimal proposition rather than the often richer one which the speaker intended. But no matter how minimal one goes with truth-conditional content, there is still a gap between these two construals, as the facts of 'semantic underdeterminacy' establish: linguistic meaning falls far short of full propositionality, let alone of the proposition expressed by the speaker.

A crucial further property of 'what is said', as the diagram above shows, is that it falls under what the speaker meant; in fact, within Grice's analysis of the various species of non-natural meaning (all reducible to intentional states of the communicator) 'saying' is characterised as a close coincidence of speaker meaning and linguistic expression meaning. This then gives rise to a problem noted by several people, that in those cases where it seems that the speaker does not mean what her words mean nothing is said. This arises in cases of rhetorical use of expressions, as in metaphor, irony, hyperbole and, perhaps, meiosis/litotes. As Grice himself put it in the third James lecture: 'Nothing may be said, though there is something which a speaker makes as if to say.' (Grice 1967/78/89b, 41). A speaker using the sentences in (20) ((20b) intended ironically) does not 'say' the propositions expressed by uttering them; the first clause of the definition of 'what is said' (see endnote 8) is not met:

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The requirement that 'saying' entail 'meaning' and the move from 'saying' to 'making as if to say' bring a bunch of problems with them; I'll briefly summarise these, but without seeking solutions within the Gricean framework, since some suggestions will arise later (see section 3.5) and, more important for me, these problems do not arise within the relevance framework:

(a) The account does not seem to accommodate what would be literally understood from slips of the tongue and other misuses, since one cannot unintentionally say something; in such cases, either nothing is said (and nor does the speaker make as if to say anything), or the close coincidence requirement has to be relaxed.

(b) In the case of many tropes, nothing is in fact said since the sentence uttered does not coincide with any proposition meant by the speaker. It seems, then, that although what the speaker meant in these cases is supposed to come in at the level of implicature, there is no vehicle by which a conversational implicature is carried, since implicatures are characterised as following from the saying of what is said. The move to 'making as if to say', as well as being unclear in itself, raises new problems (see Bertolet 1983).

(c) The Gricean account of the tropes depends on the flouting of the first maxim of Quality: do not say what you believe to be false. However, in these cases nothing has been said so, trivially, the maxim is not violated and the account on which an implicature is required in order to preserve the supermaxim of quality: try to make your contribution one that is true, cannot get off the ground (see Wilson 1995 for discussion).

The two problem areas are slips of the tongue and non-literalness, both of which fail the requirement of a coincidence of speaker meaning and sentence meaning. Bach (1994a, 1994b) provides one solution to this problem: drop the requirement that 'saying' entails 'meaning'; Sperber & Wilson (1986) have a more radical solution which involves dropping the concept of 'saying', as Grice conceived it, altogether. Their concepts of the proposition expressed by the utterance and of explicatures are discussed in the next
My account of the Gricean distinction between saying and implicating is far from complete. As Neale (1992, 512) says: 'It is at least arguable that the "Theory of Conversation" is a component of the "Theory of Meaning" and that, even if this is not the case, the two bear on each other in important ways and are most usefully discussed together rather than in isolation.' I'm sure he is right about this, although I have had to confine myself largely to discussing aspects of the theory of conversation alone; no doubt, placing it in the wider context of the (analytical, conceptual) theory of meaning would accentuate its philosophical temper and dissociate it the more from a cognitive processing account. This point will arise again in section 3.5.2 where I look at the even stricter, more pared down concept of 'what is said', advocated by Kent Bach.

### 3.3 Sperber & Wilson: relevance-theoretic distinctions

The programme of formulating an adequate account of the cognitive processes and representations involved in utterance interpretation, an account set squarely within the computational view of mind, a dominant paradigm in current cognitive science, brings with it a significant change of perspective. We can’t be satisfied with vague or mysterious means for resolving ambiguity and referential indeterminacy. We won’t be thinking of conversational (or conventional) implicature as useful tools for philosophical analysis. We cannot accept a meagre boosting of linguistically-given content to minimal propositionality if this does not figure as a representational level in the derivation of utterance meaning.

#### 3.3.1 Explicature

The assumptions (propositional forms) communicated by a speaker fall into two classes: explicature and implicature. Sperber & Wilson (1986a, 182)'s original definition of explicitness is as follows: ‘An assumption communicated by an utterance U is explicit [hence an ‘explicature’] if and only if it is a development of a logical form encoded by U.’ The definition of implicitness, then, is that an assumption communicated by U which is not explicit is implicit [hence an ‘implicature’].
Let's concentrate on the concept of 'explicature' for the moment. There are two points to note here. Clearly the content of explicatures comes from two distinct sources, the linguistic expressions used and the context, and is derived in two distinct ways, semantic decoding and pragmatic inference. 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:

(21)  
   a. Mary Jones put the book by Chomsky on the table in the downstairs sitting-room.  
   b. Mary put the book on the table.  
   c. She put it there.  
   d. On the table.  

All of these could be used in different contexts to communicate explicitly one and the same propositional form. Clearly (21c) and (21d) leave a great deal more to pragmatic inference than does (21b), which in turn is less explicit than (21a). Given the essential nature of the underdeterminacy thesis, as argued in the previous chapter, no linguistic expression will achieve full explicitness; that is, will fully encode the propositional form communicated. What we really have here are two different explicit/implicit distinctions: one which is the explicature/implicature distinction and another which is, in effect, identical to our semantics/pragmatics distinction. This second distinction on which explicit = encoded and implicit = inferred, has been argued within relevance theory to be the basis of a theory of style; it concerns the choices a speaker makes about where a hearer/reader needs strong direction and where he can be left to make his own (inferential) choices (see Sperber & Wilson 1986, 202-224; Blakemore 1989a). As I understand it, the latter is a somewhat informal use of explicit/implicit (though widely used in other pragmatics frameworks), and it is redundant, as it merely restates the encoded/inferred distinction. I shall reserve the terms 'explicit' and 'implicit' for the explicature/implicature distinction from here on.

The second point is that the explicature/implicature distinction applies only to communicated assumptions, by which Sperber & Wilson (1986a/95) mean those which the speaker has made it evident she intends the hearer to pick up (see 'communicative
intention' and 'ostensive inferential communication' in appendix 1). An utterance will, of course, transmit much information that does not fall under this definition of communication, some falling under other types of intentions the speaker may have, some lying right outside any intentions she may have (see Wilson & Sperber (1993a)). This opens up the possibility of a difference between the proposition expressed by the speaker and her explicature(s): the proposition expressed may or may not be communicated; only when it is communicated is it an explicature of the utterance. This distinction is essential to the standard relevance-theoretic account of non-literalness, taken up in section 3.3.4.

Levinson (1987b, 723) raises an apparent problem for the definition of explicature; he says that in distinguishing explicature from implicature the criterion offered by Sperber & Wilson is ‘that explicatures must contain the encoded SR (semantic representation) or LF (logical form) as a proper subpart’. The problem with this is that many clear cases of implicatures meet that condition, and he gives the following example:

(22) A: If Thatcher has won the election, she’ll have won three times.
B: Thatcher has won.
Implicature: Thatcher has won three times.

He is clearly right that B has implicated that Thatcher has won three times and that a proper subpart of this implicature is ‘Thatcher has won’. However, he has missed the crucial concept of ‘development’ in the definition of explicature. This implicature is not derived by a process of pragmatically developing the decoded content of B’s utterance; plainly, it is derived purely inferentially, by a straightforward deductive inference, one of whose premises is the assumption which IS derived by development of the encoded content, ‘Thatcher has won the election’. The ‘criterion’ provided by the definition of explicature is a derivational one, which is stronger than the one assumed by Levinson: explicatures do, inevitably, contain the SR as a proper subpart but not every communicated assumption that happens to contain as a subpart a constituent which matches the SR is an explicature.

As discussed in some detail in the preceding chapter, there is a range of
pragmatic processes, which can be loosely called cases of enrichment, that are required in the recovery of the proposition the speaker intended to express, that is, the explicature, if she communicated it. An early discussion of this phenomenon appears in Wilson & Sperber (1981), written at the time they were developing their ideas about relevance. They look at the example in (23); processing the utterance in (23a) progresses to (23b) once the two basic processes of disambiguation and reference assignment have taken place:

(23)  
   a. John plays well.  
   b. John Murray plays some musical instrument well.  
   c. John Murray plays the violin well.

However, as they go on to say, in most instances a hearer would interpret (23a) as expressing something more specific than (23b), say (23c), in circumstances of John Murray playing the violin in front of the speaker and hearer. They note a couple of important features of (23c): it entails (hence is more informative than) (23b) and it is on the basis of (23c) rather than (23b) that the implicatures of the utterance would be worked out. I subsequently took up these points in an attempt to clarify the distinction between the concept of a pragmatically imbued proposition expressed or explicature and conversational implicatures (Carston 1985a, 1988, 1993, 1996). Like Levinson, I was concerned to clarify when a pragmatically determined element of utterance meaning is to be taken as part of an explicature (that is, as a development of the decoded content) and when it is an implicature. Given the (correct) derivational understanding of the concept of a development of logical form, the issue becomes one of how far the development process goes and what constraints there are on it. Some of this discussion is reviewed in section 3.6.

So far I've considered only the explicature that an utterance has when the proposition the utterance expresses is communicated (endorsed) by the speaker, but in fact Sperber & Wilson's idea is that utterances typically have several explicatures. The logical form may be embedded in a range of different sorts of higher-level descriptions, including (weak) speech-act and propositional-attitude descriptions (Wilson & Sperber 1993a, 5-6). For instance, Mary's reply to Bill's question in (24b) might have the
explicatures given in (25):

(24) a. Bill: Did your son visit you at the weekend?
    b. Mary (happily): He did.

(25) a. Mary's son visited her at the weekend.
    b. Mary says that her son visited her at the weekend.
    c. Mary believes that her son visited her at the weekend.
    d. Mary is happy that her son visited her at the weekend.

The hearer may actually represent only some subset of these (though the speaker has made manifest her intention to make the others manifest as well). In a situation in which, for instance, Bill knows that Mary has been worrying about a growing rift between her son and herself, he may represent just (25a) (the base-level, we could say, explicature) and the higher-level explicature (25d). These are the explicitly communicated assumptions most likely to give rise to contextual effects (that is, to be relevant). In some other case, the higher-level explicature describing the speaker's belief might be the major contributor to the relevance of the utterance; for instance, in a context in which this representation could overturn or modify the hearer's existing representation of the speaker's beliefs. The importance of higher-level explicatures (in which the proposition expressed is embedded) is most apparent when we look at cases of non-literalness (as we will in section 3.3.4), on the one hand, and at cases of non-declarative utterances, on the other.

On the relevance-theoretic account, an utterance of a sentence in the imperative mood communicates an explicature which describes a certain state of affairs as desirable to some degree (to either speaker or hearer, an indeterminacy which has to be pragmatically resolved) and as achievable (or, in Wilson & Sperber (1988a)'s more technical terminology, 'potential'). For example, in an appropriate context an utterance of (26a) could communicate the higher-level explicatures in (26b) and (26c):

(26) a. Buy some milk.
    b. It is desirable to the speaker (and achievable) that the hearer buy some
milk.
c. The speaker requests the hearer to buy some milk.

As on certain speech-act accounts, the idea here is that the proposition expressed is the same as that expressed by the corresponding declarative; here it would be 'the hearer buy(s) some milk'. This is clearly not an explication of the imperative utterance, however; what is explicitly communicated by the utterance of (26a) is the higher-level representations. (See Wilson & Sperber (1988a), Wilson (1991), Clark (1991), Clark (1993a) for fully motivated accounts of this analysis of imperatives.)

The distinction between higher-level explicatures and the explicated propositional form of the utterance is interesting from another point of view too. Several classes of sentential adverbial have been analysed by theorists as not being part of the propositional form of the utterance:

(27)  a. Frankly, I'm unimpressed.
     b. Confidentially, she won't pass the exam.
     c. Happily, Mary's son visited her this weekend.
     d. Unfortunately, I missed the train.
     e. Obviously, I'm going to miss the deadline.
     f. Perhaps, we're too late.

'Frankly' and 'seriously' are cases of illocutionary adverbials; 'happily' and 'unfortunately' are cases of attitudinal adverbials and 'obviously' and 'perhaps' are evidential adverbials. It seems that the propositional form (and hence the truth conditional-content) of these utterances does not include the contribution made by the initial adverbial.\textsuperscript{15} Where, then, do these elements make their contribution? Obviously, they each decode into a mentally represented concept\textsuperscript{16} which must feature in some representation derived by the hearer. There is a nice answer to this in the system Sperber & Wilson have developed: they contribute to a higher level explication. This is most easily seen in the case of the illocutionary adverbials, which slot straightforwardly into the role of modifier of a speech-act verb in the higher-level speech-act description:
(28) a. I tell you frankly that I'm unimpressed.
b. I inform you confidentially that she won't pass the exam.

Evidentials comment on what the speaker sees as the degree of evidential support for the proposition expressed, which may in turn affect the degree of conviction she represents herself as having in the truth of the proposition expressed (that is, the propositional attitude explicature): ¹⁷

(29) a. It is obvious (obviously true) that the speaker is going to miss the deadline.
b. The speaker strongly believes that she is going to miss the deadline.
c. It is possible that the speaker and X are too late [for ...].
d. The speaker weakly believes that she and X are too late [for ...].

And, in similar vein, for the attitudinal adverbials:

(30) a. It is a happy eventuality [for X] that Mary's son visited her this weekend.
b. It is unfortunate that the speaker missed the train.
b'. The speaker considers it unfortunate that she missed the train.

There is probably a range of indeterminacies to be resolved here: 'obvious to whom?' 'happy for whom?, 'unfortunate in whose opinion?' etc.

So far so (relatively) good, but this brings us to a problem with the definition of explicature as given above. Let's look at some more complex cases involving sentence adverbials:

(31) a. Kim shouldn't pass the course, because she frankly hasn't done the work.
b. Kim might pass the course, although, confidentially, she hasn't done the work.
c. She has missed a lot of lectures and she, obviously, hates linguistics.

The argument has been that sentential adverbials contribute to higher-level explicatures
but in (31a) and (31b) here they are modifying an embedded clause, which is surely a constituent of the logical form of the utterance, and hence of the propositional form into which it is developed. Either we are wrong about the role of these adverbials or the propositional constituents into which the subordinate clauses are developed must be explicatures in their own right. I shall pursue the second option here.

What these examples seem to indicate is that the definition of explicature given above is too restrictive, a point noted by Sperber & Wilson (1995, 182, footnote a), in the second edition of their text. They say the definition must be modified to accommodate cases like the following, where P (disembedded) can be an explicature:

(32)  
   a. I tell you that P.  
   b. P despite Q.

Again, these are communicated assumptions which are embedded within an explicature derived by developing the logical form of the utterance in accordance with the criterion of consistency with the principle of relevance. So how should the definition be modified? There are two possibilities that occur to me. One would involve taking the existing definition as one disjunct, and adding another which allows for the extraction or detachment of certain constituent propositions. The other would be to make no change to the definition itself but rather to reject an assumption that underlies its application: the assumption that all utterances have but a single logical form. Instead we could allow that various clausal (sentential) elements of an utterance have a logical form, so that decoding a linguistic string may give rise to several logical forms. Disjunctive definitions are intrinsically unappealing (apparently conceding the non-unitary nature of the phenomenon they are defining), and there seems to be no obvious reason to maintain that an utterance has only one logical form. So I will opt for the second alternative. As a first shot, let’s suppose that an utterance has as many logical forms as the linguistic string uttered has S* (CP) nodes. So the example (31a), repeated here for convenience, has the logical forms given in (33):

(31)  
   a. Kim shouldn’t pass the course, because she frankly hasn’t done the work.
Then each of these can give rise to a range of potential explicatures: (34) for the logical form in (33a), (35) for the logical form in (33b), with the contribution of 'frankly' coming in here, and (36) for the logical form in (33c):

(34) a. Kim shouldn't pass the course.
    b. S believes Kim shouldn't pass the course.
    c. S is saying that Kim shouldn't pass the course.

(35) a. Kim hasn't done the work.
    b. S believes that Kim hasn't done the work.
    c. S is telling H frankly that Kim hasn't done the work.

(36) a. Kim shouldn't pass the course because she hasn't done the work.
    b. S believes that Kim shouldn't pass the course because she hasn't done the work.
    c. S is saying that Kim shouldn't pass the course because she hasn't done the work.
    d. S is sad that Kim shouldn't pass the course because she hasn't done the work.

While these may be communicated (that is, the speaker's intention to make them manifest to the hearer is itself made mutually manifest), this is not to say that the hearer will represent all of them; it is almost certain that he will not. The speaker is likely to represent (35c) because the use of 'frankly' in this utterance makes it highly manifest and so, given the principle of relevance, likely to have cognitive effects.

It might look as if we are dealing here with entailments of the maximal logical form but, although some of these lower-level (as we might call them) explicatures are entailments, the phenomenon cannot be generally characterised in this way. The
proposition expressed has entailments that cannot be explicatures, and it has subparts which can be explicatures but are not entailments. Cases of the first type are given in (37)-(38) and of the second in (39)-(40):

(37)  a.  (Apparently) Robin is a bachelor.
     b.  Robin is a man.

(38)  a.  (Unfortunately) I bought some pork.
     b.  I bought some meat.

(39)  a.  I tell you that he is (obviously) lying.
     b.  He is lying.

(40)  a.  I believe that Mary will (unfortunately) be there.
     b.  Mary will be there.

Intuitively, the entailments in (37b) and (38b) are not explicated, and this is the prediction of the definition of explicature, whether we assume a single logical form for an utterance or the modification suggested above which allows for several logical forms per utterance. On the other hand, the non-entailments in (39b) and (40b), can be explicated; intuitions that this is right are backed up by the way we understand the role of the sentence adverbials in these cases, as modifying the embedded clause:

(41)  a.  S believes that it is obvious that he is lying.
     b.  S says it is unfortunate that Mary will be there.

It seems that only those entailments which are "visible" in the linguistic form are candidates for explicaturehood and there may be an interesting complementarity with those that can be implicated, a point touched on again in the next section, on implicature. The main point here, though, is that it turns out that the definition of explicature needs no change; the definition works fine once we drop the assumption that an utterance has only that logical form which is the semantic representation of the
highest CP node.

3.3.2 Implicature

Implicatures are derived purely inferentially. Pragmatic inference is well known for its apparent non-monotonicity, by which is meant the inference does not necessarily go through if other premises are added to those from which the inference is derived. This is another way of putting the point that pragmatic inferences are defeasible (cancellable). In this respect they contrast with deductive inference, which is monotonic or indefeasible:

(42) a. Some of the children are happy.
b. Not all of the children are happy.
c. All of the children are happy.

(43) a. If a bird hoots it is an owl. Twitchy is a bird. Twitchy hoots.
b. Twitchy is an owl.
c. Twitchy chirps.
d. Twitchy is a sparrow.

The inference from (42a) to (42b) (a case of ‘generalised’ conversational implicature) won’t go through if (42c) is added to (42a). However, the inference from (43a) to (43b) goes through whatever other premises are added to those in (43a), including (43c) and/or (43d), which might be thought to be good candidates to block the inference.

Any account of implicature has to reflect its defeasibility. For Sperber & Wilson implicatures come in two sorts: implicated premises and implicated conclusions. Implicated premises are a subset of the contextual assumptions used in processing the utterance and implicated conclusions are a subset of its contextual implications. What characterises these subsets is that they are communicated (speaker meant), hence part of the intended interpretation of the utterance. Consider B’s response to A:

(44) A: Let’s go to a movie. I’ve heard ‘Sense and Sensibility’ is good. Are you interested in seeing it?
B: Costume dramas are usually boring.

Understanding B's utterance requires deriving the following conversational implicatures:

(45) a. 'Sense and Sensibility' is a costume drama.
b. 'Sense and Sensibility' is likely to be boring.
c. B isn't very interested in seeing 'Sense and Sensibility'.

Once we have an account of how (45a) is derived, the other two follow fairly straightforwardly: (45b) follows deductively from the proposition expressed by B's utterance and (45a); (45c) follows deductively from (45b) and from a further easily accessible assumption that people do not generally want to go to movies they expect to be boring. These are implicated conclusions. But what about (45a), an implicated premise, on which all this hinges? A expects an answer to his question and assumes that B's response is consistent with his expectations of optimal relevance, so he uses the most accessible of the assumptions made available by the concepts explicitly given in B's response to derive an answer. He may already know that 'Sense and Sensibility' is a costume drama, but even if he doesn't, constructing this assumption will be relatively low cost, since it follows a well-worn comprehension route and is the most direct one for finding an answer to his yes/no question.

Each of the inferred assumptions in (45) is cancellable; that is, none of them follows deductively from the proposition expressed by B's utterance, though (45b) and (45c) are derived deductively (by modus ponens) once other particular assumptions have been accessed. Thus the overall picture is one of a non-demonstrative inference process, driven by the search for an optimally relevant interpretation, which entails an order of accessing of contextual assumptions, in terms of a least effort strategy.

A further important point that Sperber & Wilson make about implicatures is that they may be communicated with variable degrees of strength. In the example just discussed, the implicatures are strongly communicated; that is, there can be little doubt that they fall within the speaker's informative intention. They are fully determinate. Speaker B expects A to supply not merely something like the premise and conclusions in (45) but a premise and conclusions with just their logical content. However, as Grice
pointed out, there is sometimes a certain indeterminacy regarding speaker meaning when that meaning is implicated rather than said. In chapter 2 I gave an example, repeated here:

(46) I'm feeling better today.

It is clear what the speaker explicates here, but what does she implicate? She could communicate any number of assumptions within quite a wide range concerning her ability to function today, her readiness to get on with work, her improved state of mind, the possibility of going without nurofen, etc. There is no precise assumption or set of assumptions that can be pinned down as those she must have specifically intended to inform the hearer of. Nevertheless, she clearly intends the hearer to derive more than the explicit content of her utterance and that more that she intends is constrained to lie within a particular conceptual range. In short, she has weakly communicated a range of implicatures some subset of which the hearer will in fact represent, thereby bearing some responsibility for the particular assumptions he chooses as part of his interpretation of the utterance. Sperber & Wilson (1987) describe this property of indeterminacy of implicatures as follows:

An utterance that forces the hearer to supply a very specific premise or conclusion to arrive at an interpretation consistent with the principle of relevance has a very strong implicature. An utterance that can be given an interpretation consistent with the principle of relevance on the basis of different - though of course related - sets of premises and conclusions has a wide range of weak implicatures. Clearly, the weaker the implicatures, the less confidence the hearer can have that the particular premises or conclusions he supplies closely reflect the speaker's thoughts, and this is where the indeterminacy lies.

(Sperber & Wilson 1987, 706)

Finally, recall the discussion above, in the section on the Gricean account of conversational implicature, concerning whether or not entailments could be implicatures. There is no reason why this should not be the case even though, arguably, such an implicature is a logical (rather than a contextual) implication of the propositional form of the utterance, derived by straight deduction. The sort of
entailment examples given in the previous section as not conforming to the definition of explicature must, if they are communicated, be implicatures:

(47) A: Will there be any men at the party?
    B: Robin's an eligible bachelor and he intends to go.

(48) A: I'd like to eat some meat tonight for a change.
    B: Good. I've just bought some pork.

It is at least arguable that in (47), B implicates that Robin is a man and in (48), that she has bought some meat. So the entailments for which this seems to be possible are those that are not "visible" in the linguistic or logical form, the complement class of those that are subparts of the maximal logical form which can be treated as independent logical forms themselves and developed into explicatures. (There may be an indirect argument against lexical decomposition lurking in here.)

The main point is that, unlike Grice, at least as I understand him, relevance theorists do not claim that entailments and implicatures are necessarily mutually exclusive; indeed they are concepts that function at different explanatory levels.

3.3.3 Non-sentential utterances, saying and explicating

Let's reflect for a moment on subsentential utterances, which have come up several times already and often prove an interesting sort of test case for the adequacy of accounts of verbal communication. As Deirdre Wilson has pointed out to me, while it may be reasonable to say that the speaker of an utterance of 'John's father' explicates that the man near the door is John's father, it is much less clear that anyone would want to say that the speaker has said (or asserted or stated) this. There are two questions here: (a) what would Grice's position have been on these fragmentary utterances? (b) does the concept of 'explicature' as so far developed apply satisfactorily to the above proposition supposedly communicated by the noun-phrase utterance?

It is not clear what Grice, faced with subsentential utterances, would have said. On the one hand, it is obvious that contextual material has to be supplied in order to achieve full propositionality (truth-evaluability). On the other hand, there is the question
of just what that material is, hence just what statement has been made, as discussed in chapter 2. And, also on this other hand, the intuition is quite strong that it is very odd, probably in fact false, to say that someone said that [X Y Z] when the utterance in fact consisted of just ‘Z’. As I’ve said, one of the impetuses for developing the saying/implicating distinction was Grice’s concern to defend certain philosophical theses; naturally, they and their supporting principles and statements are framed in full sentences. I don’t suppose Moore would have felt comfortable with an utterance of ‘my hand’, made with a look of certainty, as a datum for his theory of knowledge, nor Grice with ‘a red pillar-box’ or ‘red’ as possible L-statements in his causal theory of perception. Perhaps these and other philosophical issues dominated Grice’s concerns to the extent that he did not address some of the more ordinary and banal aspects of everyday non-philosophical communication. Grice’s choice of terms for his account of language use is thus not irony-free: ‘the logic of conversation’, ‘conversational maxims’, ‘conversational implicatures’. Most conversation is full of subsentential utterances which do not seem to be accounted for in his scheme; it follows that there is no basis for the inference (calculation) of most of the conversational implicatures communicated in the rough and tumble of quick spontaneous exchange, since crucially in the Gricean system they follow, as it is put, from the saying of what is said. Similar, and other, problems will be shown (in section 3.5.2) to arise for Bach’s even narrower concept of ‘what is said’. In developing his account and discussing the range of cases it covers, he too does not mention the ubiquitous subsentential case.

Now, what about what is explicated by a subsentential utterance? Intuitively, there is less danger of false attribution here. Explicatures by their very nature are full of elements which have been supplied pragmatically, the degree of ‘development’ of the encoded content is variable, but inevitably includes considerably more than the mere reference assignment and disambiguation of Grice’s ‘what is said’. The term has the further fortunate property that it is not in lay usage; we do not go about reporting to each other that so-and-so explicated that P. It is a technical term, the introduction of which didn’t just effect a minor amendment to the notion of ‘saying’. It is getting at something rather different, in one sense something more abstract (it’s not an assertion, an order, or any other speech-act type of thing), in another sense more concrete (a communicated thought/assumption that is developed out of the encoded content). So the
move from ‘what is said’ to the concept of ‘explicature’ marks a change in the view of what a pragmatic theory is to account for, what the crucial components of ‘what is communicated’ are.\textsuperscript{20}

So the way in which explicit communication is characterised in relevance theory accommodates subsentential utterances quite satisfactorily. Linguistic communication (and any ostensive communication involving a code) makes possible the strongest possible form of communication, since it enables the communicator to make strongly manifest her informative intention to make some particular assumption strongly manifest.

Still, as the linguistic underdeterminacy thesis underlines, there are many degrees of explicitness, and phrasal utterances like ‘John’s father’, ‘In there’, ‘Nice’, leave a considerable gap for pragmatic inference. While the notion of weak communication, of indeterminacy of communicated assumptions, is most often discussed in connection with implicit communication (as in the previous section, example (46)) it is plainly a property of explicit communication too. Fragmentary utterances display this property of indeterminacy in an especially clear way, since the hearer has considerable leeway in how he represents the recovered content (‘The man near the door is John’s father’, ‘The diffident looking guy in the pink shirt is ...’, etc). The extent of indeterminacy of explicature is considered in chapter 6, where the move to accommodating loose uses of linguistic expressions at the explicit level entails that even the constituents of an utterance which are encoded may not ensure the determinacy of those parts of the explicature they represent. However, in the next section, I outline a different, more established line on non-literal linguistic use.

### 3.3.4 Explicature and non-literalness

As emphasised in Sperber & Wilson (1986a/95), the proposition expressed may or may not be actually (ostensively) communicated; that is, it may or may not be an instance of P in the schema ‘the speaker makes mutually manifest her intention to make manifest to the addressee that P’. The proposition expressed by a metaphorical utterance or some other kind of loose use is not communicated in this sense, so is not an explicature, but rather serves as an effective and efficient means of giving the hearer access to those assumptions which are communicated. Consider utterances of the sentences in (49a) and (50a)-(50c):
(49)  a. Jane is my anchor in the storm.
     b. The speaker says that Jane is her anchor in the storm.

(50)  a. This steak is raw.
     b. The room is silent.
     c. Mike is bald.

The proposition expressed by the metaphorical utterance in (49a) involves the attribution of a property to Jane which the speaker patently does not believe holds of her. The only explicature communicated by the utterance is the higher-level one in (49b), where the proposition expressed is embedded in a (weak, generic) speech-act description. What is communicated is a range of weak implicatures concerning the role Jane plays in the speaker’s life; the conceptual structure encoded by the phrase ‘my anchor in the storm’ gives the hearer immediate access to a range of other properties associated with anchors in storms and encourages him to select some subset of those that can be predicated of a human being: say, reliable and stable when life gets difficult, helpful in calming the speaker when she is disturbed, etc. It is indeterminate exactly which of these the speaker implicated, but it is clear that she intended the hearer to recover some such assumptions within a constrained range of possibilities. The speaker may have had no specific individual assumptions in mind but rather a complex and probably ineffable concept of Jane’s significance in her life.

In the more mundane cases of loose talk in (50), the speaker again does not explicate the proposition literally expressed (since it is recognised that the steak is underdone rather than raw, the room has a very low level of noise, Mike has quite a few wispy strands of hair). Rather, the property encoded in the predicate gives access to a range of properties that can be truthfully predicated of the subject; in the case of (50a) the implicatures communicated might include that the steak is underdone, it is inedible, the speaker wants it to be cooked more, etc. These are rather stronger than the sort of implicatures communicated by the metaphor in (49); it seems that when the property literally predicated belongs to a completely different category of entity (is a category mistake, in other words), as in (49), the communication is far more evocative, it requires more searching on the part of the hearer (more processing effort) and so gives rise to
more effects.

The crucial underpinning of this account is Sperber & Wilson (1986a/95)'s concept of the interpretive use of a representation. This use is contrasted with the more familiar descriptive use, on which the representation is used to represent a state of affairs and is true or false of that state of affairs. A representation with propositional content (such as a thought or an utterance) is interpretively used when it is used to represent another representation which has propositional content; in this case, the relation between the two representations is one of logical resemblance. The two representations resemble one another interpretively in a context if and only if they share analytic and contextual implications in that context. Like all resemblances, interpretive resemblance is a matter of degree.

As well as the obvious cases of interpretive use of utterances, such as reporting speech or thought, there are cases of speculation or reflection in which an utterance is used to represent a type of utterance or a kind of thought whose intrinsic properties are felt to be worth considering. In any of these cases the proposition expressed may not be explicated by the speaker, that is, endorsed by the speaker herself. However, there is, according to Sperber & Wilson (1986a/95, 1987), an even more fundamental and general level of interpretive use: every utterance is used interpretively to represent a thought of the speaker's; that is, the propositional form of the utterance is an interpretation of the propositional form of the speaker's thought.

This is where metaphor, and loose use more generally, come in, on the standard relevance-theoretic account. In cases of the literal interpretation of a thought, the proposition expressed doesn't just resemble but is identical to the propositional form of the speaker's thought, identity being the extreme case of resemblance and literalness a special case of interpretive resemblance. When the speaker talks loosely or metaphorically there is a relation of non-identical resemblance between the two propositional forms. Then, again, the proposition expressed is not explicated (communicated) but is used as an efficient means of giving the hearer access to those assumptions the speaker does endorse and is communicating.

We can see on this account of loose talk, the full account of which I have not given here, an interesting asymmetry in the way Sperber & Wilson view two apparently complementary pragmatic processes: enrichment of encoded content and weakening or
loosening of encoded content. As I’ve emphasised in this chapter and the last, linguistic
underdeterminacy entails that there is much work of pragmatic completion and
enrichment at the level of the proposition expressed. Loosening of encoded content, on
the other hand, is assumed to have no effect on the proposition expressed; rather the
effects all come in at the level of implicature. In this respect the relevance-theoretic
account has stayed in line with the Gricean approach, on which the proposition
expressed by the utterance is not communicated (it is not said); the communicated
propositional content of the utterance is entirely implicated. Grice, as I’ve said, moved
to a concept of ‘making as if to say’; Sperber & Wilson have an unexplicated
proposition expressed. This has long been the standard relevance theory position
(Sperber & Wilson 1986a, 1986b, 1987, 1988b, 1990; Wilson 1994); however, in some
recent work, a more radical alternative has been advocated on which both conceptual
loosening and enrichment are seen as pragmatic processes which affect the level of
explicit content (see Wilson 1995, Carston 1996/forthcoming). I explore this possibility
in chapter 6 and advocate a symmetrical account of the two processes. This, I believe,
is the final severing of the cognitive theory of communication from its logical,
philosophical forebears.

Cases of irony, such as example (51a) below, involve representation by
resemblance at yet another level, on the relevance-theoretic account, since the thought
that an ironical utterance represents is itself being used to represent a thought or
utterance, which is attributed to someone other than the speaker herself at that moment,
and to which the speaker implicitly expresses an attitude of dissociation. I will not
motivate or explain this account further here, but in the context of the present section
the point is that the proposition the speaker expresses is, again, not explicated. The
explicatures the utterance does have are the higher-level ones given in (51b) and (51c):

(51) a. It’s a lovely day.
    b. The speaker has said that it’s a lovely day.
    c. The speaker thinks it is ridiculous to say that it’s a lovely day.

This is very different from the case of loose and metaphorical uses of linguistically
encoded concepts, since it involves a whole further level of metarepresentation. In this
respect, it is like reported speech and other cases of attributive use; the proposition expressed by utterances of this sort also represents a thought of the speaker’s which is itself a representation of another thought or utterance, to which the speaker expresses either a corroborative or a dissociative attitude. As will be seen in chapter 6, the divorce between the two tropes, metaphor and irony, is even greater on the unitary treatment of enrichment and loose use of linguistic expressions explored there. On that account, adjustments to conceptual content at the level of the propositional form (narrowings, loosenings) eventuate in an explicated (communicated) proposition expressed, while an ironical utterance expresses a proposition that isn’t part of what is explicitly communicated.

3.3.5 Blakemore: encoded constraints on pragmatic inference
There is one last theoretical piece to complete this account of relevance-theoretic concepts bearing on the explicit/implicit distinction. I’ve emphasised the role of pragmatic input in arriving at the proposition expressed by the utterance (its truth-conditional content), given the often meagre contribution from linguistically encoded content. To doubly dissociate the semantic/pragmatic distinction from the explicit/implicit, I need to point out those cases of encoded content which do not enter into the explicit level of communication, but which play their part at the level of what is implicitly communicated.

Blakemore (1987) took up the standard cases of Gricean conventional implicature (‘but’, ‘moreover’, ‘therefore’) and added some further cases of her own (‘after all’, ‘you see’, ‘also’) and investigated how they function within a cognitive pragmatic theory. As observed by Grice and others, they do not seem to contribute to the proposition expressed by the utterance, but Blakemore found that rather than making conceptual contributions to some other level (implicatures), they appear to act like directions to the hearer on the sort of pragmatic inferences to carry out. For example, in very simple terms, ‘but’ (on its denial of expectation use) tells the hearer to process the following clause in such a way that it contradicts and eliminates a proposition potentially present in the context, most likely one derived from the preceding clause; ‘after all’ tells the hearer to process the following clause in such a way that it provides further evidence for an assumption already in the context, most likely one derived from the processing of the
Blakemore's most important and very influential conclusion was that the elements of meaning encoded by these expressions are procedural rather than conceptual; they indicate, guide, constrain, direct, rather than encoding constituents that enter into representations. The procedural idea is at least in part a consequence of the kind of theory we are pursuing and the broader approach to the mind within which it is developed (representational and computational): conceptual meaning enters into representations; procedural meaning influences computations.

On the picture given by Blakemore, it looked as if conceptual encodings all contributed to the explicit level of communication, while procedural encoding constrained inferences affecting the implicit level (implicated premises and conclusions). However, it emerged in chapter 2, in the context of trying to understand various approaches to semantics, that other elements such as pronouns and demonstratives, while bearing on the truth conditions of the utterance, did not enter directly into truth conditions, and so were best construed as involving a different type of encoding from those that do enter directly into truth conditions. And once one sees that what the procedural is about is constraining pragmatic inference, it begins to seem likely that linguistic systems will include elements that play a guiding role in a range of pragmatic tasks. Wilson & Sperber (1993a) develop this idea: they suggest that pronouns and demonstratives encode procedural information that reduces the search space for the pragmatic process of reference assignment and that the linguistically encoded moods (indicative, imperative, hortative, etc.) constrain the process of inferring the higher-level explication expressing the speaker's propositional attitude.

I'll sum up section 3.3 by giving a stark taxonomy of the types of information that a linguistic expression might communicate (mixing the semantic and the pragmatic), within the relevance-theoretic conception; an illustration of each of the possible combinations is taken from the following utterance:

(52) She doesn't like cats but, happily, she has agreed to look after Fleabag.
A. 'cats' - conceptual, explicit, truth-conditional (contributes to proposition expressed);
B. 'she' - procedural, explicit, truth-conditional (constrains proposition expressed);
C. 'happily' - conceptual, explicit, non-truth-conditional (contributes to a higher-level explicate);
D. indicative mood - procedural, explicit, non-truth-conditional (constrains higher-level explicate);
E. 'but' - procedural, implicit, non-truth-conditional (constrains pragmatic inference, hence the cognitive effects achieved).

Note that in each case there are two semantic classifications, reflecting the two semantic distinctions in play: truth-conditional vs non-truth-conditional, and conceptual vs procedural. These distinctions crosscut each other, which raises questions such as whether one is more fundamental than the other, whether they belong to different levels of theorising, etc. It seems clear enough that for the kind of decoding (translational) semantics which provides the input to pragmatic inference, it is the conceptual/procedural distinction which matters.

3.4 Travis and Recanati: enriched concept of 'what is said'

3.4.1 Contextualist saying
No-one puts the underdeterminacy thesis and its implications for the concept of 'what is said' better than Charles Travis:

... words are sensitive to their speakings in the semantics they bear, varying semantics across speakings. So any semantics they might bear in saying something to be so is one they bear only occasion-sensitively. Their semantics as part of their language, e.g., English, is at most a proper part of their semantics on an occasion of expressing a thought, and underdetermines what thought they would thus express ... Their fixed, language-contributed semantics must, in
general, be supplemented if they are to be properly assessable as to truth, that is, if they are to count either as true or as false.

(Travis, 1991, 242)

Travis thinks that Grice’s counter-offensive against the A-philosophers, specifically Austin and Wittgenstein, misfires, precisely because it depends on his concept of ‘what is said’, which fails to accommodate the basic fact about language described in the quote just given: that is, that linguistic expressions are ‘speaking-sensitive’, as he puts it.

I have argued that there is much pragmatic input to the level of the proposition expressed, that many of Grice’s most philosophically important cases of ‘generalised’ conversational implicature turn out to be aspects of the proposition the speaker expressed (developments of the stark unexpressed logical form of the utterance). So is it the case that Grice’s cause is lost? Is it the case that when he used ‘it looks red to me’ as a crucial L-statement within his causal theory of perception, and when Moore, looking for blatant truisms, stated ‘I know this is my hand’, they were saying something which somehow includes the condition of doubt being in the air. I am less sure about this than Travis is. If Travis is right, and Grice hasn’t defeated the A-philosophical theses, then he has nonetheless made a sharp and hugely beneficial distinction between semantics and pragmatics, which, adapted into cognitive scientific terms, is proving very useful in an account of utterance interpretation. However, there are contexts and contexts, and even the most generalised of pragmatic inferences doesn’t always go through; given Moore’s context (looking for indisputable truisms) I don’t find it problematic that his statement is the odd but true one that he knows that what he is holding up is his hand. The context blocks the standard pragmatic inference that someone is doubtful about this.

Be all that as it may, both Travis and Recanati (1989b/91, 1993, 1994) develop an account of ‘what is said’ which they take to be in the tradition of Austin, Donnellan and Wittgenstein. This is a contextualist view of saying, which has much in common with the relevance theory view of the proposition expressed (or explicated) by an utterance. What these philosophers loosely termed ambiguity, Recanati is able to recast in crisper terms, thanks to the sharpness of Grice’s semantics/pragmatics distinction. This enables a distinction to be drawn between linguistic semantic ambiguity, on the one hand, and propositional ‘ambiguity’ on the other. So, for instance, Recanati (1989a)
takes up Donnellan’s apparent ‘ambiguity’ account of the referential and attributive understandings of definite descriptions (e.g. ‘Smith’s murderer’) and defends it against those who, following Grice, require that the referential understanding be treated as an implicature because it is pragmatically derived. Recanati shows that there is a third alternative, one which captures Donnellan’s intuitions concerning the different truth conditions of the two uses, without assuming a linguistic ambiguity, and which derives the referential understanding by pragmatic inference from the attributive understanding. In other words, this is a contextualist account of what is said when a definite description is used in a particular way by a speaker. I have tried to do the same thing for the different truth-conditional possibilities for and-conjunctions (see Carston 1988, 1993, and the next chapter of this thesis).

3.4.2 Availability to intuitions

Recanati (1989b/91; 1993, 245-250) makes a strong psychological claim about the level of ‘what is said’. The claim is that we have conscious access to/awareness of this level. This distinguishes it from linguistic meaning (logical form), to which we do not have such access. Furthermore, we have distinct conscious representations for both ‘what is said’ and ‘what is implicated’, and we are consciously aware of their distinctness. These claims are at odds with the apparent assumption of Grice and others who take the minimal view of ‘what is said’ and siphon off all pragmatically derived meaning to implicature; they seem to assume that ‘what is said’ is not accessible to hearers’ consciousness, and that all that we can be conscious of is the overall ‘what is communicated’ as some kind of undifferentiated mass. The two views are illustrated below: (A) is the general Gricean view; (B) is the one that Recanati argues for.

![Diagram showing the relationship between what is communicated, what is said, what is conversationally implicated, sentence meaning, and contextual ingredients of what is said]
Recanati's aim is to use this property of conscious access as a criterion for distinguishing 'what is said' from 'what is implicated'. A need for some means of making this distinction has been felt by those who have taken the underdeterminacy principle seriously, because its obvious implication is that when some aspect of utterance meaning is derived pragmatically, that meaning could be either an implicature or part of what is said. The old clearcut view that if it's pragmatic then it's an implicature cannot hold. Here is the criterion that Recanati proposes:

**Availability Principle:** In deciding whether a pragmatically determined aspect of utterance meaning is part of what is said, that is, in making a decision concerning what is said, we should always try to preserve our pre-theoretic intuitions on the matter.

(Recanati 1989b, 310)

This principle seems to gain some support from recent experiments by Gibbs & Moise (1997). They presented their subjects with sentences such as those in (53a) and (54a) below, and asked them to select "the paraphrase which best reflects what speakers said in uttering these sentences"; the choice was either between a minimal paraphrase (a Gricean 'what is said'), as in the (b) cases, and an enriched what is said (explicature) as in (c), or between an enriched what is said and an implicature, as in (d):

(53)  
   a. Robert broke a finger last night.  
   b. Robert broke a finger, either his own or someone else's, on the night

<table>
<thead>
<tr>
<th>what is communicated:</th>
<th>what is said</th>
<th>conversational</th>
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<tr>
<td>(top level,</td>
<td></td>
<td>implicatures</td>
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<td>consciously accessible)</td>
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<table>
<thead>
<tr>
<th>sub-doxastic level:</th>
<th>conviction</th>
<th>contextual ingredients</th>
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<td>sentence</td>
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<td>meaning</td>
<td></td>
<td>of what is said</td>
</tr>
</tbody>
</table>
immediately prior to the time of utterance.

c. Robert broke his own finger on the night immediately prior to the time of utterance.

d. Robert can't play in the game today.

(54) a. It will take us some time to get there.
    b. The time between our departure and arrival is unspecified.
    c. It will take us a fairly long time to reach our destination.
    d. We won't have to go shopping on the way.

Across a range of experimental conditions, the vast majority of subjects favoured the enriched paraphrases ((c) in the two cases above). The different experimental arrangements included one which involved preliminary training in the Gricean saying/implicating distinction, another in which a piece of text preceding the utterance made the implicature highly manifest, and another in which the context provided was quite favourable to the minimal paraphrase. Their results appear to confirm that speakers have reasonably clear intuitions about what is said, that they take it to be quite richly pragmatically augmented, and that they can distinguish it from assumptions that the speaker merely implicates. 21

Although I agree that intuitions will always play a role in getting an analysis going, I doubt that they can be relied on to help much in disputed cases. The variety of views that have been expressed in the literature about the level at which, for example, the pragmatically derived relations between conjuncts, or the differences between a referential and an attributive understanding of definite descriptions, should be captured, reflects the variability of intuitions. There are at least three views on each of these issues, represented in the following literature: Grice (1981), Levinson (1988), Carston (1988, 1990), Recanati (1993), Bach (1994a, 1994b), Rouchota (1992, 1994); those bearing on the relations expressed in and-conjunctions are discussed in the next chapter.

Here's another type of case. Recanati (1996) discusses an utterance of 'Claire has a good hand', where the speaker is watching a poker game: 'If I [the speaker] am mistaken and Claire is not a constituent of the situation (if she is not among the players of the game I am watching, contrary to what I believe), my utterance is not true - even
if Claire is playing poker in some other part of the city and has a good hand there' (Recanati 1996, 446). But intuitions about this are just not consistent. Many semanticists would take it that what the speaker has said is in fact true despite it being very different from what he intended to say. For instance, misuses of definite descriptions, similar to this misuse of a name, have given rise to a great variety of intuitions among philosophers. Consider a referential use of a definite description such as 'Smith's murderer', in the utterance 'Smith's murderer is insane', used to refer to the man behaving oddly in the dock of the courtroom: suppose he (Perkins) is not in fact Smith's murderer and he is not in fact insane (just extremely nervous), but the actual murderer, who is still at large, is indeed insane. Some people (Russell, Grice, Neale, Larson & Segal) would say that this utterance does express a true proposition; it is not the one that the speaker meant/intended (that is pragmatically derived and so is an implicature), but it is what is strictly and literally said. Others (including Donnellan and Recanati) would claim that the proposition expressed here is 'Perkins is insane', which is false. Of course, you might say that each of these writers has his or her own theoretical axe to grind, and so does not reflect the sort of pretheoretical intuitions Recanati is appealing to. Unfortunately, though, my experience of consulting students new to pragmatics is that their pretheoretical intuitions are just as varied.

Recanati's Availability Principle seems inert in a great many cases, and there is a good reason for this, in my view. The assumption on which the principle depends (shown in diagram B above), that we have no access to sentence meaning, is incorrect. We are not completely bereft of intuitions about what the words in our language mean, so that in fact we have two sorts of intuitions about 'what is said': intuitions about what proposition the speaker intended to express and intuitions about what the sentence she used means (or, at least, about the meaning of some of the lexical items in it). In certain sorts of problematic case, such as those just discussed, these two sets of intuitions pull in opposite directions. This is especially evident in cases of nonliteralness; for instance, metaphors such as 'John is a lion'. Some would say that the one robust intuition we have about this is that it is false, a categorial falsehood in fact, and that it is recognition of this that leads us as hearers-processors to look for the intended implications, which can be potentially true, or at least not ruled out as false on grounds of sortal incorrectness. That's essentially how metaphors work, according to
However, Recanati (1995)'s position on nonliteralness entails that 'John is a lion' can be true and so does the move to an explicit level treatment of metaphor within relevance theory (see chapter 6). Informal inquiries into pretheoretic intuitions indicate that judgements are mixed here too. Even in a clearly delineated context (say, John has just performed some act of great courage and nobility), some will judge that an utterance of 'John is a lion' is true (because he is brave, etc.), some will judge that it is false (because he is a human being). Everyone might be prepared to agree that what the speaker meant is that John has a quality of majestic courage, and that we pragmatically infer this from her use of the word 'lion', and yet intuitions appear to be divided about whether this is what the speaker can be said to have said or not. The same goes for the cases of 'Claire' and 'Smith's murderer' above. So while intuitions about what a speaker has said are worth consideration, they have to be regarded as unclear data, judgements which might have more than one possible source; they cannot provide a criterion for distinguishing what is said from what is implicated. I return briefly to this interesting matter of intuitions and their sources in chapter 6.

To conclude this section, the Travis/Recanati concept of 'what is said', as inevitably involving extensive pragmatic input, is very close to the relevance-theoretic view, though there the terms are 'proposition expressed' and 'explicature'. Given that the term 'what is said' is essentially Grice's term and so is most salient in people's minds as a minimal unenriched propositional form, I think Travis and Recanati would do well to find some other term(s), perhaps 'proposition expressed' and 'explicature'.

3.5 Bach: what is said/implicature/implicature

3.5.1 Impliciture vs. explicature

Bach (1994a, 1994b) maintains a distinction between what is said and what is implicated, though he makes some fairly far-reaching changes to Grice's conception of the former, which we'll look at in the next section. In his view, the Gricean distinction is essentially right, but it is not exhaustive; it leaves out a crucial intermediate level. He is in absolute agreement with Recanati and the relevance theorists about the role of
pragmatics in arriving at the proposition that the speaker intends to express. He distinguishes two sorts of pragmatic process involved in this: completion and expansion. Completion is required for those cases which, even given disambiguation and reference assignment, are not yet fully propositional, such as those in (55). Expansion may be required for those which, although fully propositional, are patently not yet the proposition that the speaker intended to express, as in (56), where a possible expansion is given in the square brackets:

(55)  
   a. Mary is too short. [for what?]  
   b. We've finished. [what?]  
   c. It's raining. [where?]  
   d. Paracetamol is better. [than what? in what regard?]

(56)  
   a. No-one [in my family] likes my spaghetti bolognese.  
   b. She screamed at him and [as a result] he jumped.  
   c. Mary and Sue climbed the mountain [together].  
   d. He has [exactly] three cars.  
   e. There are [approximately] 150 students in the class.  
   f. I haven't [ever] eaten slugs.

These are representative of the sorts of examples that Bach gives. In passing, I note that not everyone working in this area (including myself) would agree that all the examples in (56) are fully propositional before expansion; for instance, (56a) is probably incomplete before an obligatory pragmatic process fixes the quantifier domain, and it may be that the cardinal number terms (as in (56d)) are sense-general so always require pragmatic specification (see Carston 1990/95, forthcoming; Atlas 1992). Note also that some of these expansions involve a logical strengthening of the proposition: (b), (c) and (d) if you take the semantics of 'three' to be equivalent to 'at least three'; some involve a weakening: (a) and (e); others, Bach (1994a, 279) claims, are neither logical strengthenings nor weakenings: (f) and (d) if you take the semantics of 'three' to be 'precisely three'. They are all cases of what he calls 'lexical strengthening'.

Bach calls this level 'impliciture' because it is what is implicit in what is said.
(narrowly construed), and he confines the adjective 'explicit' to what is given semantically. He takes issue with the Sperber & Wilson term 'explicature': 'I find this use of the term misleading, inasmuch as the conceptual strengthening involved in expansion or completion is not explicit at all.' (Bach 1994b, 141). A couple of small points in favour of 'explicature' are its accompanying verb 'explicate' and the fact that it is aurally and graphologically more clearly distinguishable from 'implicature' than is 'impliciture', a term that I don't expect to catch on. Sperber & Wilson are very clear that an explicature is an amalgam of the encoded and the pragmatically inferred; as a result different explicatures can be said to vary in their degree of explicitness, a characterisation which reflects our intuitions. As mentioned earlier in the chapter, there does not seem to be much point in inventing an explicit/implicit distinction that coincides exactly with the decoding/inference (semantic/pragmatic) distinction. Finally, as the discussion of Bach's notion of 'what is said' will show, many utterances will simply not communicate anything explicitly on his account (those where the speaker does not mean what she (allegedly) says). I leave this relatively minor terminological matter.

Bach's picture of verbal communication seems to encompass the following four levels:

a. Logical form or semantic representation of the linguistic expression used (a propositional schema).

b. What is said (minimal proposition or propositional radical).

c. Pragmatically developed (completed or expanded) propositional form ('implicature'/ 'explicature').

d. Pragmatically inferred propositional forms (implicature(s)).

Note that in the relevance-theoretic account there is no level corresponding to the second of these. In the next section I'll take a closer look at this concept of 'what is said', trying to assess the role it plays in communication and whether or not there is a case for its psychological reality in the process of utterance interpretation.
3.5.2 What is said and linguistic meaning

Bach's reconstrual of the notion of 'what is said' has the following two features:

(a) saying that $P$ does not entail meaning that $P$ (communicating that $P$), and
(b) the elements of what is said must correspond to elements in the linguistic expression (sentence).

From the latter there follow two divergences from the way Grice (as far as we can tell) construed 'what is said':

(c) $P$ need not be fully propositional but may be just a fragment of a proposition, what he calls a 'propositional radical',
(d) connectives such as "but" and "therefore" are taken to be elements of what is said rather than belonging in a separate category of non-truth-conditional linguistic meaning: conventional implicature.

Taking (a) first, 'what is said' does not fall under the speaker's communicative intention; Bach dismantles the entailment relation that Grice took to hold between what a speaker says and what a speaker means. An advantage of disconnecting these two is that 'saying' then applies to the literal content of metaphorical and other figurative utterances, doing away with the need for the awkward distinction between 'saying' and 'making as if to say'. It also applies to certain verbal mistakes, such as incorrect referring descriptions and slips of the tongue, as well as to ordinary literal assertions. In short, it figures in all utterances in the same way. Its primary role in utterance interpretation, he says, is to provide the basis on which the hearer infers implicatures (explicatures) and implicatures, i.e. those representations that DO fall under the speaker's communicative intention.

Moving to (b), this is what Bach calls the Syntactic Correlation Principle, and it has obvious similarities to the Isomorphism Principle mentioned in chapter 2. Bach (1994b) claims that Grice wanted to give this principle greater weight than he found himself able to, and that the problem lay with a mistaken view of sentence connectives which led him to his category of conventional implicature. Here is the crucial part of his discussion of Grice: 'what is said must correspond to "the elements of [the sentence], their order, and their syntactic character" (1969/89b, 87). Here he [i.e. Grice] mentions that how something is put may enter into what is said. His example concerns reference. He allows that someone who utters [1] and someone who (in 1967) utters [2] might not
say the same thing

[1] Harold Wilson is a great man.

[2] The British Prime Minister is a great man.

but he does not commit himself on this point' (Bach 1994b, 142).

There is a subtle misrepresentation here, since if one goes back to this characterisation of ‘what is said’ given by Grice (and reproduced in full in endnote 8 of this chapter), he does not say that ‘what is said’ must correspond with the elements of the sentence. There is no talk of a ‘correlation’ between the lexical items and syntax of the expression uttered and the elements of the ‘what is said’, though of course the compositional semantics of the sentence used by the speaker, is a crucial component in determining ‘what is said’. Bach produces this quote in other papers too (e.g. Bach 1994a, 274), and again the words "must correspond to" lie outside the quotes; this is because they are Bach’s words, not Grice’s. Second, if Grice did believe that this was essential to the concept of ‘what is said’, why would he hesitate over [1] and [2]? It would follow automatically that something different is said in the two cases. So I am less sure than Bach is that he finds support for his position in Grice’s own view.^^

As shown above in (c), one result of strict adherence to the Syntactic Correlation Constraint is that what is said need not be even a minimal proposition; it may be a propositional radical, as in the examples in (55). The test for ‘what is said’ in any given case is provided by the following schema for indirect quotation: ‘S said that ...’ or, adopting the perspective of the hearer at the time of the utterance ‘S is saying [to me] that ...’. Each of the propositionally incomplete cases in (55) can be embedded acceptably in this schema. For example, S said that paracetamol is better, S said that it is raining, with the semantic underdetermination carried over into the ‘that’ clause.

Here’s an objection. There is another class of utterances which encode only a fragment of a proposition, for which it would seem that the syntactic correlation constraint coupled with this indirect quotation test gives a different result. These are subsentential utterances (phrasal or lexical) such as those in (57):

(57) a. John’s father.

b. On the table.

c. Can’t see.
d. Nice.
e. Telephone.

These patently do not embed successfully in the indirect quotation schema: e.g. ‘S said that John’s father’, etc. The reason for this is obvious: they don’t meet the subcategorisation requirement on ‘say that’; the complementiser "that" must take a sentential complement. They can of course be directly quoted: ‘S said "John’s father"’ as can all the fully sentential cases, but this is just the quoting (the meta-representation) of a linguistic string and not, it seems, the concept that Bach is after.

So it looks as if ‘what is said’ by an utterance may be subpropositional iff it happens to have been expressed by a natural language sentence. In the case of these subsentential utterances apparently nothing is said. But there does not seem to be anything principled about this difference of outcome between the two cases. ‘What is said’ is supposed to provide the linguistic basis on which, together with contextual information and constraining pragmatic principles, the hearer can infer what the speaker is communicating, and, of course, that is exactly what the semantic representation of these subsentential utterances (the propositional fragments they encode) does provide. The distinction between the two types of case which is entailed by this concept of ‘what is said’ seems unwarranted.

Let’s consider for a moment the impliciture (explicature) that could be communicated by these little utterances. I set aside cases where they are answers to an immediately preceding question and so slot into a site left by the question form. Take again the case of (a) ‘John’s father’, uttered at a party by me to a friend when I spot a particular man across the room, knowing that my interlocutor has long wanted to meet John’s father. As already discussed in chapter 2 and briefly in section 3.3.3 above, there is considerable indeterminacy as regards which proposition I have expressed and which proposition the hearer will construct. Any of those in (58), and a variety of others, might do:

(58)  a. The man who just came in is the father of John Sims.
     b. The man near the door is the father of John Sims.
     c. The father of John Sims is that guy over there wearing a green suit.
What falls within the speaker's communicative intention is not any particular propositional form but a propositional range, and the hearer is free, within the constraints imposed by pragmatic principles (consistency with the principle of optimal relevance, for instance), to construct that proposition which will interact most fruitfully with his immediately available contextual assumptions.

The very minimal semantic information encoded in the utterance provides the linguistic basis for the pragmatic system to work on, without any need for a level of 'what is said'. I see no reason to think that things are different for fully sentential utterances which happen to fit the 'Speaker said that ...' formula. In other words, the processes involved in recovering what is communicated can proceed directly from level (a), the propositional schema which is the representation decoded from the linguistic expression employed. The concept of 'what is said' is not consistent in its application across types of utterances, nor does it seem to play any role in the understanding process beyond that played by the logical form of the utterance. In short, it appears to be redundant, at least within the sort of cognitive processing theory we are interested in here.

A brief word now on point (d), the idea that certain connectives, such as "but" and "therefore", should be treated as part of what is said rather than as indicating distinct implicated propositions (non-central speech acts). Bach (1994b) believes that, while Grice adhered to the Correlation Principle, he was driven to exclude "but" and "therefore" from 'what is said' because he could not see a way 'to explicate its import over and above $p$ and $q$ without using a third clause, an additional conjunct, e.g. to the effect that there is a relation of consequence or contrast between $p$ and $q$. ... [so that] what is said would contain one more clause than is contained in the sentence used to say it. This further conjunct would not correspond to a clause in that sentence and could not count as part of what is said' (Bach 1994b, 145). As already argued, the evidence that Grice held the Correlation Principle is far from compelling. Moreover, evidence that reasoning along the lines just quoted entered into Grice's categorisation of an element of utterance meaning as a conventional implicature is non-existent. His few discussions of these cases are entirely concerned with whether or not the item contributes to the truth-conditional content of the utterance or not (see Grice 1975/89b, 25; 1968/89b, 120-21; 1989a, 361); these cases are deemed conventional implicature because their falsity
does not seem to falsify the utterance. I would hark back here to Grice's original motivation for the saying/implicating distinction: he wanted to isolate the core statements being made by certain philosophers in their attempt to establish particular theses; so, for instance, 'x looks red (to me) but y looks green (to me)' is to be taken as making a true statement iff the speaker has a sensory perception of redness on looking at x and a sensory perception of greenness on looking at y; his implication of some sort of contrast between the first conjunct and the second is just as irrelevant to this as any implications that there may be doubt about the redness of x and/or doubt about the greenness of y. The test case would, of course, be a connective that patently does affect truth conditions, but which is like "but" or "therefore" in that it could be argued, just as plausibly, that another whole clause is needed to explicate its import. The obvious example is "because" on its simple content use:

(59)  
   a. The chair was wet because it had rained overnight.  
   b. The chair was wet, it had rained overnight and the cause of the chair's wetness was the overnight rain.

It seems clear (as clear as anything can be in this area) that the truth conditions of an utterance of the sentence in (59a) are as given in (59b); if the chair had not been affected by the rain at all (having been indoors all night) but was wet from having been thrown into a full bath-tub, the utterance would surely be false. I believe that on these grounds Grice would have taken "because" to contribute to what is said. He would not have used the implicature strategy to save from a charge of falsity or impropriety, a philosopher, who had uttered "P because Q" in a situation in which there was no causal relation whatsoever between the states of affairs described by Q and P. Yet we have a two conjunct sentence with a three clause specification of truth conditions, which is an instance of the sort of general situation that Bach believes led Grice to conclude that "but" did not contribute to what is said. Sadly, I've been unable to find any discussion by Grice of this crucial test case sort of example; however, I believe that the evidence of his concern for what is said as the minimal truth-conditional content of the utterance, and the lack of evidence of any worry about the technicalities of formally representing what is said, are sufficient to establish that while "because" is to be seen as part of what
is said, "but" is not. On Bach’s conception, however, all connectives are taken to be part of ‘what is said’ provided they signify relations between the propositions expressed. He does recognise a distinct set of cases (illocutionary adverbials), which do not contribute to ‘what is said’, but rather provide a kind of higher-level comment on the utterance itself; I won’t discuss these here (see Bach 1994a, 276-77).

Before moving to the important issues of disambiguation and reference assignment, I’d like to look briefly at Bach’s use of the indirect speech schema to support his very pared down concept of ‘what is said’. Cappelen & Lepore (forthcoming) amass a great many examples in support of their contention that ordinary reporting of what someone has said may be considered correct, even true, despite the embedded clause differing in a range of ways from the linguistic expression used in the original utterance. This is perhaps too obvious to need great elaboration: the complement clause may omit material present in the original, as in summaries; it may include additional material, to make up for the absence of some other source of information which had been present in the original situation of utterance; it may substitute referring expressions in the original with other coreferential expressions, etc.\(^{24}\) Reports of ironical utterances are particularly interesting in this respect; Larson & Segal (1995, 453) discuss the case of Jason who, after sitting through a particularly awful philosophy talk, expresses his view by uttering (60) with heavy sarcasm:

(60) That was really brilliant.

(61) a. Jason said that the talk was really brilliant.

b. Jason said that he didn’t like the talk much.

Cappelen & Lepore maintain that what Jason said cannot be reported correctly by (61a), but can be by (61b), and Larson & Segal suggest (61a) is only true if the irony in the original is somehow reflected in the report, perhaps by a mimicking of Jason’s original sarcastic tone of voice; they add: ‘This suggests that the verb *said* is sensitive to more than just the strict and literal content of people’s utterances. Rather, what people are held to say encompasses their pragmatic, communicative intentions’ (Larson & Segal 1995, 454).

Bach (1994b) seems to accept the general point, but insists that there is a
distinction between ‘what is said loosely speaking’ and ‘what is said strictly speaking’ and that this is a distinction to which those of our inferential mechanisms responsible for recovering speakers’ communicative intentions must be receptive because ‘such inferences must be sensitive to the semantic content of sentences if sentences are to provide the linguistic basis for identifying speakers’ communicative intentions’ (Bach 1994b, 137, my emphasis). He is concerned with what is strictly and literally said, and this, it appears, is a semantic entity. The remaining question is: what sort of a semantic entity is it? It need not be fully propositional, so need not specify a determinate truth condition. Is it, then, in effect, the semantic representation that linguistic decoding delivers, as in the relevance-theoretic conception? I consider this question in the next section.

Note that the ‘simple, intuitive test’ which Bach relies on, that ‘what is said is specifiable by a that-clause embedded in a matrix clause of the form S said that ...’ (Bach 1994a, 278), seems to involve some sort of quite mechanical embedding of the surface syntactic structure used by the utterer (with just the essential deictic shifts, for instance, from ‘I’ to ‘she’). This is not in line either with ordinary intuitions about reporting or with the (presumably more rigorous) judgements of semanticists concerned with when a reporting sentence can be said to be true. Furthermore, it just doesn’t work in the case of subsentential utterances, despite the fact that a speaker employing one of these is as much in the business of saying something as a speaker who employs a full sentence. It does not look like a test to rely on.

3.5.3 What is said and indexicality

It is looking very much as if Bachian ‘what is said’ is equivalent to the encoded linguistic meaning, so that an account which recognises the latter as a distinct level of meaning need not bother with the former. To check this out further, we should consider the two pragmatic processes that Grice recognised as necessary additions to conventional linguistic expression meaning in determining ‘what is said’: reference assignment and disambiguation. Bach has much more to say about the former than the latter, so I’ll concentrate on that. I find him holding two slightly, but crucially, different positions in different places on the fixing of indexical reference and so on the nature of ‘what is said’.

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Bach (1987) takes the view that reference is essentially a pragmatic issue, a matter of speaker’s intention and hearer’s inference, with just a tiny class of exceptions. According to Taschek (1990)’s review of Bach (1987), this is the ‘astonishing view ... that an expression’s referring function, when it has one, never makes a semantic contribution to the sentences in which it occurs.’ From the point of view of the cognitive pragmatic framework I am pursuing, this ‘astonishing’ view seems absolutely right: speakers, not linguistic forms, refer and part of the pragmatic inferential phase, as opposed to the decoding phase, of utterance understanding is working out what the speaker is referring to.

I’ll focus on Bach’s discussion of pronouns (used to refer). He, in fact, distinguishes pronouns which refer semantically from those which refer pragmatically, and only those referents determined in the first way, i.e. semantically, enter into ‘what is said’. What makes certain cases of reference determination genuinely semantic, according to him, is that they do not involve consideration of the speaker’s communicative intention. The distinction he has in mind is the by now familiar one between pure indexicals and the rest. Following Kaplan (1977/89), a pure indexical (‘I’ being the paradigm case) specifies/encodes a rule (a ‘character’), which is a function from the context of utterance to a referent; an utterance containing such an indexical has a semantically determined, though context-relative, truth condition. Bach distinguishes the notion of ‘narrow context’, which plays a role in semantics, from contextual information in the broad sense, which is anything the hearer takes into account, in accordance with pragmatic maxims/principles, in reaching the intended interpretation of the utterance. ‘Narrow’ context consists of a small, well-defined set of objective parameters, including, and perhaps exhausted by, the speaker, the addressee, the time and the place of utterance. 25

Bach (1987, 176-77) compares the following two utterances:

(62) I am ready to go now.
(63) He was ready to go then.

Though (62) has no absolute truth condition it has a relative truth condition which varies with context; it is true in a context in which a is the speaker and t is the time of
utterance iff $a$ is ready to go at $t$. This, then, is what is said by such an utterance. However, the indexicals 'he' and 'then' in (63) are different; their reference is not a simple function of narrow context; it is dependent on the speaker's referential intention, hence on broad context and the pragmatic principles or maxims that a hearer uses quite generally in arriving at a confirmed hypothesis about what a speaker meant. Bach's position on these is that their reference does not contribute to 'what is said' but rather to the impliciture of the utterance (the proposition the speaker intended to communicate). So what is said by an utterance of (63)? Bach proposes the following:

(64) A certain male person was ready to go at a certain time prior to the time of utterance.

He recognises that this is not synonymous with (63) and seems to intend it as a rough way of indicating the sort of open proposition that is what is said in this case; the two instances of 'a certain ...' are to be understood as constraints on the pragmatic reference fixing process, the result of which will appear in that singular proposition which is the impliciture of the utterance. Understood in this way, (64) is very similar, if not identical, to the sort of logical form or assumption schema that is the output of the linguistic decoding process on a relevance-theoretic conception: an incomplete conceptual representation with variables whose value, to be fixed by pragmatic inference, is constrained by the linguistic character of the referring expressions.

I find no discussion of disambiguation to accompany these observations about determination of reference, but since it seems obvious that this is a process that also crucially depends on a speaker's communicative intention, hence on broad context and communicative principles, it cannot be involved in what is said as construed here but must also makes itself felt only at the level of impliciture. I conclude that this semantic view of what is said is essentially the same as the concept of decoded linguistic meaning, so that there is no point in distinguishing them. Pure indexicals are the one possible point of difference, but the only strong case is 'I', and nothing at all will be lost by including its reference assignment with the rest even if pragmatic principles are seldom required for the purpose.

While I think that the account just given is the one Bach generally endorses, he
gives a curiously different picture in Bach (1994a). Consider the following exchange, focusing on the pronoun "she" in B's response to A:

(65)  A: I wonder when Mildred gets back from Paris.
      B: She's back.

There are various ways of indirectly reporting what B has said:

(66)  a. B said that Mildred's back from Paris.
      b. B said that Mildred's back.
      c. B said that a certain female person is back.
      d. B said that she's back.

The first of these would be rejected by Bach, in all his writings on the matter, as involving a loose use of the concept of 'saying that', since there is nothing in B's utterance which corresponds with the constituent "from Paris". He is after a strict notion of 'speaker saying' and, according to the preceding discussion, would favour the 'definite indefinite description' in (66c). It's not clear why he doesn't go for (d), a direct copy of the original utterance, which gives a perfectly satisfactory report of B's utterance and complies very strictly with the Syntactic Correlation Principle. However, the main point here is that Bach (1994a, 282) favours (b), with the referent 'Mildred' as a constituent of 'what is said', in what seems to be a move away from the strict semantic notion, back towards the Gricean notion, though he maintains the view that what is said may not be fully propositional (may not determine a truth condition). The reason given for this being the right conception of what is said is that the presence of a linguistic expression ('she') mandates recovery of a referent; 'an indexical is there in the sentence', whereas there is no linguistic element requiring recovery of the constituent 'from Paris'. Similarly, when the linguistic form used is ambiguous, a choice is obligatory (except in the case of a pun), so that just the operative meaning appears in 'what is said' (see Bach 1994a, 290, endnote 20). So it seems that in discerning "what is said" one must advert to the speaker's intention in two instances: assignment of referents to indexicals, and determining the 'operative meaning' in the case of
ambiguous expressions. That is, these two and just these two pragmatic processes are involved in determining what is said; note that by 'pragmatic' I don't just mean that aspects of context somehow contribute, but rather that whatever pragmatic principle(s) or maxims you employ in the derivation of the expanded proposition expressed (impliciture/explicature) and implicatures is also required to account for hearers' generally successful performance of these two tasks.

Summing up, the concept of 'what is said' in Bach (1987), which is supported by comments in Bach (forthcoming), is one on which only certain indexicals, the pure ones, have their reference fixed, the others having the constraint they encode spelled out by some sort of indefinite definite ('a certain ...'). Disambiguation, like the non-pure indexicals, cannot be achieved by narrow context alone, but crucially involves speaker intentions. A consistent application of the narrow context idea would exclude any process of disambiguation at this purely semantic, speaker intention-free, level. So 'what is said' is a very messy entity: a set of propositions or propositional radicals with some referents fixed and some not.

The 1994a concept of 'what is said' is even more of a mixed bag. Although its primary role is still that of providing the linguistic basis for the hearer's inference to what the speaker is communicating (explicatures and implicatures), its own recovery/derivation requires a partial involvement of speaker's communicative intentions. Some inferential pragmatic work is required but other equally, if not more, immediate inferential developments of logical form, such as the recovery of the constituent "from Paris" in example (65), are excluded.

I repeat the conclusion of some pages ago, reinforced now by these additional considerations. There appears to be no role for a level of 'what is said' to play in an account of the representations and processes required in the interpretation of utterances. All that Bach conceived of in this regard for 'what is said' is achieved by linguistic meaning (logical form). Of course, it doesn't follow from this that the notion (in one or other of its manifestations) has no role to play in some other sort of account of what is involved in utterance meaning. Bach's conception of a pragmatic theory seems to be pitched at another level, a level at which the word 'process' seldom appears. I call this philosophical pragmatics, though he would probably object to this, having claimed both in Bach & Harnish (1979) and more recently (personal communication) that his is
an empirical theory.

It is tempting to conclude that the concept of 'what is said', as traditionally construed, should be laid to rest. However, I shall conclude less stridently: if there is a place for a concept of 'what is said', in either Grice's or one of Bach's senses, that place is not within the sort of cognitive processing-oriented account that I am committed to. The flavour of this conclusion is very similar to the conclusion I reached in chapter 2 with regard to truth-conditional semantic theories of natural-language sentences. It is in a spirit of trying to sort things out a bit rather than trying to establish that the only theory worth holding onto in the huge general arena of semantics and pragmatics is the sort of cognitive processing account offered by relevance theory. I have seen nothing to match this theory at what it sets out to do, but it doesn't set out to do everything; it is a particular type of theory (empirical, psychological, processing), pitched at a specific level of explanation, and imposing its own idealisations and abstractions from the mucky data the world throws up (see short discussion in chapter 1). I shall tentatively suggest in the final chapter that the vast array of theorising that falls under the heading of semantics and pragmatics might be usefully separated out into some distinct endeavours; this is not to say that all are equally worthwhile (I don't want to be labelled a 'relativist', God forbid), but, given the plurality of types of theory and of levels of explanation in this area, there is almost bound to be more than one or two which are coherent and valid.

3.6 Pragmatic meaning: enrichment or implicature?

The question in the title of this section used not to arise; an aspect of utterance meaning that could be shown to have been pragmatically inferred was automatically categorised as an implicature, a communicated assumption distinct from, external to, what had been explicitly said. For the most part, there went hand in hand with this assumption the view that the semantic aspect of an utterance is its truth-conditional content. I'll briefly mention some examples of this line of reasoning. Here's the first one:

(67) a. The door is closed.
    b. The door of room 5, 20 Gordon Square is closed.

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On a Russellian account of definite descriptions, the example in (67a) presents a problem because it appears not to respect the uniqueness part of his semantics (there are many doors in the universe). One solution to this (among several others) is as follows: (i) it seems clear that completing the description in such a way that it does denote a unique entity in the world (say, as in (67b)) is a pragmatic matter, so (ii) the proposition expressed by an utterance of (67a) is the patently false one that there is an entity which is unique in having the property of being a door and it is closed, while what is meant is a pragmatically inferred proposition, say the one in (67b), which may well be true. Russell’s semantics for ‘the door’ is maintained, what is said is false and absurd, and the strong intuition that something else, of a perfectly reasonable sort, has been communicated is explained as an implicature involving a uniquely denoting description. (For critical discussion of this sort of account, see Millican (1990) and Larson & Segal (1995, 329-30).

A second example, from Richard (1990, 120), concerns ‘and’-conjunctions:

(68)  
   a. Tonto jumped onto his horse and he rode into the sunset.  
   b. Tonto rode into the sunset and he jumped onto his horse.  
   c. Tonto jumped onto his horse and rode into the sunset. Not necessarily, however, in that order.

Richard says the strong intuition that (68a) and (68b) communicate a certain order of occurrence is to be explained pragmatically, as is evident from the cancellability, without contradiction, of this element of meaning, shown in (68c). So it follows that strictly and literally these say the same thing - that a jumping occurred and a riding occurred - and the one is true iff the other is true. The implication of an order of events is an implicature, different in each case, and as such does not enter into the semantic level, the level of what is said. (I discuss the analysis of ‘and’-conjunctions in much more detail, in the next chapter.)

Third, consider the notorious issue of belief contexts:

(69)  
   a. Mary believes that Twain is alive.  
   b. Mary believes that Clemens is alive.
The problem here, given a particular view of proper names (that of direct reference theorists), is that, although the proper names are coreferential (hence make the same contribution to semantic content), it is widely felt that these two utterances could differ in truth value and so must be truth-conditionally distinct. The strategy, again, is to show that the felt difference is pragmatic rather than semantic, and so, contrary to intuitions, does not enter into what is strictly and literally said (truth conditions); (69a) and (69b) in fact express the same proposition: ‘Mary believes of a that he is alive’, where a is the individual referred to by ‘Twain’ (and by ‘Clemens’) and the difference between the two utterances is explained as a difference of implicature, hence not a truth-conditional difference. (See critical discussion in Recanati (1993, chapter 17)).

Many more examples of this Gricean gambit could be given. It is notable that, in all three cases, the implicature analysis rides roughshod across strong intuitions that the implication in question does contribute to truth conditions hence, for most people (though not Bach), to what is said. Presumably, examples like this motivated Recanati’s Availability Principle (see section 3.4.2). Although I argued there that this principle leaves us stranded when intuitions conflict, it does seem to be good policy to heed intuitions when they are coming through loud, clear and consistent, as in these cases.

Furthermore, according to the linguistic (semantic) underdeterminacy view, established in chapter 2, the logical form of a linguistic expression seldom, if ever, determines a truth condition, so that pragmatics is inevitably required in the recovery of a fully propositional representation. Even such essential elements of what is said as referents of referring expressions require principle-guided pragmatic inference and these cannot be relegated to implicature except on pain of never achieving full propositionality (truth-conditionality). There is no direct inference from "x is pragmatic" to "x is an implicature (so not truth-conditional)".

In this context it’s worth mentioning a (methodological) principle frequently employed by philosophers of language following Grice: ‘Modified Occam’s Razor’ (MOR), according to which ‘Senses (linguistic meanings) are not to be multiplied beyond necessity’ (Grice 1967/78/89b, 47). This is essentially a principle of theoretical economy; it entails that, instead of positing a linguistic ambiguity to account for multiple interpretations of a linguistic expression, pragmatic principles and inferences, which are independently motivated, should be employed, wherever possible. Advocates of the
implicature accounts of 'and'-conjunctions and belief contexts just discussed above, would employ this principle to counter suggestions that 'and' is ambiguous between a truth-functional meaning and a temporal sequence meaning, and 'believe' is ambiguous between an opaque and a transparent context reading.

However, once underdeterminacy and its implications are recognised, it becomes clear that employment of this principle can, at best, take us only part of the way to a full account; having established that some aspect of utterance meaning is to be accounted for pragmatically rather than semantically, the issue remains whether it contributes to explication (Recanati's enriched 'what is said') or is an independent, implicitly communicated, proposition. Obviously, MGR cannot choose between two pragmatic options. The same goes for Grice's standard diagnostics for conversational implicature, the two most generally employed being calculability (on the basis of conversational maxims) and cancellability without contradiction. These, of course, hold for all pragmatic meaning, whether an implicature or a contribution to truth-conditional content. It is for this reason that some of us have played with other criteria in an attempt to find a principled basis for deciding between the two pragmatic possibilities in any given case.

Recanati (1989a/91, 1993) has proposed the Availability Principle. I have argued, in section 3.4.2, that since intuitions are so often variable and manipulable, they cannot provide the basis for a general reliable criterion and that the principle is based on the erroneous claim that we have conscious access to the level of 'what is said' (explicature) but not to (any aspects of) linguistic meaning.

3.6.1 Minimalist principles
In Carston (1988), I discussed two 'minimalist' principles which, though seldom made explicit, seem to guide philosophers in distinguishing pragmatic contributions to the proposition expressed (what is said) from implicated meaning; they are minimalist in that they reflect a concern to keep pragmatic contributions to the explicit level, the level of 'what is said' to a minimum. These are the linguistic direction principle and the minimal truth-evaluability principle. I argued that neither of these is satisfactory, at least not for a cognitive account of utterance interpretation. I shall discuss them only briefly here.

The logical form or semantic representation which is the result of linguistic
decoding contains variables and/or slots which require filling by pragmatic inference. Recanati calls this sort of pragmatic process ‘saturation’. According to the linguistic direction principle, a pragmatically derived element of utterance meaning may contribute to the level of what is said if and only if it is required to give a value to a slot or variable in the decoded semantic representation, that is, iff it is a case of saturation. The obvious instance is the constrained variables which are the encoded character of linguistic expressions used to refer, some of which were discussed in section 3.5.3 in the context of Bach’s concept of what is said and indexicals. Are there any others? Cases of grammatical ellipsis, as in (70), seem to involve a variable or slot, but the unexpressed material here is entirely recoverable by grammatical means:

(70) a. Jane wants apple pie and Bill [] chocolate mousse.
    b. Although [] unwell, Sam gave a brilliant lecture.
    c. Vlad likes football and so does Nick.

Pragmatic inference is not only not required to saturate these slots, it is prohibited from overriding the grammatically dictated value; for instance, (70a) cannot be understood as Jane wants apple pie and Bill loathes chocolate mousse, even if it is blindingly contextually salient that Bill does indeed loathe chocolate mousse.

There are a few other examples which have been suggested in the literature as involving pragmatic saturation of linguistically given slots, but there is no general consensus on these:

(71) a. Kate’s picture is hanging in the Tate.
    b. Everyone went home early.
    c. I haven’t eaten.

For the genitive form in (71a), the grammar might supply a relation variable whose value has to be pragmatically fixed: picture painted by Kate, picture of Kate, picture owned by Kate, Kate’s favourite picture, etc. There may be a domain variable for the bare quantifier in (71b) whose value, again, has to be supplied by pragmatic inference: everyone in the linguistics department at UCL, everyone at Bill’s party, etc. And for
it may be that a temporal span slot accompanies the past perfect tense, so pragmatic determination is required, a likely value in this example being ‘today’ or ‘in the last several hours’.

As we’ve seen, Bach entertains two notions of what is said; one is purely semantic in that it excludes any element of meaning that involves the speaker’s intention; the other, more liberal, notion seems to allow just those pragmatic contributions that are required for saturation (Bach 1994a, 282-83), though he would not treat the examples in (71) as such cases. In accordance with this principle, he distinguishes between syntactically generated slots and variables, which must be filled in order to arrive at what is said, and those which are conceptually but not linguistically mandated, so do not have to be filled in order to arrive at what is said. The examples he has in mind include ‘finish’ as opposed to ‘complete’ and ‘eat’ as opposed to ‘devour’:

(72)  

a. He completed the essay.  
b. He finished at midnight.

Supposing the referent of ‘he’ in both cases is ‘Nick’, then what is said in (72a) is ‘Nick completed the essay’, while what is said in (72b) is ‘Nick finished at midnight’. Even if it is perfectly clear that what he finished is the essay, it is not a constituent of what is said, as there is no syntactically specified slot for an object. So what is said is not fully propositional (does not have a determinate truth condition). Similarly, subsentential utterances (‘on the table’, ‘John’s father’), which, arguably, do not come embedded in a logical form full of slots or variables, would, according to this principle, say something which falls well short of a full proposition. This in itself is enough to render this notion of ‘what is said’ inadequate and pointless for many. It falls between two stools: it is more than the decoded linguistic meaning and it is less than a level to which a truth-conditional semantics can be applied. From the point of view of a theory of utterance interpretation, it does not define any representational level within the account, neither that level which is the essential stable input to pragmatic processes, the level of linguistic meaning (logical form), nor any natural subclass of those representations which fall within the speaker’s communicative intention and the hearer’s warranted
interpretation (explicatures or implicatures).

In Bach's case, there is the further issue that he distinguishes two additional levels to 'what is said': impliciture and implicature, where impliciture is very close to the relevance-theoretic level of basic explicature: it is a fully propositional development of the logical form and is communicatively intended; it involves a considerable contribution from pragmatic inference, not just to complete it (make it truth-evaluable), but also to ensure that it is the propositional form that the speaker intended. So, the issue of distinguishing among the contributions of pragmatic inference arises again: which are constitutive of impliciture and which are implicatures? Bach does not address this.

The second minimalist principle overlaps in its predictions to a large extent with the first, except where what the first determines is subpropositional. The *minimal truth-evaluability principle* says that a pragmatically derived element of utterance meaning may contribute to the level of what is said if and only if it is required to arrive at a complete proposition, that is, a truth-evaluable entity. Anything beyond that is to be considered an implicature. I think that Grice observed this second minimalist principle; his discussions distinguishing what is said from what is implicated (whether conventionally or conversationally) focused on distinguishing those aspects of overall utterance meaning which were necessary in determining the truth value of the utterance from those that were not. The implicature analyses, mentioned at the beginning of 3.6, of definite descriptions that do not denote a unique entity, of 'and'-conjunction relations, and of the opacity of belief contexts, are also 'minimalist' in this way about what is said. And the principle seems to guide many accounts that equate the domain of truth-conditional semantics with what is said; Cappelen & Lepore (forthcoming) and Reimer (forthcoming) cite many proponents of this view, including Davidson, Kaplan and Soames (see endnote 9 of this chapter).

So what is wrong with this view? To answer this it is useful to look at utterances whose logical form seems to require just reference assignment and/or disambiguation in order to be minimally propositional (hence truth-evaluable), but which are either trivially true or blatantly false, and so do not fall within the set of assumptions which comprise the intended interpretation of the utterance:
(73)  a. It'll take time to complete this thesis.
b. Delays are possible.
c. Something's happened.
d. I haven't eaten.
e. There's nothing on telly tonight.

The minimal prepositional forms assignable to (73a)-(73c) are virtually always trivially true: every undertaking takes a span of time, delays are always within the realm of what is possible, at any point in (human) time, there has been some occurrence or other. The minimal prepositional forms assignable to (73d)-73e) are obviously false, since the speaker has eaten in her life, and there is something or other on the telly. The general point for the two types of case is the same: across the vast majority of contexts, this propositional form does not interact productively with the hearer's existing assumptions about the world. It is either already so well known that it cannot be made more highly manifest to the hearer, or it is so plainly untrue that it will not be treated by the hearer as a manifest assumption at all; in both cases a local process of pragmatic strengthening is required in order to recover a propositional form which could be informative and relevant. For instance, (73c) might be strengthened to (74a) and (73d) to (74b):

(74)  a. Something of an untoward sort has happened [on the motorway].
b. There's nothing worth watching on the telly tonight.

Recanati (1993) calls these cases of 'free enrichment', distinguishing them from saturation, as the push for the pragmatically derived material is entirely cognitive, not indicated by any linguistic element. It might be noted that, in the positive case, the pragmatic process results in a propositional form which is logically stronger than the minimal one, while in the negative examples, the process results in a logically weaker one ('There's nothing on telly', arguably, entails 'There's nothing good on telly'). The process is local in each case, that is, it strengthens or precisifies a constituent of the proposition. Relative logical strength of propositions is just not to the point; in both cases the proposition derived by the pragmatic process is cognitively stronger in the sense that it is more informative/relevant than the minimal one; it has cognitive effects.  

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Minimalists would probably agree that the minimal propositions derivable from (73a)-(73e) are not what the speaker meant, while the representations in (74a)-(74b) are; they would insist, however, that the minimal proposition is what was said and that what was meant in each case is an implicature. This is, in fact, at odds with Grice's position that what is said is meant, though he doesn't seem to have been wholly consistent on this matter. More to the point, in the current context of a cognitive account of ostensive communication and inferential interpretation, is the fact that minimal propositions of this not-meant (not communicated) sort are not among the constructs of the theory, as they are neither communicated assumptions nor the vehicle by means of which these assumptions are recovered.

Delivering the propositional forms intended by the speaker (or forms appropriately similar to them) is what pragmatic maxims/principles are all about; they are not employed so as to enable recovery of a minimally truth-evaluable proposition, which, more often than not, neither falls within the speaker's communicative intention nor has any role to play in the interpretation process. Neither of the two principles will do for the theory of the cognitive representations and processes involved in ostensive-inferential communication. The linguistic underdeterminacy thesis entails that there is considerable pragmatic work involved in arriving at the proposition the speaker intends to express; the users of one or other of these minimalist principles have either ignored the import of this thesis for an account of verbal communication, or are involved in some other endeavour altogether, perhaps an attempt to carve out a level that might serve as the appropriate domain of a semantic theory of some sort. For further discussion, see Carston (1988) and Recanati (1989b/91, 1993).

3.6.2 Functional independence

In Carston (1988), I suggested a different sort of principle for deciding on whether or not a pragmatic inference resulted in an implicature or contributed to an explicature. This was called the functional independence principle; the idea behind it was that the proposition expressed (the explicature) and implicatures should play independent roles in the mental life of the hearer; if an alleged implicature was such that its role in subsequent inferences such as the derivation of contextual effects subsumed the role of the alleged proposition expressed, then the alleged implicature was most likely really a
pragmatic aspect of the proposition expressed.

Truisms, such as those in (73a)-(73c), have few, if any, cognitive effects, so that the richer propositions which are pragmatically inferred here subsume their inferential role and go well beyond it. By the independence principle, it follows that these richer propositions, two of which are given in (74), are not implicatures but the proposition explicitly expressed by the utterance. A more striking case, discussed in the next chapter, is the following ‘and’-conjunction, where it is apparent that a cause-consequence connection between the two conjuncts is communicated:

(75)  a. He applied bleach to the sink and the dirt dissolved.
    b. His application of bleach to the sink caused the dirt to dissolve.

Assuming that the causal connection is not part of the decoded meaning but is derived pragmatically, it could be an implicature or could contribute to the proposition explicitly expressed. According to the functional independence principle, the latter construal is the correct one, since whatever cognitive effects the truth-functional conjunction may have, they are but a proper subset of those that the pragmatically derived causally connected proposition has. That is, there is no independent role for the truth-functional conjunction to play.

Recanati (1989b/91) finds the principle inadequate, at least in one of its manifestations, and provides a clear counterexample. He characterises it as follows:

*Independence principle*: conversational implicatures are functionally independent of what is said; this means in particular that they do not entail, and are not entailed by, what is said. When an alleged implicature does not meet this condition, it must be considered as part of what is said.

(Recanati (1989b, 316), my italics)

First, this is not quite right; nowhere in the paper did I endorse that part of the statement that I have italicised. As discussed in section 3.3.2 above, it seems quite possible to me that a speaker could implicate an entailment of the proposition her utterance expresses, for instance:
Here, it is at least arguable that B implicates that she bought some fruit, which is the answer to A's question. Unlike Grice, relevance theorists do not claim that entailments and implicatures are necessarily mutually exclusive; indeed they are concepts that function at different explanatory levels. However, Recanati's main point concerns the non-italicised part of his statement of the principle, and this I did say at various points throughout the article. Here is his counterexample:

(77) A: Was there anybody rich at the party, who might be asked to pay for the damages?
B: Jim is rich.
A: Yes, but did he go the party?
B: I don't know, but I can tell you that if anybody was there, Jim was there.
A: Somebody was there - this I know for sure (I saw John going there). So it looks as if the damages will be paid for, after all.

(Recanati (1989b, 320))

It is clear that the beginning of A's last reply, 'Somebody was there', implicates that 'Jim was there', given the premise supplied by B's previous utterance, 'If anybody was there, Jim was there'. This implicature, that Jim was there, entails the proposition explicitly expressed, that somebody was there. So, according to the Independence principle, it should be considered a part of what is said rather than a genuine implicature. This prediction is simply wrong. There are a couple of points to make here. First, in the paper I vacillate between a functional characterisation of the notion of independence that I'm looking for and a logical characterisation. The logical characterisation is simpler and clearer: an implicature should not entail the proposition expressed; it is this that Recanati takes up and he shows, correctly, that it cannot be right. The argument that I have levelled against the minimalists applies here too: it is a mistake to assume that logically based principles necessarily have a cognitive correlate.

The rather vaguer notion of 'functional' independence concerns the requirement
that the proposition expressed by the utterance and its implicatures play independent roles in the hearer's inferential processing, specifically that they function independently as the premises and conclusions of arguments (see Carston (1988, 158)). Interestingly, this condition seems to be met by the example in (77): 'Jim was there' is the conclusion of a deductive inference, one of whose premises is the proposition expressed by the utterance, namely 'Someone was there'; so the functional characterisation seems to correctly predict the status of 'Jim was there' as an implicature rather than a pragmatic contribution to the level of what is said. A more compelling counterexample would involve a communicated assumption which, like the example here, is clearly an implicated premise (rather than an implicated conclusion) and entails what is said; I have not come across such a case.

However, it is not clear to me that 'functional independence' is worth any kind of vigorous defence; it was in fact intended as only a useful heuristic and should probably never have been elevated by the label 'principle' at all. I was (and am still) of the view that the principle of relevance itself effects a sorting of pragmatic inferences into contributions to the proposition expressed and implicatures, and so subsumes whatever correct predictions 'functional independence' might make. In his bid for an optimally relevant interpretation, the addressee's pragmatic work is appropriately apportioned between proposition expressed and implicature. As Sperber & Wilson put it recently: "Any interpretation ... results from mutual adjustment of the explicit and implicit content of the utterance. This adjustment process stabilises when the hypothesized implicit content is warranted by the hypothesized explicit content together with the context, and the overall interpretation is warranted by (the particular instantiation of) the communicative principle of relevance" Sperber & Wilson (1997, 120). This has some interesting implications for the interpretation of non-literal uses of language, such as metaphors, as will be seen in chapter 6.

The various minimalist principles, the Availability principle and the Scope principle (yet to be discussed) are generally thought of, not as principles employed by hearers in their utterance understanding processes, but as useful tools that pragmatic theorists can turn to in order to reach, or justify, particular analyses of utterance meaning. Bearing this in mind, I move to what has turned out to be the most useful criterion or test, in practice, for distinguishing between these two roles that
pragmatic contributions may play.

3.6.3 Embedding tests

Along with the Availability principle, Recanati (1989b/91) proposed a further principle, called the **Scope principle**, which is intended to provide the pragmatist (as opposed to the addressee engaged in utterance interpretation) with a criterion for delineating the distinction between explicating/saying and implicating:

A pragmatically determined aspect of meaning is part of what is said and, therefore, not a conversational implicature) if - and, perhaps, only if - it falls within the scope of logical operators such as negation and conditionals.

In fact, the insight embodied in this principle had already been employed for some time as a kind of test for toning up intuitions about truth-conditional content. It seems to have begun with Cohen (1971)'s use of the following two examples in order to demonstrate that Grice couldn't simultaneously maintain the truth-functionality of 'and' and of 'if':

\[(78)\]
\[\begin{align*}
\text{a. } & \text{If the old king has died of a heart attack and a republic has been declared, then Tom will be quite content.} \\
\text{b. } & \text{If a republic has been declared and the old king has died of a heart attack, then Tom will be quite content.}
\end{align*}\]

Given the alleged truth-functionality of 'and', the antecedents of the two conditionals must be truth-conditionally equivalent, from which it follows that the two conditionals are truth-conditionally equivalent. However, this does not seem to be so; the temporal relation understood to hold between the conjuncts seems to be an integral part of the antecedents, so that the two are truth-conditionally distinct and could well differ in truth-value, Tom being happy with one sequence of events but unhappy with the other. As will be seen in later applications of the test, the same result can be achieved by embedding the sentence under scrutiny in the scope of other operators including negation, disjunction, and comparatives. Assuming that the only options in accounting
for the temporal connection are a Gricean implicature or a richer semantics, Cohen favours the latter. Relevance theorists, on the other hand, have used the results of this embedding test, together with a pragmatic account of how the temporal ordering arises, to support an account on which this is a pragmatic contribution to the proposition explicitly expressed (explicature, what is said). This is the subject of the next chapter.

Recanati (1993) demotes the Scope principle, in favour of the Availability principle, because of the problem created by so-called metalinguistic uses of logical operators:

(79) a. I am not his daughter; he is my father.
   b. If you use elevators and sidewalks you must be from America; in England we have lifts and pavements.

The salient feature of these examples is that some property other than truth-conditional content seems to be falling within the scope of the logical operator: in (79a) some connotation assumed to be carried by a readiness to declare oneself someone’s daughter, in (79b) the use of the lexical items ‘elevator’ and ‘sidewalk’. This sort of metalinguistic use can be applied to virtually any utterance property: phonetic, intonational, grammatical, stylistic, etc. I take it that the problem Recanati thinks this presents for the Scope principle is that the principle can only fulfil its purpose of distinguishing the two types of pragmatic contribution if, as it is often misleadingly put, the operator is not being used metalinguistically. For instance, if the conditionals in the Cohen examples in (78) are being used in this way, then nothing follows about the truth-conditional content of the conjunctive antecedents; it could be that the order of presentation of the two parts is being metarepresented, that the focus is on the implicature that this gives rise to, and, as a result, the consequent is in an implication relation with this implicature rather than with the truth-conditional content of the antecedent.

In my view, more fully explicated in section 5.4 on metalinguistic negation, the operators themselves are not being used in any special way; what the difference between descriptive and metalinguistic uses comes to is whether or not some feature, linguistic or conceptual, of the embedded material is being used metarepresentationally. Provided
one can discern this, one can tell whether or not the embedding test can be applied to provide evidence in distinguishing implicatures from truth-conditional contributions. In many instances it is perfectly clear, as in the examples in (79), but there are others where it is not; then other considerations have to be brought to bear in deciding whether the use is descriptive or metarepresentational, and so whether the test can be properly applied or not. Used with care, the scope embedding test is a helpful tool, though it should probably not be given the status of a principle.

It has also been employed to another end within relevance theory: to test whether the encoded content of a lexical item contributes to the proposition expressed (truth-conditional content) or to a higher level explicature (this concept was discussed in 3.3.1). For instance, intuitions that the sentence adverbial ‘sadly’ does not contribute to the truth conditions of the utterance in (80a) are supported by embedding it in a conditional, as in (80b) (or a factive clause as in (80c)), and considering what the truth of the consequent seems to depend on:

(80)  

a. Sadly, Mary hasn’t got into Cambridge.  
b. If, sadly, Mary hasn’t got into Cambridge she’ll have to go to Hull.  
c. Mary will have to go to Hull, because, sadly, she hasn’t got into Cambridge.  
d. Mary hasn’t got into Cambridge.  
d’. It is sad that Mary hasn’t got into Cambridge.  

It seems clear enough that, in both (80b) and (80c), Mary’s having to go to Hull follows just from (80d), and not from (80d’). Note that the only two options considered here are the proposition expressed or higher level explicature; for independent reasons ‘sadly’ is not taken to contribute to an implicature. All the test can do is sharpen up intuitions about whether some element of utterance meaning is truth-conditional or not; if it is not, then, depending on the options independently established, it may be a conversational implicature, a higher level explicature or something else. For extensive use of this test, employing a number of different operators, to distinguish truth-conditional contributions from higher level explicature contributions, see Ifantidou (1993, 1994) and Ifantidou-Trouki (1993).
Finally, it will be interesting to see what the test indicates for cases of non-literal use, such as metaphor and other loosenings:

(81) a. If this argument is *rock solid*, the problem is solved.

b. Paul isn’t a *lion*; he’s a *pussycat*.

c. She called the chef because her steak was *raw*.

The issue here is whether the pragmatically inferred non-literal meaning (communicated by the use of ‘rock solid’, ‘lion’, ‘pussycat’ and ‘raw’) contributes to the proposition expressed or is only implicated. For instance, is the negative utterance in (81b) inevitably true, since Paul (a human being) does not belong to a certain class of feline mammals, or could it be judged false if Paul has certain qualities of courage and nobility? This is considered in chapter 6, where I explore the idea that pragmatic loosenings, like pragmatic enrichments, do contribute to the proposition explicitly expressed. I shall suggest that there are two sets of conflicting intuitions affecting judgements about these particular embeddings.

3.7 Conclusion: from generative semantics to pro-active pragmatics

Grice’s idea that there are prevailing standards of rational communicative behaviour, embodied in his Cooperative principle and conversational maxims (see appendix 2), has effected a revolution in the way linguistically communicated meaning is thought about and analyzed. What his idea entails is that communication is possible without the use of a code, that a communicator conveys her thoughts by, so to speak, opening her mind in a certain way to her addressee, so that he is able to infer (non-demonstratively, of course) her intention.

Work in the framework of generative semantics had aimed to pack into the deep semantic structures of the language the myriad elements of meaning that a single surface form might be understood as having (E. Bach, Fillmore, Lakoff, Ross, Seuren are some of the main figures in this tradition). For instance, that a verb in the imperative mood (e.g. ‘Leave now’) might communicate an order, a request, permission or advice, was explicitly encoded at this level in distinct semantic representations; various deletion rules
were postulated as operating on these structures, so as to account for the absence of the performative verb in the surface structure. Indefinite NPs (e.g., 'a symphony') provide another example: these might communicate a universal, an existential, a generic, or a specific understanding, each of which would, again, be encoded by a distinct operator at deep structure, all the different possibilities mapping onto a single surface structure via grammatical transformations of some sort. This sort of approach raised many worries, due to the baroque, arbitrary, and unconstrained derivational processes involved, and the apparent nonrecoverability of the deleted content.

With the advent of inferential pragmatics came a complete methodological turn around. The questions that linguistic semantics should be trying to answer changed significantly. What is it about the imperative mood that makes it possible to communicate this range of speech acts? What is it about the indefinite that gives rise to these inferences about how it can be understood? Allowing that language users bring a rich body of contextual assumptions to communication, and that they have specifically communicative inferential capacities, which they can apply to augment considerably the linguistic content, suggests a strategy diametrically opposite to that followed in generative semantics: go for as lean a linguistic semantics as is possible. (See Nunberg & Pan (1975) for an interesting early exposition of this altered perspective.)

Grice's basic insight has been hugely extended by two subsequent theoretical developments: (a) the recognition of the radical linguistic underdeterminacy thesis, which takes pragmatic inference right into the proposition expressed ('what is said') by uttering a linguistic expression; and (b) the transplantation of inferential pragmatics from its original restrained social-philosophical milieu to the teeming underworld of human cognitive processing, brought about by relevance theory, which highlights its pervasive and prolific nature. The balance has tipped, from encoded meaning with inferential additions, to pro-active pragmatic inferencing constrained by bits of encoding. (See Wilson (forthcoming b) for further discussion of the shift from the code model of communication to the inferential view and its implications.)

One important implication of the underdeterminacy thesis and the thorough cognitivization of pragmatics is that the concept of what is explicitly communicated cannot be equated with linguistically encoded meaning, or some minimal boosting of it, to fill linguistically indicated slots or to meet some logical requirement of minimal
propositionality. The notion has to answer to the cognitive imperative of playing an active role in the achievement of an overall interpretation which is consistent with the communicative principle of relevance.

The next three chapters trace some of the implications of the ideas in chapters 2 and 3, for three key domains of pragmatic theorising: ‘and’-conjunctions, negation, and loose (including metaphorical) uses of linguistically encoded meaning. I have addressed elsewhere in some detail another central topic in pragmatics, the range of phenomena claimed to fall within the category of scalar implicature (see Carston 1990/95, 1997c).
Notes

1. At the end of the book, Gazdar raises the question of whether the semantic autonomy thesis can be maintained. As stated by Gazdar, this is the thesis that a complete theory of the truth conditions of natural-language sentences/utterances need make no reference to pragmatic properties. He leaves the question unresolved, after having found some apparent problems for the thesis, some of which were mentioned in the previous chapter (2.5). In his review of Gazdar's book, Stalnaker (1980) points out that the thesis as stated by Gazdar is clearly false, due to indexicality and other obvious contextual dependencies of aspects of truth-conditional content. However, he points out that 'this rejection does not prevent us from holding that truth-conditional semantics is a self-contained subject matter that can profitably be studied in abstraction from pragmatics. A compositional semantic theory may take certain semantic determinants as unexplained givens: a domain of discourse, reference classes, assignments of referents to deictic pronouns. Its job is to explain how the contents of complex expressions are a function of the meanings of their parts, together with the semantic determinants. Pragmatics has the complementary job of explaining how the semantic determinants are determined by identifiable features of context ...' (Stalnaker 1980, 905). This more reasonable semantic autonomy hypothesis presumably lies behind the work of truth-conditionalists such as Higginbotham and Larson & Segal.

2. I will not discuss Grice's system of maxims here or elsewhere; they are listed in appendix 2. They have been widely used and abused. With regard to a cognitive processing approach to utterance interpretation, they cannot compete with the relevance-based criterion (see Wilson & Sperber 1981, Sperber & Wilson 1986a/95, 1987).

3. I find this analysis inadequate, on at least two counts: the maxim involved does not account for the referential inference, and the alleged implicature, with its mention (as opposed to use) of particular linguistic items (e.g. "he") does not look like anything one would want to attribute to a speaker's informative intention. I address this second point below briefly, but close assessment of this analysis lies outside my immediate concerns here; for discussion of Levinson's (and Horn's) two informativeness maxims and the distinct classes of implicatures they generate, see Carston (1990/95, 1997).

4. Levinson is embarked on the development of a theory of default or preferred interpretations. These are taken to be generalised conversational implicatures, in Grice's sense (see section 3.2.3 below). The theory involves developing a system of non-monotonic default rules which, while based on the two quantity maxims and the manner maxims, are attached to particular linguistic elements; for instance, in the absence of defeating contextual assumptions, a partitive use of 'some x' implies 'not all x'. I have seen only preliminary work on this theory; a full account is due out soon (Levinson forthcoming).
5. Some references to work of philosophers employing the suspect linguistic manoeuvre are Austin (1956/57), Benjamin (1956), Malcolm (1949), Ryle (1949), and Wittgenstein (1953).

6. In preparing this section I found the discussions by Travis (1991) and Neale (1992) very helpful.

7. The original version of the distinction, given in Grice (1961), was 'stating' versus 'implying'. As Harnish (1976, 332, 337) points out, the shift to 'implicating' removed the unwanted 'logical' sense of 'imply', and, more important here, the shift from 'stating' to 'saying' enabled a broadening of scope to include 'telling' and 'asking' as well as 'stating'. See also discussion by Bach (1994b, 143).

8. The analysis of 'U (the utterer) said that p' is as follows:

"U did something x (1) by which U meant that p
which is an occurrence of an utterance type S(sentence) such that
S means 'p'
S consists of a sequence of elements (such as words) ordered in a way licensed by a system of rules (syntactical rules)
S means 'p' in virtue of the particular meanings of the elements of S, their order, and their syntactical character."

(Grice 1967/69/89, 87).

9. Subsequent to writing this section I read a paper by Reimer (forthcoming) which appears to lend support to the view that the Gricean "what is said" and sentence semantics (construed truth-conditionally) are coextensive. She discusses the following assumption (X) made by many people currently working within different semantics programmes (from Davidson to Kaplan):

(X) An adequate semantic theory \( T \) for a language \( \mathcal{L} \) should assign \( p \) as the semantic content of a sentence \( S \) in \( \mathcal{L} \) iff in uttering \( S \) a speaker says that \( p \).

She is responding to Cappelen & Lepore (forthcoming) who find this an inadequate basis for a semantic theory, since many reports of what someone has said plainly overlap only partially with the semantic content of the original sentence uttered. Reimer retorts that they are wrong to take "says" here in a pre-theoretic, ordinary usage sense; rather, as used by semanticists, "says" should be (and standardly is) understood as the strict Gricean notion of "saying".
10. As well as being the standard view among semanticists, some pragmatists in the Gricean tradition make a strict distinction between the processes involved in disambiguation and reference assignment and those responsible for implicatures. For instance, Asa Kasher, in a series of articles about types of pragmatics, distinguishes an ‘interface pragmatic system’ from central pragmatics. Central pragmatics involves the operation of rational communicative principles of a Gricean sort and accounts for implicature, indirect speech acts, and stylistic effects, while the interface system seems to be concerned with the pragmatic aspects of ‘what is said’ and does not involve communicative principles (see Kasher 1991b, 390-91). Elsewhere, he makes a further distinction (of a Russellian sort), between ‘acquaintance indexicals’ and ‘description indexicals’, and says: ‘As a first approximation to an analysis of the psychologically possible acquaintance indexicals, we make a peri-pragmatic suggestion: the pairing of such an indexical with the appropriate element of a context of utterance must be made by a perceptual input system, without recourse to the background beliefs accessible only to the central cognitive systems. On the plausible assumption that not too many aspects of any context of utterance are grasped by such informationally encapsulated systems, our suggestion imposes a psychological restriction on the class of possible acquaintance indexicals.’ (Kasher 1991c, 571-2). I take it that this is akin to a distinction between ‘pure’ indexicals (‘I’, ‘you’, ‘here’, ‘now’) and the rest of the indexicals, in which case it concerns only a small subset of the reference fixings involved in arriving at what is said. This issue arises again in section 3.5.3 in a discussion of Bach’s distinction between narrow context and broad context, which rather closely parallels the (more psychologically oriented) distinction Kasher is making between perceptual system pragmatics and central system pragmatics.


12. Grice’s early analysis of what it is for an individual to mean something by an utterance x (where ‘utterance’ refers not only to linguistic productions but to any communicative (i.e. ostensive) behaviour) was as follows:

‘[S] meant something by x’ is (roughly) equivalent to ‘[S] intended the utterance of x to produce some effect in an audience by means of the recognition of this intention’

(Grice 1957/89b, 220)

This analysis underwent many revisions, both by Grice himself and by others, but the crucial reflexivity of intention was retained.
13. By a "weak" speech act description I mean one that does not carry the sort of speaker commitments of specific speech acts like "asserting that", "requesting that", etc (though, these too may, on occasion, be communicated). The idea is that propositional forms (enriched logical forms) may be integrated into assumption schemas such as "X says that P" and "X tells Y to P", where "says that" and "tells" are merely reflections of different ways in which a representation can be entertained (as a description of an actual state of affairs or as a desirable state of affairs). See discussion in Sperber & Wilson (1986a/95, 247-54).

Note that "says that" here is quite different both from Gricean "saying" (as discussed above) and from its ordinary usage in reported speech, where the embedded clause in an utterance of, for example, "Tony Blair said that life will improve for all of us" may be a very satisfactory report while not coinciding with the propositional form of any of his utterances (it may be an implicature or simply a summary with a range of implications in common with propositions he has expressed).

14. As Ifantidou (1994, 69-70) points out, there is an omission here in the Gricean account. Grice (1978/89b, 42) is explicit that he does not wish the communication of the propositional attitude of speaker belief in what she says to be treated as a conversational implicature. Since it is obviously not part of what is said, nor a conventional implicature (as it depends on the maxims of Quality), there doesn't seem to be any place for it within the Gricean framework.

15. It turns out that the facts are rather more subtle than this: illocutionary (e.g. 'frankly') and attitudinal (e.g. 'sadly') adverbials do not contribute to the truth conditions of the utterance, while evidentials (e.g. 'clearly', 'possibly') and, much more obviously, hearsay adverbials (e.g. 'allegedly', 'reportedly') do contribute to truth conditions. See Ifantidou-Trouki (1993) and Ifantidou (1994).

16. Arguments for this are given in Wilson & Sperber (1993a) and Ifantidou (1994). At this point it may seem that no arguments are needed. However, recall the distinction between conceptual and procedural encodings discussed briefly in the previous chapter, and to be discussed again shortly (in section 3.3.3). The point of the arguments is to show that these adverbials are not cases of procedural meaning.

17. An alternative account of sentence adverbials treats them as parentheticals. Like the parenthetical phrases in (a) and (b), the sentence adverbials receive so-called comma intonation:
   (a) Sue hasn’t a hope, I’m afraid.
   (b) Pat, on the other hand, might make it.
   (c) Frankly, she hasn’t a hope.
   (d) She, obviously, hasn’t a hope.

Haegeman (1991) and Espinal (1991) investigate the syntax of these as a unitary phenomenon (of ‘disjunct constituents’). On a relevance-theoretic pragmatics, they would not then be seen as directly contributing to a higher-level explicature of the
proposition expressed, but as a separate comment (e.g. ‘I tell you this frankly’), which may then ‘fine-tune’ a higher-level explicature. There is some interesting work on parentheticals within relevance theory (Ifantidou (1993), (1994) and Rouchota (forthcoming)).

18. This first shot is undoubtedly false and serves merely to open up the possibility of a single utterance having a set of logical forms. On the one hand, as Diane Blakemore pointed out to me, there are embedded clauses which cannot be detached and developed into independent explicatures; non-finite clauses are certainly of this sort (for example, the embedded clause in ‘she wanted to dance on the table’) and the finite/non-finite clause distinction might be a good place to start in refining the account. On the other hand, as Deirdre Wilson pointed out to me, phrasal utterances and some embedded fragments have a logical form, but they might not be properly analyzed as dominated by a CP node. Indeed, if a parenthetical account of sentence adverbials (see previous footnote) turns out to right, it may be that ‘frankly’, etc. are among those phrases which are not embedded under their own CP or IP node. Clearly, if the multiple logical forms per utterance account is to survive, an adequate characterisation of a logical form needs to be found.

19. Clark (1996, 143-146) also points out this problem, within a broader discussion of the false assumption that ‘what is said’ is well defined for every type of utterance.

20. The main work on the interpretation of subsentential utterances using a relevance-theoretic framework is Stainton (1994, 1997). While this is a very subtle and convincing account for the most part, it is worth noting that he does not use the concept of ‘explicature’ but instead focuses on the making of an assertion via a lexical or phrasal utterance. This may give rise to some of the same reservations as just made with regard to claims that a speaker said something fully propositional with his non-sentential utterance.

21. I think there are some problems both with the data Gibbs & Moise used and with their underlying semantic/pragmatic analyses (for instance, the very counterintuitive ‘at least’ semantics for cardinal terms), so I do not give much weight to these results. Nicolle and Clark (forthcoming) have run similar experiments and found that in certain conditions subjects select an implicature rather than an explicature (equivalently, an enriched ‘what is said’). It looks very much as if a key feature in manipulating subjects’ intuitions (and hence their interpretation of the term ‘what is said’) concerns where the main relevance (the bulk of cognitive effects) is located; this may lie with an explicature or with a strongly communicated implicature.

22. I say "seems to" since it may be that the first two levels do not pick out different elements or levels of meaning at all, but are simply different ways of construing one and the same aspect of utterance meaning. The terms ‘logical form’ or semantic
representation locate this content in the linguistic system, while the concept of 'what is said' relativizes it to an utterance, to an act of communication, to language users. If so, 'what is said' just is the logical form of the linguistic expression uttered on a particular occasion. As the discussion to follow shows, much of the time it seems that it is this wholly semantic (intention-free) notion of 'what is said' that Bach has in mind.

23. Stalnaker (1989) notes a shift in Grice from the 1967/75/89b discussion of what is said by an utterance of 'he's in the grip of a vice' to this definition of saying where 'the qualifications about context dependence drop out'. He continues 'A correct account of saying would have to recognize the ways in which context as well as meaning determine what is said.' (Stalnaker 1989, 8).

24. In Sperber & Wilson's terms, the propositional form constructed from the embedded sentence is in a relation of interpretive resemblance (that is, resemblance in content as opposed to resemblance in form) to the propositional form of the original utterance, and the appropriate (optimally relevant) degree of resemblance will differ across contexts (see Sperber & Wilson (1986/95), Wilson & Sperber (1988b) and Wilson & Sperber (1992)).

25. For further discussion of the narrow/broad context distinction, see Bach (forthcoming). Compare Kasher (1991b)'s distinction between reference assignment by perceptual input system (presumably intention-free) and reference assignment by central systems (guided by rational communicative principles), mentioned above in footnote 10 of this chapter.

Regarding membership of the class of pure indexicals, the only case mentioned with any certainty is 'I'; the next most favoured candidates are 'now', 'here', 'former', and 'latter'; then there is a range of other temporal cases such as 'today', 'yesterday', 'tomorrow', 'last week', 'next month', etc. However, problems with the sort of fixed, code-like reference determination that is entailed by the concept of pure indexicality have been pointed out for all of these (even including 'I').

26. Bach (p.c.) says that the notion of what is said is also needed to label the content of the locutionary act [in fact, the rhetic, as opposed to the phonetic and phatic aspects of the locutionary act], as opposed to the il- or per-locutionary acts (in Austin 1955/62's terms). And it is necessary to distinguish the locutionary act from these others in order to allow for cases where the speaker is communicating nothing or is communicating something utterly distinct from anything traceable to the words he is using. Bach and Harnish (1979, 288-89) defend the need for a concept of locutionary act (hence what is said) against attacks by Searle and by Katz. But, again, the sorts of cases mentioned here seem to be explainable in terms of encoded linguistic meaning; for instance, one might say of the first case: he isn't communicating anything but the sentence he uttered has the meaning such and such. Without embarking on an exploration of Austin's concepts, it is not obvious to me that Bach's concept of 'what is said' is quite the same beast as a locutionary act, which has "a more or less definite 'sense' and a more or less
definite reference" (Austin 1955/62, 93). As already discussed, Bach (1987, forthcoming) argues quite forcefully that, with the possible exception of a few 'pure' indexicals (perhaps only "I" in fact), it is not possible to discern indexical reference without recourse to speaker intention (hence to whatever pragmatic maxim/principle mediates ostensive behaviour and recognition of the intention behind it). Since Bach's semantic notion of 'what is said' is intended to be intention-free, I don't see how it can be the same as the locutionary act, even supposing we care to preserve this latter notion, which I doubt. [Many thanks to Kent Bach for an interesting and helpful e-mail correspondence on the concept of 'what is said'.]

27. Modified Occam's Razor is much used by philosophers of language, including those who give pragmatics an extensive role to play in establishing truth-conditional content (see, for instance, Recanati 1993, 1994). I am doubtful about its validity in a cognitive account of utterance semantics and pragmatics such as relevance theory (see Carston 1997a). Within a theory of utterance interpretation conceived as a matter of online cognitive processes, it might well be more economical to retrieve a clutch of stored senses and choose among them, than to construct an interpretation out of a single sense and contextual information, guided by principles of rational discourse. The more so if all senses of an ambiguous word are automatically activated by its phonological form, as much work in psycholinguistics seems to indicate. I am uneasy with the assumption that a monosemous analysis is always to be preferred to a polysemous one, though the "if at all possible, go pragmatic" strategy that it entails is one that I generally follow myself, as it makes for much more elegant analyses and because, for the time being, we lack any other strong guiding principle. Geurts (forthcoming) seems to find the principle in itself a useful heuristic but does not think that it should be associated with Occam.

28. Recanati (1993, 240-44) endorses my dismissal of these principles and extends it to a third which combines these two, the *mixed minimalist principle*. The motivation for this is to exclude instances of conventional implicature cases like 'but' from being taken to issue in a pragmatic contribution to what is said. Some theorists see 'but' as being like an indexical in setting up a slot to be contextually filled, so that according to the linguistic direction principle the pragmatic work prompted by 'but' would contribute to the proposition expressed. Virtually everyone (except Bach) is agreed that 'but' does not contribute at this level, so what the mixed minimalist principle does is place a further constraint on those pragmatically filled slots that enter into what is said: their contribution must be required for the utterance to be truth-evaluable, i.e. to be fully propositional. This principle has the desired excluding effect, but is, of course, prey to the objections to the other two minimalist principles.

29. Of course, not everyone has embraced the Gricean perspective, much less the cognitive processing account of relevance theory. For instance, the work of Seuren (1985, 1994) is a sustained attempt to develop a thorough-going code model account of natural language: it has very rich deep semantic structures and, necessarily, a lot of complex machinery mapping these structures onto the much less elaborated and multiply ambiguous surface structures. One consequence of this is that an encoded semantic
structure in this system may look very much like a relevance-theoretic representation of
the proposition expressed by an utterance, recovered by a combination of decoding and
pragmatic inferencing. An example of this, which will come up in chapter 5, is the
proposition expressed by a sentence like 'I didn’t see three mongeese; I saw three
mongooses', which involves metalinguistic negation, a matter of pragmatics for me, a
matter of linguistic semantics for Seuren (see section 5.4.3).
... and men do not think they know a thing till they have grasped the "why" of it ...

(Aristotle, Physics II, 3)

Only connect!

(E. M. Forster, Howard's End, Epigraph)

4.1 Preserving the truth-functionality of 'and'

Grice (1981) made a few brief remarks about the following examples of 'and'-conjunction:

(1)  a. He took off his boots and got into bed.
    b. He went to bed and took off his boots.

He wanted to provide an alternative to the view that, in order to account for the different ways in which these two utterances would normally be meant and understood, the word 'and' needs to be assigned a sense additional to its logical truth-functional sense. His suggestion was that the understanding of (1a) and (1b) as communicating different sequential orderings of the actions described be attributed to his manner maxim of orderliness; in other words, the understanding is arrived at entirely pragmatically and the sense of the word 'and' need not be thought to diverge from the logical conjunction operator. Naturally, he took the communicated temporal ordering to constitute a conversational implicature (a generalized implicature).
Given the semantic underdeterminacy thesis, this is, of course, not the only option available: the pragmatically inferred relation could be a case of an enrichment at the level of the proposition expressed (the truth-conditional content). Richard (1990, 123), after presenting the Gricean implicature account, says: "We do not come equipped with a meter that reliably distinguishes between semantic and pragmatic implications. Examples like that concerning 'and' and temporal order help make the point that what seems for all the world like a truth-conditional implication may turn out not to be one". I shall argue, to the contrary, that this IS an instance of a truth-conditional implication, albeit one pragmatically derived. Note that his first statement here is probably right, provided we are clear that, by "semantic" we are to understand truth-conditional content (which, given the arguments of the previous two chapters, standardly includes certain elements of pragmatically derived meaning) and by "pragmatic implications" we understand implicatures. The lack of any metre to make the distinction involved is what has led to the various criteria discussed in section 3.6.

The importance of the Gricean suggestion is that it opens up the way to a pragmatic account. Grice saw himself as countering a suggestion of Strawson (1952) that there is a divergence between the ordinary use or meaning of the word 'and' and the conjunction operator, &, of the propositional calculus. But it is not clear to me that it is correct to attribute to Strawson a semantic ambiguity position. As suggested in the previous chapter, it is equally possible that Strawson, along with some of the other ordinary-language philosophers, was simply putting forward a context-sensitive view of saying. If this is right, then the pragmatic position that I advocate is simply a working out of that idea, using theoretical tools not available to Strawson. This is how Recanati (1994) has interpreted the pragmatic enrichment account.

In various papers, I have argued that the pragmatic story, whether Gricean or propositional enrichment, needs to be extended to account for a much wider range of relations understood to hold between the states of affairs described by sentences conjoined by 'and' (see Carston 1985a, 1988/91, 1993, 1994a). Here is a representative set of such examples:

(2) a. It's summer in England and it's winter in New Zealand.

b. He handed her the scalpel and she made the incision.
c. She shot him in the head and he died instantly.
d. He left her and she took to the bottle.
e. He was shortsighted and mistook her for a hatstand.
f. She went to the yoga class and found it very calming.
g. I forgot to hide the cake and the children consumed it.
h. We spent the day in town and went to Harrods.

Apart from (2a), these are all cases of so-called asymmetric or directional conjunction (see Schmerling, 1975); that is, their meaning is crucially affected by the order of the conjuncts - reversing the order radically changes the meaning conveyed. For instance, reversing the order of the conjuncts in (2c) would convey the idea that she shot him in the head after he had died, despite the fact that this runs counter to normal assumptions about how events of shooting and dying connect up. The pragmatic account takes the linguistic semantics of 'and' to be identical to that of the truth-functional logical conjunction operator, so that, as far as their logical forms are concerned, all the examples above are symmetric.

One of the strongest arguments in favour of this very minimal semantics for 'and', with the temporal and consequential relations accounted for pragmatically, is that any semantic account would have to allow for the encoding of a huge range of such relations. Let's look a bit more closely at the examples in (2). (2b) is the standard sort of case of a sequential relation between the two events described in the conjuncts, paraphraseable by 'and then', but the temporal relation most readily understood to hold for (2h) is one of containment, the going to Harrods having taken place during the time spent in town. As regards consequence relations, (2c), (2d) and (2g) can all be understood as involving some such connection, though each case is different: the event in the second conjunct of (2c) is directly caused by the one in the first conjunct (her shooting him is sufficient for his dying); in (2d) the event mentioned in the second conjunct is certainly understood as a reaction to the one mentioned first, though the cause-effect relation here is fairly indirect and requires a mesh of further conditions; in (2g) there is no temptation to talk of a causal relation: the leaving out of the cake is a factor enabling the children to get hold of it and devour it, but it is far from a sufficient condition for their doing so. Furthermore, while a relation of consequence between the
conjuncts standardly involves a relation of temporal sequence between them, as in (2b)-(2d), it need not always do so: in (2e) his mistaking her for a hatstand is a causal consequence of his shortsightedness but the example cannot be paraphrased by 'and then'; similarly, in (2f) the release of tension is a result of the yoga class but is achieved as the class progresses not after it. And so on and on; the more examples one considers the more fine-grained variations among the connections one finds. This suggests that the appropriate explanation is a pragmatic one, according to which communicators are calling on their general knowledge of how states and events in the world connect with each other.

Another argument frequently proffered against a rich semantics for 'and' and in favour of the pragmatic account is that the very same temporal and consequential relations arise when the 'and' is removed. That is, the non-conjunctive (or asyndetic, in traditional terms) counterparts of these examples are understood as essentially identical to them with regard to the information they convey about the relations between the facts described by the individual sentences. (See Posner 1980, Carston 1988/91, 1990/95, Wilson & Sperber 1993b.)

    b. He handed her the scalpel. She made the incision.
    c. He was shortsighted. He mistook her for a hatstand.
    etc.

So, (3b) communicates that he handed her the scalpel before she made the incision, just as (2b) does. Similar observations can be made regarding all the other asyndetic counterparts of the explicitly conjoined examples. While these parallels appear to be incontestable, there are other examples, which show that, though it may be the case that all the conjunct relations are equally well captured by non-conjunctive counterparts, the converse is not the case. That is, there are relations that are communicated by juxtaposed sentences which cannot be communicated when these same sentences are conjoined by 'and'. As far as I know, the first person to point this out was Herb Clark (as noted by Gazdar, 1979, 44), using the following example:
(4) a. John broke his leg. He tripped and fell.
b. John broke his leg and he tripped and fell.

The point is that in (4a) the information communicated by the second sentence can be (and most probably would be) understood as providing an explanation of the event described by the first sentence. So the tripping and falling, though presented second, is understood as having preceded and caused the leg-breaking, presented first. This 'backward' relation between the events is not a possible interpretation when the two sentences are conjoined as in (4b).

In fact this is just one of the relations or connections between two juxtaposed sentences which are precluded when they are conjoined with 'and'. Bar-Lev & Palacas (1980) have pointed out the extent of this phenomenon and the variety of its manifestations. They propose a semantic explanation for why 'and' appears not to allow certain sorts of connections between its conjuncts, thereby rejecting the bare truth-functional semantics for 'and'. The data they consider are of central importance in the semantic-pragmatic analysis of conjunction and their analysis, though not right in my view, captures an insight, which, when recast, leads to a satisfying account of the differences between the conjoined and non-conjoined cases given above. I will look at their account in section 4.3.

This matter has already been addressed to some extent within the relevance-theoretic framework, by Diane Blakemore, in the course of her work on discourse connectives (Blakemore 1987, 1992, 1997). Her subtle analysis accounts for the non-equivalence entirely in pragmatic terms and crucially involves the concept of the unit processed for relevance. In attempting to develop an account which embraces a wider array of cases than hers, I am very much building on her fundamental work. Essentially, the analysis I offer involves coupling some simple observations about the linguistic properties of 'and'-conjunction together with the cognitive and pragmatic insights of relevance theory.
4.2 A relevance-based pragmatics of conjunction

4.2.1 Cognitive scripts and accessibility

One of the crucial factors contributing to the effort side of the optimal relevance definition is the accessibility of contextual assumptions. These are either retrieved ready-made from memory or constructed from partially articulated assumption schemas in memory together with new information provided by the utterance. Though not a great deal is known about the organisation of memory, it is widely assumed in cognitive studies that frequently experienced actions, events or processes and sequences of these are stored in chunks, as frames or scripts. Some of these may be relatively specific, such as the sequence of walking out of one’s front door and locking it, of going to a restaurant for a meal or of two people having an argument. Others may be of a more skeletal or abstract nature such as that humans generally perform actions with a purpose in mind or that events in the world are usually causally connected to other events.

So when we hear (2b), for instance, we are given immediate access to a bundle of stereotypical material of this sort, a surgical operation script, involving scalpels and the making of incisions, and, perhaps, a more general abstract schema about one person handing something to the other for that other to do something with it, etc. On the basis of this readily accessible information it is instantly assumed that the making of the incision followed the handing over of the scalpel and the scalpel was used for making the incision; that is, the proposition expressed is enriched along the lines of (5a). This is by no means a logical necessity: the enrichment in (5b) is perfectly conceivable and internally consistent. In fact it would probably lead to a greater array of cognitive effects than (5a), precisely because of its more unusual nature.

(5) a. He handed her the scalpel and a second or two later she made the incision with that scalpel.
   b. He handed her the scalpel and simultaneously she made the incision with her pocketknife.

The relevance-based pragmatic criterion provides an explanation for why (5a) is the interpretation chosen: the point is that the hearer constructs the most accessible
interpretation and, provided that it gives rise to an adequate range of cognitive effects and puts him to no unjustifiable effort in achieving them, in a way which a rational speaker could have foreseen, he does not consider other less accessible interpretations. Abstracted from any narrative or conversational setting as the example is here, the default assumption is that it will give rise to adequate effects. Furthermore, any of the other logically possible interpretations, such as (5b), are so massively much less accessible, with no one of them more obviously available than dozens of others, that even a hearer dissatisfied with (5a) could have no idea what other hypothesis to try. It follows that a speaker who wanted to communicate something other than (5a) would not be able to do so by uttering (5b) and, if functioning rationally, would not attempt to do so.

The relevance-based account of the cause-consequence relations in (2c) and (2d) is essentially the same: we all have fairly frequently encountered and used scripts of shootings and dyings, and of human relationships in which one person leaves the other with a range of unhappy repercussions. In addition, we have more general assumption schemas concerning cause-effect relations in the physical world, cause-effect relations between human mental states, between mental states/events and behaviour, and between events in the world and mental events. The consideration of such connections appears to be a major feature of our cognitive life as we attempt to understand the world, in particular each other, and function adequately within it. So the assumption of a causal relation between the events described by the conjuncts comes readily to mind and, presumably, gives an adequate flow of effects.

4.2.2 Enrichment or implicature?

As the quote from Richard (1990) says, these conjunct relations seem to be truth-conditional implications. According to Recanati’s Availability principle, these intuitions should be respected in deciding whether or not a pragmatic inference contributes to ‘what is said’ (the proposition expressed). I suggested in 3.6.3 that the embedding tests provide useful evidence in any decision of this sort, and, in fact, these tests have been put to extensive use in the existing relevance-theoretic literature to support a pragmatic enrichment account of these relations (see Carston 1985a, 1988/91, 1993; Wilson & Sperber 1993b). Here are a few examples, each involving embedding an ‘and’-
conjunction in the scope of a logical operator, disjunction, comparative, conditional, respectively:

(6) Either he left her and she took to the bottle or she took to the bottle and he left her.

(7) It's better to do your PhD and get a job than to get a job and do your PhD.

(8) If a manhole is left uncovered and you break a leg, sue.

(Examples adapted from Wilson & Sperber 1993b)

The Gricean treatment of the temporal and consequential connections as implicatures makes the false prediction that the proposition expressed by (6) is redundantly repetitive, of the form 'Either P or P', and that (7) is a nonsensical comparative, of the form 'It is better to P than to P'. The alternatives differ from each other in respect of which event is the consequence of the other; that is, the temporal and consequential relations make a crucial contribution to the truth-conditions. On the relevance-theoretic analysis this is easily explained since they precisely are pragmatically determined aspects of the proposition expressed.

These then are the ideas which are to function as a backdrop for the analyses I will suggest later for a range of less straightforward examples, which have not previously been addressed in this pragmatic framework (or any other, as far as I know), though a semantic account of them has been suggested.

4.3 The semantic alternatives

Strong semantic accounts include the ambiguity view and the single rich lexical entry idea of Cohen (1971). According to the latter view, the sense of 'and' consists of a set of features, including sequentiality and cause-consequentiality. To accommodate the fact that not all these features are understood on every use of a conjunction, he says that features may be selectively pragmatically cancelled in particular contexts. For instance, understanding the statement in (2a) about the seasons in two parts of the world would involve cancellation of both the temporal and causal features. He claims that, unlike the semantic ambiguity position, his is as much in line with Modified Occam's Razor as
Grice's logical 'and', since it involves a single sense for 'and'.

I have given a range of arguments against both of these accounts in the references cited above, and will mention only a few briefly here. First, the use of MOR looks sophistical to me; if such a principle is worth observing at all, then it can surely be further modified along the following line: 'Semantic features are not to be multiplied beyond necessity', in which case Cohen's rich multi-featural lexical entry falls foul of it as much as a semantic ambiguity analysis. As with the ambiguity analysis, features proliferate as one looks at more and more cases, like those in (2), which show a range of different temporal and consequence relations arising. This creates a serious problem for Cohen's idea, which the ambiguity account does not face; some of these features are at odds with each other, for instance, 'temporal sequence', 'temporal overlap' and 'simultaneity'. It follows that his set of features must be internally inconsistent, which surely precludes them from forming a single lexical sense. Finally, the process of contextual feature cancellation is not explained: can any features be cancelled or are some inevitably preserved (the truth-functional ones for instance)? is cancellation effected by a communicative maxim or principle of some sort or is it a simple consistency mechanism? If the latter, what prevents cancellation of one of the conjuncts itself when it is at odds with a contextual assumption ('not P' may be contextually salient to the hearer while processing an utterance of 'P and Q')? I take it that this idea of a single rich sense for 'and' cannot be maintained.

Bar-Lev & Palacas (1980, 139-40) consider first a set of data which are essentially variants of the Clark case, given in (4) above:

(9) a. Max didn't go to school; he got sick.
    b. /= Max didn’t go to school and he got sick.
(10) a. Max fell asleep; he was tired.
    b. /= Max fell asleep and he was tired.
(11) a. Max fell; he slipped on a banana peel.
    b. /= Max fell and he slipped on a banana peel.

In all these cases, a very natural interpretation of the (a) member of each pair, the non-conjunctive variant, is that the second clause gives a reason for the first, which is,
therefore, in some relation of consequence with the second clause. So the clause presented second is understood as temporally prior to the one presented first. Later in the paper they give a further range of examples, which show that there are other constraints on the set of possible relations between states of affairs presented conjunctively as opposed to those presented non-conjunctively. One of their examples is given in (12):

(12) a. Wars are breaking out all over; Champaign and Urbana have begun having border skirmishes.
    b. Wars are breaking out all over and Champaign and Urbana have begun having border skirmishes.

This extension to the data will be considered later; it raises some quite new issues, I think. For the moment, I'll concentrate on the temporal/consequential examples in (2)-(4) and (9)-(11), which motivate B-L&P's analysis. They briefly point out that pragmatic maxims concerning the order in which we communicate material, such as Grice's manner maxim of orderliness, and Schmerling's principle of pragmatic priority, according to which we lay the groundwork for what we are going to say next (see Schmerling 1975, 229), make the false prediction that the pairs of examples above are equivalent. This is a point that is worth emphasising, as the setting up of maxims or principles of discourse which stipulate that the order of utterance must match the chronology of the events described is widespread. Here are two more manifestations of the tendency:

A. **Submaxim of Time**: In so far as possible, make the order of saying reflect the order of events.

   (This is seen as just one dimension of a more general conversational maxim which enjoins a speaker to make her 'sayings "mirror" the world'.)

   (Harnish, 1976, 359)
B. Temporal Discourse Interpretation Principle: Given a sequence of sentences S1, ... Sn to be interpreted as a narrative discourse, the reference time of each sentence Si is interpreted to be: (a) a time consistent with the definite time adverbials in Si, if any, (b) otherwise, a time which immediately follows the reference time of the previous sentence Si-1.

(Dowty, 1986, 45)

These too predict that the temporal interpretation of the pairs of examples in (4) and (9)-(11) should be the same, contrary to fact. It looks pretty clear that attempts in this direction should be abandoned. (See Carston 1990/95 and, especially, Wilson & Sperber 1993b, who mount a strong case against such 'special-purpose sequencing rules' as they call them.)

B-L&P go on to say that, whatever the source of the meaning differences is, it cannot be to do with the order of the constituent clauses since this ordering is the same for the two members of each pair: "... on the contrary, the change of meaning is uniquely associated with the presence of 'and'. At this point it seems most natural to conclude that the cause of the change lies in the meaning of "and", rather than in a discourse principle of any sort." (1980, 140). While this is not an unreasonable conclusion to come to, it is by no means a necessary one. Note that the various discourse principles of information ordering actually get it right for the conjunctions (at least those so far considered). Where they fall down is in accounting for the relations that arise in the non-conjoined cases. So, what these observations most clearly entail is that these maxims should be dropped (assuming we don't want discourse principles whose domain is restricted to cases of linguistically encoded conjunction alone), and some other pragmatic principle brought into play, one which allows for the broader range of relations possible for the juxtaposed sentences, since these patently cannot be explained semantically. The communicative principle of relevance is such a principle. Then, in addition, it is necessary to account for the difference between the conjunctive cases and their non-conjunctive counterparts, which may be explainable in terms of the semantics of the lexical item 'and', as B-L&P claim. In fact, nothing in their observations up to this point excludes the possibility of a wholly pragmatic explanation, but it may be instructive to look at their semantic account.
On the basis of the examples (9)-(11), they propose that the semantics of 'and' is not the simple truth-functional semantics of the logical conjunction operator, but that it has a crucial feature specifying a relation of 'semantic command' between the two conjuncts:

(13) The first conjunct, $S'$, semantically commands the second conjunct, $S''$; that is, $S''$ is not prior to $S'$ (chronologically or causally).

They claim that there is an analogy here with a syntactic notion of command, familiar from generative grammar, according to which A commands B as long as B is not higher (in a syntactic tree) than A. They don’t develop this analogy which remains impressionistic at best. In fact, syntactic theory over the past couple of decades has employed various notions of structural command, of which the most durable and useful has proved to be c-command, which bears little, if any, relation to the concept of ‘semantic command’ as given in (13). The putative analogy doesn’t seem worth pursuing.

Turning to the main point now, which is the proposed semantics for ‘and’, that $S''$ is not chronologically or causally prior to $S'$. It has some nice features. First, it seems to encompass the whole spectrum of temporal and consequential relationships which the conjunctions in examples (2a)-(2h) and (9b)-(11b) can have, and to exclude those that they cannot have: it covers the full range of temporal relations - simultaneity, overlap, containment, forward sequencing - and excludes backward sequencing; similarly, it allows for the full range of relations of consequence which the second clause may be in with the first, and excludes the first from being a consequence of the second. Second, although they do not say so explicitly, it is clear that this analysis still leaves a vast amount of appropriate work for pragmatics, in determining, for any particular case of a conjunctive utterance, precisely which, if any, temporal and consequential connection is to be taken to pertain. The relevance-based pragmatic analysis given in section 4.2 would go through, without any obvious changes being required, taking as its input the ‘semantic command’ characterisation of conjunction. Third, this semantics for ‘and’ avoids a range of problems which other attempts to give a semantic account have fallen prey to. As mentioned above, the semantic ambiguity account and Cohen's
univocal multi-featured semantic account wind up having to proliferate a potentially infinite number of senses or features in their bid to account for the full set of subtly different temporal and consequential relations that different examples communicate. Furthermore, some of these senses or features contradict others, for instance, simultaneity and sequentiality. B-L&P's account seems to me to be the most promising of the semantic options on offer.

However, it turns out not to be satisfactory. The difference between examples like (12a) and (12b), for instance, does not seem to be accounted for. Before looking at these, together with a further range of data, I'll run through some other worries which this account raises. First, it is not clear what the intended semantics of 'and' is, whether it has, say, three features, one requiring the truth of the first conjunct, another requiring the truth of the second conjunct, and the third specifying the semantic command relation between the two, or whether it just has the semantic command feature with the truth features somehow derived from or implicit in it. Second, although it allows for the full range of temporal and consequential relations that can occur, what it seems to come down to is a clever way of finding a single descriptive statement which covers the set of examples. That is, there is nothing explanatory about it. Why should the 'backward' relations be excluded by the presence of 'and' but not by the mere juxtaposition of sentences? This might seem to be an unreasonable sort of question to pose. An explanatoriness requirement seems a tall order in this realm, akin to asking for an explanation of why the word 'bread' means bread; lexical semantic facts simply aren't explainable, 'l'arbitraire du signe', as Saussure put it. However, in this particular case, I believe, a more explanatory account is possible, though, certainly, the focus won't be semantic. A deeper account will emerge by considering the syntactic differences between conjunctions and juxtapositions, and some basic facts about human cognitive processes.

A more substantial worry at this point is that this semantic analysis is riven by counterexamples, cases which should make it apparent that the attempt to account for the restrictions on conjunctive interpretation in semantic terms is doomed to perpetual inadequacy, no matter how artfully done. The sort of counterexample which springs to mind, if one takes B-L&P at face value, is the following:
(14) a. She lives now in Crouch End and she lived in Muswell Hill three years ago.

b. The boy is dead and he was shot by the soldiers.

The state of affairs recounted in the second conjunct of (14a) is clearly chronologically prior to that expressed in the first one. The event described by the second conjunct of (14b) is causally implicated in the state of affairs described by the first one. In a charitable spirit, one might allow that semantic indications in the conjuncts themselves overrule the semantic command requirement on 'and', so 'used to live' explicitly places the second mentioned state of affairs before the 'lives now' state of affairs; similarly, for the sequence encoded by 'was shot' and 'is dead'. All the same, if this semantic command requirement really is an intrinsic feature of the semantics of 'and' we would expect some sort of oddness or tension in these examples, if not a downright contradiction, between the dictates of semantic command, which preclude the temporal priority of the second conjunct, on the one hand, and the temporal order imposed by the explicitly given linguistic content in the conjuncts, on the other. I assume that intuitions are agreed that there is nothing contradictory or even mildly uneasy about these examples.

B-L&P (1980, 142-43) discuss an example of Gazdar's (1979, 69-71) which raises the same problem in a different form:

(15) If the old king has died of a heart attack and a republic has been formed, and the latter event has caused the former, then Tom will be content.

Leaving aside the argument between Cohen (1971) and Gazdar (1979) which prompted the example, my point, again, is that on the semantic command analysis, the three conjunct antecedent of this conditional should have a contradictory feel, since we are being told both that a cause-consequence relation between the second conjunct and the first is precluded and, then, that just such a relation holds. In discussing this example, B-L&P say 'The two original conjuncts "float" with respect to each other, no semantic relationship implied, or not implied ... in (15) ['and'] implies logical conjunction alone, with the third conjunct spelling out an otherwise unavailable meaning.' (1980, 143)
seems right, but I don't see how it is compatible with the semantic command feature
which, contrary to what this quotation says, does indeed imply (in fact encode) that a
particular relationship is excluded. There is a marked inconsistency here which may
indicate that B-L&P are working with a notion of semantic command which differs from
the one they actually formulate. I am unable to work out what it could be. In trying
to find a reformulation that would bring the notion into line with their discussion of the
Gazdar example, I was driven back to an ambiguity analysis which involves listing all
the possible relations between the conjuncts and which, of course, includes, as one sense,
the truth-functional definition, which is the one needed to explain this example. I take
it as established that the ambiguity analysis is out of the running and conclude that this
example provides strong support for the pragmatic account.

In fact, the information that imposes the 'backward' temporal and causal relations
does not have to be encoded in the conjuncts, as the following examples indicate:

(16) a. She did her BA in London and she did her A-levels at home in Leeds.
b. The plant died and it was Mary who forgot to water it.

It is not the semantic content of the conjuncts that dictates the chronology, since the
tenses in the conjuncts in each case are the same, but general knowledge about the order
in which people usually do A-levels and BAs in our society and about the life and death
of houseplants. So what's going on here is that pragmatically derived information is
overriding the alleged semantics. This runs counter to everyone's conception of the
nature of semantically-decoded versus pragmatically- inferred content. The fundamental
characteristic of pragmatically derived meaning is its cancellability or suspendability (see
Grice 1967, Horn 1972, among many others), while semantic content is invariant,
context-independent and uncancellable.7

Even more interesting in this regard, and with much broader implications than these
cases, is the following example of Larry Horn's (personal communication to and from
Deirdre Wilson):

(17) A: Did John break the vase?
   B: Well, the vase broke and he dropped it.
Here the event of dropping the vase is readily understood as having preceded and caused the breaking of the vase, although this belies the order of the conjuncts. Now, there is certainly something more going on here than in the cases previously considered. The speaker is avoiding explicitly expressing the proposition that John broke the vase, the utterance of which would be briefer and more direct than the one she has produced. What she communicates explicitly is two of the crucial premises the hearer needs in order to arrive at the conclusion that John did break the vase. She is making the hearer do some extra inferential work in deriving an answer to his question and so, in relevance-theoretic terms, the utterance should convey effects that the more direct utterance would not, which indeed seems to be the case. There is more to be said about how this example works and I’ll take it up again later in the chapter. The important point here is that whatever the effects this response has, in the context of the preceding question, they are not effects derived via contradiction.

As ever, there are two levels at which the inferentially derived relation between the conjuncts of this example could be established: at the level of the proposition explicitly expressed or at the level of implicature. That is, either: (1) the pragmatically enriched proposition expressed (the basic level explicature) is something along the lines of 'The vase broke as a result of John's dropping it', or: (2) the proposition expressed does not include any specification of a cause-consequence relation and, perhaps, not even any temporal ordering; the two events are simply represented as having occurred in the recent past. Then the inferred cause-consequence relation is derived as an implicature, that is, an implicated conclusion, derived deductively from the two propositions expressed by the conjuncts together with the highly accessible general knowledge proposition that dropping a vase is very likely to cause it to break. I would plug for the second of these options, but a commitment need not be made at this stage, because the point here is that, either way, there is a problem for the semantic command analysis of 'and'. Taking the first option, the proposition expressed would directly contradict the semantic content from which it is developed, since this specifies that the second conjunct cannot be causally prior to the first. There is no such contradiction and again B-L&P would have to say that a pragmatic enrichment was somehow cancelling some semantically encoded material.

Taking the second option, we have an implicature which contradicts the
proposition explicitly expressed. This sort of situation can arise; for instance, in the case of ironical utterances, where a speaker dissociates herself from the proposition expressed and implices an assumption or set of assumptions which contradict, or are at odds with, the semantic content of the proposition expressed. In such instances the proposition expressed is not an explicate, in relevance-theoretic terms; that is, it is not part of what is communicated (endorsed by the speaker) but is rather a vehicle for the communication of some other assumptions (and attitudes). In Grice's terms, the speaker 'makes as if to say' something in order to implicate something else. This, however, is surely not the case with B's utterance in (17); B is no less committed to the truth of the proposition expressed than to the implicated cause-consequence relation; indeed the derivation of the latter depends on and follows directly from the truth of the former. So the contradiction predicted by the semantic command analysis must hold between the base level explicate of the utterance (which precludes the causal priority of the second conjunct) and the implicated conclusion that the dropping event (described in the second conjunct) caused the breaking event (described in the first conjunct). There is no such contradiction and, in fact, there could not be, since this situation would involve a speaker simultaneously communicating (that is, giving her backing to), not merely expressing, two contradictory assumptions. I take this to be a reductio ad absurdum of the 'semantic command' analysis of 'and'.

There is nothing unique about Horn's example; with a little thought, one can come up with contextualisations which alter the supposedly fixed (semantically encoded) forward-directed temporal and causal relations of the Clark case in (4):

(18) A: Bob wants me to get rid of these mats. He says he trips over them all the time. Still, I don't suppose he'll break his neck.

B: Well, I don't know. John broke his leg and he tripped on a Persian rug.

The same exercise can be performed for examples (9b)-(11b). The upshot of all this is that the 'semantic command' analysis of 'and' has to be abandoned. In the next section, I'll change tack temporarily and consider the interpretation of the non-conjunctive (or juxtaposed) sentence pairs, which, in their turn, have highly preferred interpretations. I'll return later (section 4.5.2) to the 'and'-conjunctions and give an account of why the
interpretation favoured for the juxtaposed sentences is precluded from their ‘and’-conjoined counterparts. This will be a wholly pragmatic account, grounded in claims about cognitive processing.

4.4 Cognitive fundamentals: causality and explanation

The focus in this section is on the interpretation of the juxtaposed sentences. The second sentence in each of (4a), (9a), (10a) and (11a) is understood as providing an explanation of some sort for the state of affairs described in the first, as if answering an implicit ‘why?’ or ‘how come?’. Recall that it’s this explanatory role that the second conjunct of an ‘and’-conjunction seems unable to play:

(9) a. Max didn’t go to school; he got sick.
    b. Max didn’t go to school and he got sick.

(11) a. Max fell over; he slipped on a banana skin.
    b. Max fell over and he slipped on a banana skin.

What is an explanation? What distinguishes an explanation from other types of information, such as (mere) descriptions? The standard answer to this, at least since Aristotle, is that an explanation starts with what is taken to be a correct description of a state of affairs and gives an account of what necessitated, or at least constrained, that state of affairs to be as it is. Scientific explanation aims at causal sufficiency, but more mundane cognitive and conversational explanation may be satisfied with much less, with citation of possible reasons, or enabling conditions, for instance. Given a relatively broad construal of what might pass as explanatory, it does seems that the second sentence in each of (9a)-(11a) gives an explanation (cites a cause or a reason) for the state of affairs described in the first.

The prevalence of this sort of explanatory interpretation for the juxtaposed cases is made evident by an example that B-L&L mention in passing at the end of their paper:
(19)  
  a. Max can’t read and he’s a linguist.
  b. Max can’t read; he’s a linguist.

The natural and immediate interpretation of the conjunction in (19a) is that there is some sort of contrast (or adversative relation) between these two facts about Max. Such an interpretation is entirely in line with our existing assumptions about linguists and the ability to read. So the interesting case is (19b), where it seems that we take the information that Max is a linguist as an explanation for his inability to read. On the face of it this is pretty surprising. It runs directly counter to the standard assumption, which would lead us to take these as contrasting properties, and there is no linguistically encoded content which could override the stereotypic assumption and force this interpretation upon us, as in ‘This is because he is a linguist’, for instance.

In section 4.1 above, I noted that the temporal and consequential relations observed for ‘and’-conjunctions also arise for their non-conjoined counterparts; this is one of the points standardly proffered as evidence that the relations need not be seen as part of the semantics of ‘and’ itself. However, the examples in (2) and (3), used to illustrate this point, did have to be chosen rather carefully; consider the following:

(20)  
  a. He hit her and she screamed.
  b. She screamed and he hit her.
  c. He hit her. She screamed.
  d. She screamed. He hit her.

While the cause-consequence relation must be understood as forward-directed in (20a) and (20b), the two conjunction cases, this is not inevitably so for the juxtaposed cases in (20c) and (20d). In both cases, the second sentence might well be taken as giving the cause or reason for the behaviour described in the first. Both the cause-consequence and the fact-explanation interpretations are compatible with common-sense assumptions about human interactions, and, without further contextualisation, neither is obviously preferable to the other. What’s interesting about (19b), though, is the dominance of the fact-explanation interpretation. After all, a cause-consequence interpretation is no more implausible than the fact-explanation one; also, it would better reflect a forward temporal
relation and the idea that background information is given first: 'here's a general property of Max which has had the consequence that ...'. Such a relationship can be made to seem more plausible than the fact-explanation one, by changing the example to bring it into line with prevailing assumptions about the inability to read and job prospects:

(21)  
\begin{enumerate}
    \item a. Max can't read and he's a street-cleaner.
    \item b. Max can't read. He's a street-cleaner.
    \item c. Max is a street-cleaner. He can't read.
\end{enumerate}

However, this doesn't seem to make much difference to the interpretation process; in both of (21b) and (21c), as against the conjunction case in (21a), the second sentence is readily taken as an explanation for the fact observed in the first.

So the (temporary) shift of focus in this section is, from a consideration of why certain relations are precluded from the interpretation of 'and'-conjunctions, to similar considerations regarding the juxtaposed sentences and, in particular, to the dominance of the explanatory interpretation of the second one. The account of the latter will not amount to very much more than an earnest assertion that we are explanation-seeking creatures, so that, in general, when we register a new fact/assumption about the world, we look for an explanation for it. When the source of that new fact is an utterance, the communicator can assume that a further utterance which supplies an explanation for it will be relevant to the addressee.

Either the world is a vast causal nexus and our mental representational system has evolved in such a way as to accurately reflect this, or, the world is not like this, being perhaps just 'the totality of facts', but we have, nevertheless, developed this highly effective (that is, survival-promoting), even if inaccurate, way of representing it and acting on it. However 'it' may really be, there is overwhelming evidence that in our striving to achieve a coherent understanding of events in the world we very much go in for organising our interpretations in terms of cause-consequence relations; we will cleave to inconsistent causal accounts rather than have none at all (hence God, the First Cause and causa sui).

Work in many areas of cognition demonstrates this. For instance, in their study
of the sort of reasoning that humans employ when required to make ‘judgments under uncertainty’, Tversky & Kahneman (1982) have demonstrated the great ease with which people construct causal accounts for outcomes which they could not predict. In the field of social psychology the dominant paradigm nowadays is ‘attribution theory’ which sees humans as lay scientists attempting to infer causes (find explanations) for the effects they observe, including, crucially, the causes of particular instances of human behaviour (see Kelley 1972). Many people investigating the inferential processes involved in text comprehension, whether in AI, psychology or pragmatics, have remarked on the fundamental role of causal assumptions in understanding a text as a coherent whole rather than as a series of unrelated statements (for instance, Schank 1975, Keenan, Baillet & Brown 1984, Myers, Shinjo & Duffy 1987, Abbott & Black 1986, Singer 1994). There is considerable evidence that we are much better at remembering both real and fictional sequences of events that are causally connected than those that are just temporally connected (Abbott & Black, 1986, 129-130).

In these various disciplines, there is extensive use of the notion of causal schemas, that is, of knowledge structures consisting of a package of propositions concerning two or more states of affairs which are explicitly represented as causally related. As I assumed in section 4.2.1, we seem to have a great many stable schemata of this sort; for instance, the death from shooting scenario, the dropping and breaking of vases, etc. However, given the ease with which causal connections are imposed on novel sequences there would seem to be other less fully scripted, more flexible, causal schemas, varying in their degree of articulation and in the number and type of variable slots they employ, thus allowing for the construction of new causal sequences. In the absence of established or adaptable causal schemas, the default procedure might be as general as ‘Given two states of affairs P, Q, the one hotly followed by the other, consider P as having caused Q.’

The automatic reflex-like nature of the causal-link making mechanism in our mental life is demonstrated by work on perceptual processes. Michotte (1963) showed the irresistible tendency in humans to perceive sequences of events in terms of causal relations, even when the perceiver is fully aware that the relation between the events is incidental and the apparent causality is illusory. For example, although it is reasonable, given our knowledge of the world, for us to believe that the collision of one billiard ball
with another has caused the movement of that other, we do not actually believe that a
patch of green light projected on a screen and moved along to make contact with a patch
of red light causes the subsequent movement of the red light, but we nevertheless
inevitably perceive it as doing so. Building on this, Rock (1983) talks of the
'coincidence-explanation' principle in accounting for the favoured perception of
ambiguous sensory stimuli. He claims that the perceptual system prefers, wherever
possible, to account for all co-occurring changes, correlated events or apparent
regularities in the percept in terms of a common cause; there is an implicit aversion to
unexplained or coincidental variation or regularity. He continues: 'Temporal contiguity
alone is a powerful determinant of perceived causation ... So, for example, if a loud
noise occurs just as a light goes out, there is a feeling that the one has caused the other.
This is a clear example of rejecting coincidence even though we "know" better.' (Rock
1983, 137-138).9

In our understanding of human behaviour and social relations, causes and
consequences are no less central and considerably more diverse. Much of our cognitive
life is given over to explaining and predicting people's actions/behaviour (others' and
our own). This activity calls for a wider array of terms than 'cause' and 'effect'. On
the causing side of the relation we talk of people as having 'reasons', or 'motives' for
behaving in certain ways, of their being driven, forced, induced, seduced, tempted,
enabled, allowed, etc, by others or by circumstances, to act in certain ways; on the effect
side we talk of consequences, results, outcomes, achievements, side-effects, etc. At the
centre of all this lies our attribution to each other of such mental states as beliefs, desires
and intentions (discussed in chapter 2, section 2.4). This folk psychological theory, or
theory of mind, appears to emerge in the normal child between the ages of three and
four years (Leslie 1987a, 1987b). In conjunction with the cause-consequence concept,
already a fundamental feature of the child's representational system, it gives rise to the
ability to explain episodes of human behaviour in terms of mental causes: 'why did
Mary look in the box?' The answer moves from 'because there were chocolates in
there' to 'because she thought/knew there were chocolates in there and she wanted
some'. Quite generally, establishing the agency of a state of affairs is only a small part
of what matters to us; we want to know the agent's motives, his intentions, the extent
to which he knew what he was doing, etc. This sort of 'intentional' explanation has

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considerable social and moral implications; on this basis, responsibility is assigned, blame and credit are allotted, excuses or mitigating factors may be found, punishments and rewards are meted out, social relations are strengthened or weakened.

While nature may or may not be a system of causes and effects, what is clear is that it is not a system of explanations. We have to construct explanations for ourselves and we may communicate them to one other. Explanations are the products of minds, possibly only human minds. Explanations are 'meta-' with regard to causes and reasons. They are answers to questions of a certain sort, specifically of a 'why?' sort, and perhaps also of a 'how?' sort. Aristotle's doctrine of 'the four causes', the formal, the material, the final and the efficient, is now generally construed as a taxonomy of types of explanation and gives a way in to thinking about the sorts of relations between facts which we take to be explanatory. A *formal explanation* of a state of affairs, x, will be concerned with what constitutes an x; a *material explanation* of the same state of affairs will be concerned with the means by which x came to be; a *final (or teleological) explanation* concerns the ultimate purpose of x; an *efficient explanation* concerns the immediate 'trigger' for the occurrence of x. To illustrate, consider each type as a response to a 'why/how' question raised by the description in (22):

(22) The chicken crossed the road.

**Formal:** She was on the east side at 2.00 and by 2.10 she was on the west side.

**Material:** She hopped like crazy for ten minutes.

**Final:** She wanted to join Elmo on the other side.

**Efficient:** Elmo told her to get on over, or else.

While both the final and efficient types are natural responses to the English 'why?', the formal may seem better prompted by 'How do you know that she crossed the road?' (a point that will be taken up again later) and the material by 'How did the chicken ...?'. But they are all explanatory; they all involve the citing of a cause, reason or enabler of the state of affairs described by (22), or of the belief that the state of affairs pertains, which distinguishes them from the answers to 'who?', 'what?', 'when?' and 'where?'
type questions, that do not function as explanations (at least not primarily). As the
discussion so far would lead us to expect, explicit conjoining of (22) with any of these
destroys the explanatory relation:

(23) a. The chicken crossed the road and she hopped like crazy for ten minutes.
    b. The chicken crossed the road and she wanted to join Elmo on the other
       side.
    etc.

This point will be taken up again in section 4.5.1, where I consider why this
interpretation is impossible and whether these four types of explanation exhaust the
relations precluded by 'and'-conjunctions.

There are good and bad explanations (but not good and bad causes), there are real
reasons and bogus reasons (rationalizations) that may be offered as explanations for
behaviour, and there are great individual differences in what people will accept as
satisfactory explanations. But when it comes to the explanation interpretation of
utterances such as those just given and the earlier (9a)-(11a), (19), (20c), (20d), (21b)
and (21c), such adequacy considerations are essentially post-interpretive. Taking the
second utterance as explanatory of the first is simply the first strategy tried; when the
effects it yields are puzzling, as in the case of (19b), where Max's being a linguist is
hardly a compelling explanation of his inability to read, the next interpretation accessed
and checked for adequate relevance, I think, is one on which the speaker is taken as
giving a facetious explanation, rather than as doing something else entirely, such as just
listing two facts about Max or predicing a property of Max and then giving a plausible
consequence of that property.

Why is it the first strategy tried and why is it maintained even when far from
satisfactory? It follows from a fundamental organising principle of our cognitive
makeup, which requires that our representations of individual states of affairs be
embedded in a mesh of (broadly speaking) causal relations with other representations.
A representation that cannot be so enmeshed will generally not be found relevant (it
won't have cognitive effects). Relevant information is information that connects up with
one's existing representation of the world so as to effect certain improvements on it,
such as providing confirmatory evidence for some existing assumptions, disconfirming and eliminating others, reorganising and integrating information into the sorts of schemata which will make subsequent information processing less effortful. Another way of putting this is that relevant information is information that answers questions one has or, equivalently, that fills in incomplete representations (assumption schemas).

An explicit question is an explicit indication to a hearer of the sort of information the questioner regards as relevant (rich enough in effects to be worthy of attention). As Wilson & Sperber (1988b) put it, questions interpretively represent relevant propositions; while yes-no questions express complete propositions which call for confirmation or disconfirmation, wh-questions express incomplete (that is, not fully propositional) logical forms which represent the sort of complete proposition the questioner considers relevant. The kind of completion required is explicitly indicated by the wh-word: what, when, how, why, etc. For instance, a 'why P?' question can be understood as interpretively representing an assumption schema of the sort 'P because ____', indicating that the provision of an explanatory proposition would be relevant.

In the juxtaposed utterances considered here, there is no explicit question, but, as the fairly lengthy discussion above about causal representation and its fundamental role in our mental lives was intended to suggest, when we register a new piece of information, P, we standardly construct a 'P because ____' assumption schema, the completion of which will be relevant to us. So a speaker can safely assume that a hearer presented with a description will automatically formulate a 'why?' question (or, equivalently, access a 'P because ____' schema); she can anticipate this, and perhaps preempt an explicit question, by supplying an explanation, which is bound to achieve the expected standard of relevance. Conversely, hearers, looking for interpretations which are consistent with their expectations of optimal relevance, will automatically take the second utterance as explanatory of the first unless there are overwhelming reasons not to. The relation is so readily accessible that it is standardly not encoded (but left tacit); that is, the speaker does not preface the second utterance with 'That is because ...' or 'The reason is ...'. The decoding of these would put the hearer to extra work, which would be justified only if it gave rise to some effects, additional to those that the standard low effort employment of the explanatory strategy would afford.
4.5 Relevance relations and units of processing

4.5.1 The conjunction unit

I return now to the issue of the relations that can be understood to hold between the states of affairs described in the conjuncts, and, in particular, in this section, to why certain relations possible in the juxtaposed cases are not possible in the 'and'-conjunctions. There are two questions here:

(a) Since the bid for explanations for observed and communicated facts is so fundamental, apparently the first strategy pursued in the interpretation of the second sentence uttered in the juxtaposed cases, why is it precluded from the interpretation of 'and'-conjunctions?

(b) Supposing an adequate answer to this can be supplied, is that the whole story? That is, can all the precluded relations be understood as cases of explanation? It is not obvious that the sort of exemplification relation understood in (12a) (‘Wars are breaking out all over; Champaign and Urbana have begun having border skirmishes’) can be included here, and there is a variety of other ‘elaboration relations’, as they are often called, which can arise between juxtaposed cases but not between conjuncts.

I start with the first question. The claim is that the second conjunct can never function in an explanatory role vis-a-vis the first conjunct. It’s important to distinguish this from the claim being made by the ‘semantic command’ analysis, that the state of affairs described in the second conjunct can never be understood as the cause of the first. This latter view, we have seen to be false, as shown by the Horn example in (17), repeated here, (and appropriate contextualisations of (9b)-(11b)):

(17) A: Did John break the vase?
    B: Well, the vase broke and he dropped it.

Although the interpretation of B’s response will, doubtless, involve deriving the assumption that John is responsible for the breaking of the vase, I don’t think there is any temptation here to describe B as explaining to A that John caused the breaking of the vase. Rather, B gives A two facts and leaves it to him to do as he likes with them. The ‘semantic command’ analysis of ‘and’ misses the point entirely: it makes the false
prediction that 'and' excludes the possibility of the second conjunct being interpreted as temporally or causally prior to the first and it bypasses what really needs to be accounted for, which is the preclusion of an explanatory role for the second conjunct.

In her study of such discourse connectives as 'so', 'moreover', 'furthermore', 'after all', and 'you see', Blakemore (1987, 119-20) notes a contrast in the acceptability of conjunctions in which they are made to occur, either explicitly or implicitly (that is, encoded or left to inference):

(24) a. The road was icy and [so] she slipped.
b. She's good-looking and [furthermore/moreover] her father's rich.
c. ? She slipped and [you see] the road was icy.
d. ? She passed the French exam and [after all] she is a native speaker.

Taking out the 'and' to render them non-conjunctive makes all four equally acceptable. As discussed in the previous chapter, Blakemore's analysis of the semantics of these connectives is in terms of instructions to the hearer to put the proposition they introduce into a particular inferential relation with other available propositions; in this way she achieves a uniform characterisation and these connectives seem to form a natural class, distinct from truth-conditional connectives such as 'after', 'before', 'while', 'because', 'unless', etc. So the question is why they should split into two groups when used conjunctively. Part of the answer is given by the following observation: '...the proposition introduced by "you see" must be relevant as an explanation. That is, it is relevant as an answer [to a question] raised by the presentation of the first proposition. ... The same point applies to the connection expressed by "after all"' (Blakemore, 1987, 123). The rest of the answer, of course, has to address the preclusion of the explanatory function from a conjunction.11

Blakemore's claim is that, when a speaker produces an explicit conjunction, it is that complex conjoined proposition that carries the presumption of optimal relevance and not the constituent propositions (the conjuncts) individually. That is, it is the conjunction as a whole, which is the unit that should satisfy the criterion of consistency with the principle of relevance. It follows from the principle of relevance that a hearer is entitled to assume that he won't be required to expend processing effort gratuitously;
that is, that the effort demanded will be adequately rewarded by cognitive effects. A hearer presented with a conjoined sentence is being required to undertake the processing that follows from the lexical and syntactic structure involved in conjoining and can therefore expect effects over and above those that might follow from the conjuncts taken individually. The individual conjuncts may be relevant in their own right, but there is no automatic presumption that they will have adequate effects individually.\textsuperscript{12}

This single processing unit idea receives some support from the fact that a conjoined subject, phrasal or sentential, may function as a syntactic unit with a single determiner or complementizer, and take a singular verb:

(25)  
\begin{align*}
\text{a. Friends, whose [kindness and encouragement] has ...} \\
\text{b. My [hope and wish] is to ...} \\
\text{c. That [John had an affair and Mary left him] is a sad fact.}
\end{align*}

As the examples in (2) (a few of which are repeated here) illustrate, conjunctions are frequently taken to communicate a chronological sequence of events and, where relevant, the state of affairs described by the second conjunct is taken as a consequence of the first.

(2)  
\begin{align*}
\text{b. He handed her the scalpel and she made the incision.} \\
\text{d. He left her and she took to the bottle.} \\
\text{f. She went to the yoga class and felt her anxiety lift.}
\end{align*}

In cases such as (2b)-(2f), the cognitive effects of the conjunction unit crucially hinge on these assumed relations; for instance, the effects of (2b) may include implications concerning the working relationship between the 'he' and 'she', and the nature of the activity they are engaged in, which will depend on the assumption that the second action described followed closely on the first and the first was a necessary precursor of the second (that is, she needed the scalpel in order to perform her incision). The particular scenario understood here will be taken as an instance of a more general stereotypical schema, about two people working together to perform an operation, and it might prompt some adjusting of standing assumptions in this schema about male and female roles.
Assuming that schemas (sets of related propositions, stored together) really are cognitive units, and there is much evidence to support this (see Anderson 1980, Lloyd 1989), I would like to suggest that, in at least a great number of cases, conjunctions will map directly onto such units rather than onto individual propositions. Their relevance will lie, at least partially, in the reinforcing effect they have on the schema as a whole and the modifications they might introduce to subparts of the schema.

(2a) was included as a case that did not give rise to a directional interpretation, and (18a) might be another such case where reversal of the conjuncts makes little difference to the interpretation.

(2) a. It's summer in England and it's winter in New Zealand.

(18) a. Max can't read and he's a linguist.

Symmetric these may be, but, given what I've said about the principle of relevance applied to conjunctions, they ought to have some effects that follow from their having been conjoined. The obvious sort of effect here is, broadly speaking, one of contrast. In (2a) the effects would involve various comparative judgements about England and New Zealand, the activities one could pursue there at this time of year, the way the two landscapes might look, which place one might prefer to be in, etc. In (18a) where it is two properties, predicated of a single individual, which seem to be understood contrastively, the effects might principally concern implications (and the raising of questions) about the sort of abilities and character that Max might have, given this unusual conjunction of attributes.

If it is correct that a conjunction is processed as a single unit for relevance, then the last step in the account of the exclusion of explanatory interpretations from conjunctions follows directly: one conjunct cannot function as an explanation for the state of affairs described in the other, since an explanation is an answer to a ‘why?’ or ‘how come?’ question and ‘questions and answers are by their very nature planned as separate utterances, each one satisfying the principle of relevance individually’ (Blakemore 1987, 123).

This account applies in a pleasing way to some examples which exhibit rather
different properties from those of the cases considered so far:

(26) a. Jim has a new girlfriend. He goes to New York every weekend.
   b. Jim has a new girlfriend and he goes to New York every weekend.

There are various possible interpretations, including a cause-consequence one, on which (26a) and (26b) are essentially the same, schematically ‘P (and) so Q’. But what I’m concerned with here is an interpretation of the juxtaposition in (26a) which is not possible for the conjunction in (26b). The solution just proposed, for the restrictions on conjunction interpretation, predicts that the second conjunct of (26b) will not be able to function as an explanation of the fact given in the first conjunct; this indeed seems to be the case. As we have seen, this is the sort of relation that juxtaposed utterances, on the other hand, frequently enter into.

However, the backwards causal relation which hearers are likely to understand for the juxtaposition in (26a) is different from that discussed so far. It is not the case that Jim’s going to New York every weekend is a cause or a reason for his having a new girlfriend. Rather, it is his going to New York that gives the speaker grounds for her belief that Jim has a new girlfriend; that is, it plays a causal role in her having this belief. It is not too surprising that this is a readily accessible interpretation for the juxtaposed utterances, since, as is widely acknowledged, it is often the intended interpretation of a ‘because’-clause, as in the examples in (27):

(27) a. Jim has a new girlfriend, because he goes to New York every weekend.
   b. Jane has left, because her son isn’t here.

The two scope possibilities for ‘because’-clauses are clearly evident in (27b): it can be interpreted either as giving the reason for Jane’s having left, or as providing evidence for the belief that she has left. Further context is required to resolve this ambiguity.

This ‘reason for believing’ interpretation of the juxtaposed utterances in (27a) is easily handled within relevance theory, which, as outlined in chapter 3, section 3.3.1, claims that an utterance may communicate several propositions explicitly. So, for instance, the first utterance in (26a), used literally, would have at least the following
explicatures:

(28)  
\[ \begin{align*} 
\text{a.} & \quad \text{Jim has a new girlfriend.} \\
\text{b.} & \quad \text{The speaker is saying that Jim has a new girlfriend.} \\
\text{c.} & \quad \text{The speaker believes that Jim has a new girlfriend.} 
\end{align*} \]

So a 'why?' question can be raised in reaction to any of these and the second utterance taken as explanatory of any of them. In the case of (26a), the second utterance, 'he goes to New York every weekend', is to be taken as an explanatory response to (28c), the higher-level explicature representing the speaker's propositional attitude, rather than to (28a), the proposition expressed, which has been the target of the explanation in all the previous juxtaposed cases.

In the next section, a new group of examples is considered, showing that there are relations other than explanation, that can be communicated by using juxtaposed sentences, but which cannot be communicated if the two sentences are conjoined in a single unit. I shall try to extend the account already given to cover these.

### 4.5.2 Elaboration relations

The story given above for the prohibition on an explanation relation between conjoined sentences turned on the fact that an explanation is an answer to a 'why' question (whether explicit or implicit) and, as quoted above from Blakemore, 'questions and answers are by their very nature planned as separate utterances'. This would indicate that the account should extend beyond 'why?' questions to other types of question. The following examples, suggested by Deirdre Wilson, show that this is so:

(29)  
\[ \begin{align*} 
\text{a.} & \quad \text{I ate somewhere nice last week; I ate at Macdonald's.} \\
\text{b.} & \quad \text{I ate somewhere nice last week and I ate at Macdonald's.} 
\end{align*} \]

(30)  
\[ \begin{align*} 
\text{a.} & \quad \text{I met a great actress at the party; I met Vanessa Redgrave.} \\
\text{b.} & \quad \text{I met a great actress at the party and I met Vanessa Redgrave.} 
\end{align*} \]

The juxtaposed variants here do not communicate an explanation; the second utterance
in each of (29a) and (30a) does not give a cause or a reason for the event described in
the first utterance, nor do they provide an analysis of any of the concepts in the first
utterance. They do have an amplificatory function, though, and are readily understood
as responses to questions, prompted by the first utterance. In fact, the first utterance in
each of (29a) and (30a) seems specifically designed to raise the questions 'where?' and
'who?', respectively, which the second utterances answer. Again, conjoining these with
'and', as in (29b) and (30b), knocks out that interpretation and causes a strikingly
different one to come to mind (involving some sort of contrastive relation).

Notice that these differences between the (a) and (b) versions could not be
accounted for at all by the semantic analysis in terms of semantic command, nor by any
other semantic analysis for that matter. They follow, however, from the observation that
'and'-conjunctions are single processing units, meeting the pragmatic criterion of
consistency with the principle of relevance as a whole. It may be that questions of the
'who?', 'what?', 'where?', 'when?' sort have to be more deliberately provoked, as they
are in these cases, than does the 'why?' or 'how come?', explanation-requiring, sort of
question, whose insistent appearance has already been noted, in discussing the
juxtaposition examples in (19)-(21).

It's also interesting to note which sorts of sentence level linguistic entities can
be conjoined and which cannot. For convenience I'll refer to the declarative, the
imperative and the interrogative as sentence types, and represent the types as follows:
P, P!, and P?. Clearly, an acceptable conjunction can be formed by conjoining two
sentences of the same type, but there seem to be certain restrictions on the mixing of
types:

(31) a. [P! and Q]
Mow the lawn and I'll lend you my stilettoes.

b. [P and Q!]
He'll be here soon and make sure dinner is ready.

c. [P and Q?]
You'll get back together and will it make you happy?

d. [P? and Q]
Will you be happy with him and you'll have to give up your job.

2. [P? and Q] where Q is answer to P?

Why did he leave her and she did nag at him all the time.

There are varying degrees of acceptability here, but (31e) seems to be the least happy of these attempted conjunctions, with (31d) also somewhat uneasy. It looks as if question-answer conjunctions are not possible, which is what the account of the exclusion of the fact-explanation interpretation of conjunctions predicts. It may be that the only [P? and Q] type that we can get away with is, in fact, interpreted as [P? R and Q] where R is the inferred answer to P?, so (31d) is understood as:

(32) Will you be happy with him? You won't be and you'll have to give up your job.

It is noticeable that the acceptability of this sort of conjunction drops markedly when the intended answer to the question isn't immediately apparent:

(33) Why did the chicken cross the road and she is such a featherbrain.

If these observations are right, there is a quite general restriction on the conjoining of an interrogative and declarative, and (31d) is more accurately represented as a sentence-initial 'and':

(34) a. Will you be happy with him? And you'll have to give up your job.

So the single processing unit nature of conjunction, coupled with the observation that, in various of the juxtaposed cases, the second utterance appears to be answering an implicit question raised by the first, provide the ingredients for an account of why so many of these relations cannot be communicated by a conjoined utterance.

However, there are further possibilities for juxtaposed cases that are excluded from conjunction, including the relations of exemplification and restatement or reformulation. Bar-Lev & Palacas (1980) mention some of these, including (12) above, repeated here, and (35):
Wars are breaking out all over; Champaign and Urbana have begun having border skirmishes.

Wars are breaking out all over and Champaign and Urbana have begun having border skirmishes.

Language is rule-governed: it follows regular patterns.

Language is rule-governed and it follows regular patterns.

With regard to these and others,\(^{14}\) they say: ‘... "and" is mutually exclusive with other conjoining relationships, including exemplification, conclusivity, and explanation ... in nontemporal, noncausal cases, "and" is inadmissible in relationships heading in either direction, forward or backward’ (B-L&P 1980, 143-4). These observations seem to be essentially correct, but I don’t see how B-L&P’s ‘semantic command’ analysis can account for these. They seem to think that it does, since after presenting the examples they say: ‘It is fair to conclude at this point that "and" is not semantically vacuous, but indeed has a meaning, captured by the principle of semantic command’ (1980, 145). The conjunctions in (12b) and (35b) do meet the ‘semantic command’ requirement, that the second conjunct is excluded from being taken as temporally or causally prior to the first, so why is it that they cannot be understood in the same way as the juxtaposed cases? This question is not addressed by B-L&P.

Elaboration relations are big business in the coherence theory literature;\(^{15}\) many different subtypes of elaboration have been discerned, including various different backward-directed evidential and explanatory relations, such as those discussed in the previous section, and several types of specification and restatement. Here are just a couple, from Mann & Thompson (1986):

Your behaviour bothers me. You come in drunk and you insult the waiter.

He sure beat me up. I really took a thrashing from him.

They label (36) a case of ‘specification’ and (37) a ‘restatement’. In both cases, again, if they are conjoined with ‘and’, these relations are lost. The account given so far can be extended to these examples, in that the second utterance in each case can be
understood as answering an anticipated question: for (12a) 'where are wars breaking out?', for (35a) 'what does it mean to say language is rule-governed?', for (36) 'what's the problem with my behaviour?'.

However, there is more to be said about at least some of these examples, those in which the second utterance can be construed as another way of putting the first, that is, as an interpretation of the first. Blakemore (1993) discusses the way in which an utterance which is a reformulation of another utterance, usually the immediately preceding one, achieves relevance; Blakemore (1996, 1997) analyses a variety of conceptual discourse markers, whose function seems to be to tell the hearer that the utterance they preface (or some part of it) is a representation of a preceding utterance (or some part of it), rather than a description of a state of affairs. This group of markers includes 'that is', 'in other words', and 'in short'. Here is one of her examples:

(38) a. At the beginning of this piece there is an example of an anacrusis.
    
    b. That is, it begins with an unaccented note which is not part of the first full bar.

(from Blakemore 1997, 8)

The relation of (38b) to (38a) is more or less identical to that of the sequence in (35a) above, which does not have an explicit indicator of the relation. It would be natural to suppose that the second utterance in (35a) is interpreted as a reformulation of the first utterance, one which gives the hearer easier access to the contextual assumptions against which processing the proposition expressed by the first utterance will achieve an array of effects. Put differently, these are cases of 'formal' explanation (see discussion of explanation types in section 4.4 above); they involve explaining the meaning of 'anacrusis' and of 'rule-governed' (as applied to language), thereby enabling the hearer to derive further contextual effects from the first utterance (assuming he did not already have a full grasp of the meaning of these expressions). This explanatory, question-answering role of the second utterance accounts for the nonoccurrence of the relation in (35b), the conjoined counterpart of (35a). Formal explanations (that is, explications of the meaning of expressions) will, necessarily, involve the interpretive use of a representation, in relevance-theoretic terms.
Finally, consider the exemplification relation, exemplified in (12a) above, and here in (39a), a relation which disappears when the two sentences are conjoined:

(39)  

a. I always pick the wrong queue;¹⁶ yesterday I ended up waiting a quarter of an hour to get to the checkout.  
b. I always pick the wrong queue and yesterday I ended up waiting a quarter of an hour to get to the checkout.

The second utterance in (39a) could be comfortably prefaced by 'for example' or 'for instance'. In Carston (1992), I suggested that exemplification is a way of providing evidence (inductive support) for a claim. Blakemore (1997, forthcoming) gives some substance to this idea, pointing out that with recognition of a particular state of affairs as an example comes an assumption that it is typical in some respect, and that, therefore, there is a set of other cases which have the same property. She says "it is the suggestion that there are other cases which could have been cited which makes exemplification such a good means of providing evidence for the claim exemplified" (Blakemore forthcoming b, 20). To make a claim and then to present evidence for it is to produce two utterances, each of which carries the presumption of relevance individually; this explains why exemplification is not a possible relation between the conjuncts of an 'and'-conjunction, since they comprise a single unit processed for relevance.

The relations discussed in these sections, which can arise for juxtaposed cases but not for conjunctions, are explanation, evidence, logical consequence (see endnote 14) and reformulation; they all have in common the property that they are not relations "out there" in the world; they are relations that hold only in minds, perhaps only in human minds. They are relations between representations. On the other hand, the temporal and cause-consequence relations, which may hold between conjuncts, are very much out there, or, at least, are assumed by us to be out there; we register them perceptually and we represent them in our factual beliefs.

In the next section, I leave the two-unit cases and concentrate on completing the account of the pragmatics of 'and'-conjunctions, focusing on the forward-directed temporal sequence relation so typical of these examples.
4.6 Processing effort and iconicity

The pragmatic account, in section 4.2.1, of the temporal sequence relation, very often inferred to hold between the state of affairs described by the first conjunct and that described by the second, relied heavily on the idea of highly accessible narrative scripts, in which these sequential relations are represented. But this cannot be the whole story, since there is a range of other cases in which sequential (and cause-consequence) enrichment cannot be a result of scripted knowledge.

Consider the following:

(40) a. Sally cooked some vegetables and felt more optimistic.
    b. Mary put on her tutu and did a highland fling.
    c. Bill saw his therapist and fell down a manhole.

(41) a. Tonto rode into the sunset and he jumped onto his horse.
    b. Bill went to bed and took off his shoes.

Each of the examples in (40) is taken to communicate a temporal sequence, though none of them involves a stereotypical scenario, in which they are represented as sequential. The examples in (41), on the other hand, give ready access to a script: the 'jumping onto horse and riding into sunset' script and the 'taking off shoes, etc. and getting into bed' script, so the question they raise is why the stereotypical script does not lead to a backwards temporal relation being inferred as holding in the two examples. Why isn't (41b) understood as 'Bill went to bed after he took off his shoes'?

I've dismissed accounts that rely on a pragmatic maxim or principle which enjoins speakers to present their descriptions of states of affairs in the order in which these took place in the world. These are kinds of iconicity principles, as is made explicit in Harnish (1976, 359)'s supermaxim: 'Be representational; in so far as possible, make your sayings "mirror" the world', from which his more specific mirroring submaxims of time and space follow. For the reasons already given, in section 4.3, it would not be a good move to reinstate maxims of this sort, although they do seem to account for the persistent interpretation of 'and'-conjunctions as involving temporal
sequence, even in cases like (41a)-(41b), where this runs counter to stereotypical assumptions and leaves us with a weird interpretation.

The explanation is, I think, a general cognitive one rather than a specifically pragmatic one; it concerns the relative ease/difficulty of certain processing paths. The processing of proximal stimuli of an unintended sort cannot but take place in a certain order. When a certain (visible or auditory) event, e₁, occurs in the world, and is followed by a second event, e₂, and both of these are picked up by the appropriate sensory transducer and processed perceptually and conceptually, the processing of a representation of the first event begins before the processing of a representation of the second event. So, to a significant extent, the processing of the second event takes place in the context of the prior processing of the first event, rather than vice versa. We have no choice but to process an awful lot of information in this way; it impinges on our receptors in the order in which it occurs. Given this utterly banal fact (true doubtless of other sentient beings too), the human cognitive system presumably finds it natural (easy) to process other stimuli (those designed by humans, including ostension) in a similar way.

This cognitive explanation enters into utterance interpretation, hence pragmatics, by virtue of the rather obvious fact that utterance processing involves effort. In the absence of explicit (encoded) signposts telling a hearer what temporal relations hold between states of affairs described in a single processing unit, as is the case with 'and'-conjunction, an order of presentation that matches the temporal order of the events is the least costly in processing effort demands. There is no need for principles or maxims enjoining iconic representation; it follows from the precepts of relevance theory that, other things being equal, a speaker will cause her hearer as little processing effort as possible in achieving the intended cognitive effects of her utterance.¹⁹

Mental scripts of stereotypical sequences of events represent their real-world temporal relations, so, in many instances, the temporal sequence inference is supported by both general ease of processing considerations and a script which represents events as occurring sequentially. However, when there is no script, as in the examples in (40), the natural processing track is taken, and when there is a clash between a script and this most accessible route, as in the examples in (41), the latter prevails.

To end this section, consider the following nice illustration of a speaker who
causes his hearer unnecessary processing effort, by making each of his charges a pointless reformulation of the previous one and presenting them in a haphazard order. His 'cunning' utterance succeeds in confounding his hearer.

Dogberry: Marry, sir, they have committed false report; moreover, they have spoken untruths; secondarily, they are slanders; sixth and lastly, they have belied a lady; thirdly, they have verified unjust things; and to conclude, they are lying knaves.

........
Don Pedro: Who have you offended, master, that you are thus bound to your answer? This learned constable is too cunning to be understood. What's your offence?

(Shakespeare: Much Ado About Nothing, v.i,224-240)

4.7 Conclusion: Enrichment or Background?

In this chapter, I have argued against a number of different semantic accounts of the relations that can hold between the conjuncts of an 'and'-conjunction and, in the case of 'semantic command', those that cannot. The pragmatic account of the various temporal, consequential and other conjunct relations that I have favoured has a very cognitive flavour to it: knowledge structures in the form of stereotypical scripts have played a large part, as has the idea that the human mind is constantly looking for and assuming causal relations among the states of affairs it perceives and conceives, and an iconic processing route was claimed to be the least effortful, other things being equal. The key to the differences between the sorts of relations that conjunctions, on the one hand, and juxtaposed descriptions, on the other, can communicate, was claimed to be that while the juxtaposed cases can function as distinct units, each processed individually for relevance, conjunction comprises a single processing unit and carries the presumption of relevance as a whole.

Finally and briefly, I mention an interesting issue that arose towards the end of chapter 2, in the context of the discussion of Searle's concept of the Background. The question there was: which, if any, elements of the great mass of contextual/background material go into the proposition expressed? Alternatively, which unencoded elements
of total utterance meaning enter into the proposition expressed (that is, enrich the encoded logical form) and which do not? Which unencoded elements does the hearer actually infer? Consider the following familiar utterances:

(42)  a. I've had breakfast.
     b. She ran to the edge of the cliff and jumped.
     c. She gave him the key and he opened the door.

Temporal sequence is inferred in (42b) and (42c); in addition, it has been claimed that, in each case, a hearer recovers an unarticulated constituent, in the process of deriving the proposition the speaker intended to express: ‘today’, for (42a), ‘over the cliff’ for (42b), ‘with the key she gave him’ in (42c), as well as the temporal sequence. But Searle points out that there are a number of other elements of meaning which, though not literally expressed, are assumed by both speaker and hearer; for instance, that the ‘having’ of breakfast was an instance of ingesting in the normal way through the mouth, that the jumping over the cliff took place in a situation in which the laws of gravity held, and that the door opening was performed in the normal way by putting the key in the keyhole in the door rather than, say, by gouging a hole in it. Are these elements of the Background also recovered and represented by the hearer as part of the proposition expressed by the speaker? If so, what limits are there on this process of building in material? If not, why not, what distinguishes them from the constituents that are recovered and represented?

I don't think that any of these Background elements of meaning would be represented by the hearer of these utterances, except in the unusual case of a context in which there was some doubt about their holding. In general, elements are inferred only if they are likely to make a positive contribution to the relevance of the utterance, that is, only if they contribute to the derivation of cognitive effects. The point about the Background is that it is a body of taken-for-granted, unrepresented dispositions and manifest assumptions, which make it possible for the representations that are our actual thoughts and utterances to be meaningful. There is a question about what exactly is in the Background and what is not, and there are possible disruptions of the Background, which cause aspects of it to lose their background status and become represented, but
these matters do not bear on the concept itself.

With regard to the examples in (42), it does seem that the relevance of (42a) depends on the breakfast having taken place ‘today’, and that of (42b) depends on the jumping being ‘over the cliff’. Cognitive effects follow from these. Nothing more follows from the breakfasting having been in the normal ingesting way or from the jumping having been subject to gravity, though much may have followed from these NOT being in force. As for the instrumental inference of ‘with a key’ in (42c), I suspect that that is one that comes for free, along with the other material, in the door-opening script, whether relevant in the particular case or not. Scripts may be viewed as some sort of intermediate structure, between unrepresented Background and particular propositional representations of non-stereotypical knowledge.
Notes

1. Like most others discussing the general properties of sentential ‘and’-conjunctions, I am not considering an apparently exceptional class of examples, of which the following are three:
   a. She’s gone and ruined her dress now.
   b. I’ve got to try and find that screw.
   c. Do me a favour and shut it.
As Schmerling (1975) points out these do not behave syntactically or semantically like cases of logical conjunction.

2. I may be using the term conjunction in a rather non-standard way. Many authors write of (asymptotic) conjunction relations when discussing what I am calling juxtaposed or ‘non-conjunctive’ cases; some would say the conjunction relation is implicit (inferred) in these cases to distinguish them from the explicit (encoded) cases when a linguistic connective is present. Furthermore, they would make a distinction between coordinating conjunction (whether encoded or inferred) and subordinating conjunction (whether encoded or inferred). However, I don’t think that my simple distinction in this chapter between what I call conjunctions (examples where the linguistic element ‘and’ is present) and juxtapositions (where there is no explicitly given connective), should cause any conceptual difficulties.

3. This argument has to be used with care. Consider the following use of it:
   a. John is tall but Bill is short.
   b. John is tall. Bill is short.
Since the juxtaposed sentences in (b) communicate a contrast comparable to that of (a), a blind application of the argument would suggest that the connective ‘but’ does not encode anything about a contrast, and that this is pragmatically inferred in both cases. For independent reasons, it’s clear that this is not right, and appropriate choice of examples makes it evident:
   c. John is rich but he is tall.
   d. John is rich. He is tall.
No contrast is communicated by (d), while use of ‘but’ ensures there is one, however odd it may seem, indicating that this is what is encoded by ‘but’.

4. Other pragmatic accounts give a lot of weight to stereotypical interpretation too; for instance, Levinson’s (1987, 65-68) principle of informational enrichment is essentially an instruction to derive implicatures which are stereotypical enrichments of the information encoded by the utterance. However, this principle makes some false predictions, and offers nothing by way of explanation for why hearers should enrich stereotypically (when they do) instead of in more unusual (and interesting) ways. See Carston 1990/95, Carston 1994a, Wilson & Sperber 1993b, for critical discussion of Levinson’s account.
5. The account of the pragmatic derivation of the temporal relation between the conjuncts which I gave in Carston (1988/91) was a little different; there I saw it as a byproduct of the necessary assignment of temporal reference to the past tense of the verbs in each of the conjuncts, so for (2b) "handed" and "made". The result of this process looked like the following:

\[ X \text{ handed } Y \text{ the scalpel at } t \text{ & } Y \text{ made the incision at } t+n \]

(where \( t \) is some more or less specific time prior to the time of utterance and \( t+n \) is some more or less specific time, later than \( t \).

This made it more like a saturation account; Grice and others accepted reference assignment as one of the few processes required to bring the linguistic content up to a complete proposition. There are various problems with this (see Recanati 1989b, 301, footnote 3, and Wilson & Sperber 1993b), the most obvious being that it won't account for cases involving temporal spans rather than specific times. I see no reason now to attach it so closely to a reference fixing process; along with the various cause-consequence relations, it can be accounted for by a free enrichment process, which involves highly accessible assumptions schemas and relevance-theoretic constraints.

6. Another example which they give here is of the variety known as 'pseudo-imperative':
   a. Stand up, and I'm going to break your arm.
   b. Stand up; I'm going to break your arm.

I leave this here as it is generally assumed to raise additional issues. See Clark (1991, 1993a) for a survey of ideas about these and for a relevance-theoretic account.

7. This statement will seem a little strong in the light of the observations in chapter 6, where I make a case for the loose use of linguistic expressions bringing about alterations to the proposition expressed, which involve the loss of some encoded linguistic content. However, I think it will be evident that these cases, where a pragmatic loosening is warranted, are very different from what would be required here, which is that general world knowledge completely reverses some alleged lexical content.

8. Anderson (1980) discusses the notion of schemata in general and considers a range of evidence for their status as real cognitive units.

9. These observations stand in opposition to the Humean view that the causal idea is the result of a lengthy period of experiencing, sensorily, repeated occurrences of spatio-temporal contiguity between objects or events. To the contrary, Michotte's experiments indicate that some causal connections are directly perceived (as opposed to all being a function of higher-level cognitive processes). Furthermore, Michotte claimed, causally connected events do not necessarily have to be experienced repeatedly for the causal link to be forged (it's enough to be bitten by the dog once). Given this, he thought it probable that even very young infants perceive events as cause-effect episodes.
rather than as mere sequences. The results of recent experimental work support this prediction. Leslie and Keeble (1987) have suggestive evidence that six-month-old infants already perceive cause-effect relations, providing a strong case for the innateness of the concept and for the early stage at which it is operational (along with other concepts concerning the properties of physical objects, of course).

10. This is an instance of the important distinction made in relevance theory between descriptive and interpretive representation, touched on briefly in chapter 3, section 3.3.4. Descriptively used representations represent states of affairs directly. Interpretively used representations (thoughts or utterances) represent other representations; utterances are always first order interpretive in that they represent thoughts, but they may be interpretive to further orders, for instance, if they report speech or thought. The interesting thing about questions is that they are intrinsically (semantically) interpretive: they represent certain relevant assumptions. See Sperber & Wilson (1986a/95, chapter 4, sections 7 and 10), Wilson & Sperber (1988a), Clark (1991).

11. Interestingly, 'after all' and 'you see' can apparently occur comfortably in a 'but'-conjunction:

a. She failed the exam but, after all, she's been unwell all year.
b. He has the qualifications but, you see, he won't get on with the boss.

Blakemore (1987, 125-141) suggests that, on its denial of expectation use, 'but' is not a coordinating conjunction at all, but a (non-truth-conditional) discourse connective; if this is right, each of (a) and (b) consists of two processing units and it is not surprising that explanation-indicating devices can be acceptably employed.

12. I do not mean to imply that, in contrast with the conjunction examples, the juxtaposed cases are inevitably treated as two processing units, each independently satisfying the optimal relevance criterion. All the examples considered in the text do seem to function as effectively two utterances, but one can conceive of cases where they might function conjunctively, so be treated as a single unit, and cases where the first one might have a scene-setting, background-giving role, such that it's purpose is essentially as a bit of context against which the second is to be processed.

13. In the course of a discussion of epistemic modality, Papafragou (1997) uses two examples, which show that it is certainly not the case that all of the adversative relations that can be expressed by use of 'but' can also be achieved by 'and'-enrichment. She gives the following pair:

a. He may be a university professor, but he sure is dumb.
b. ? He may be a university professor, and he sure is dumb.
Although there is some sort of contrast here between two properties (being a university professor and being dumb), this cannot be acceptably expressed by 'and'. It may be that Blakemore's (1987, 1989b) distinction between a conjunctive contrast 'but' and a non-conjunctive denial of expectation 'but' provides the solution: 'and' can be used to capture the former but not the latter, a fact that would follow nicely from the single processing unit characterisation of 'and'-conjunction, which presumably extends to conjunctive 'but'.

14. Bar-Lev & Palacas (1980) also give the following pair of examples:

   a. There are his footsteps: he’s been here recently.
   b. There are his footsteps and he’s been here recently.

The conclusion, or logical consequence, relation which can be understood to hold for (a), but not for (b), is yet another distinct case from the, broadly speaking, 'elaborative', or amplificatory, relations I am discussing in this section. I discussed this case at length in Carston (1993). Again, the observation that ‘and’-conjunctions comprise a single processing unit plays a crucial role; the other component of the explanation concerns the fact that the logical consequence relation is an inferential relation and inferential relations, quite generally, hold between distinct processing units. It follows that a conjunction unit may function, as a whole, as a premise in an argument, or, as a whole, as a conclusion in an argument, but that it cannot communicate a premise-conclusion relation as holding between its constituent propositions.

15. A currently popular view is that there is a fixed set of such relations (for instance, cause, reason, enabler, evidence, justification, specification, exemplification, restatement, etc.) which play a central role in the coherence of discourses and texts. There are various attempts to provide a (usually hierarchical) taxonomy of these (Sanders et al. 1993, Hovey & Maier forthcoming), with results varying from four basic relations to several hundred of a more fine-grained sort. Some theorists assume that the identification of such relations in a text is a crucial aspect of understanding it (for instance, Hobbs 1979, 1983, Mann & Thompson 1988, 1987). Blakemore (1997, forthcoming b) is critical of these approaches, disputing both the possibility of finding any definitive set of coherence relations and the need for recovery of propositions expressing these relations in understanding a discourse. She shows that the understanding of an utterance or discourse depends, not on the classification of the coherence relations it exhibits, but on how it achieves relevance. For an interesting discussion of the differences in goals and predictions of coherence theory and relevance theory, see Giora (1996) and Wilson (forthcoming a).

16. The use of a variety of different punctuation marks across the juxtaposed cases (whether full stops, colons, semi-colons, etc) is a rough indication of some of the different relations that hold between the two units. See Nunberg (1990) for some ideas about the sort of information communicated by these marks.
17. Lloyd (1989, chapter 8) makes the case for what he calls a *narrative psychodynamics*, that is, for narrative with its characteristic temporal sequentiality as a basic structure of cognition, whose basic connective is "and then". He develops this idea in the context of a discussion of the properties of human thought which distinguish it from logical ideals of rational thought, and writes of us posing to ourselves an urgent "what next?" question, seeking plot, rather than proof. This idea is worth exploring further, but I can't do that here.

18. Iconic representation involves a pictorial element, which makes it not wholly conceptual or descriptive; there is a degree of isomorphism between the representation and what it represents, usually a second order relation between (a) the relations between the external entities, and (b) the relations between their corresponding internal representations (see Recanati 1993). Iconicity (naturalness) of linguistic form is supported in functionalist literature on syntax; see especially Haiman (1983, 1985, 1994), and for useful discussion of the role of iconicity in the formalist/functionalist debate, Newmeyer (forthcoming, chapter 3). More directly relevant to pragmatics, Sweetser (1990, 87-93) discusses iconicity at the cognitive level, which inevitably enters into language use.

19. Just as the submaxim of manner concerning orderliness in the narration of events is subsumed by the processing effort considerations that are fundamental to relevance-theoretic pragmatics, so too are the other manner submaxims, of brevity and clarity, at least to the extent that these make correct predictions. As discussed in section 4.3, the orderliness maxim gets it wrong in a number of cases of juxtaposed utterances, and brevity may be sacrificed, if the more succinct of two possibilities requires more processing effort than the longer option, for instance, 'condiments' versus 'salt and pepper'.

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CHAPTER 5

THE PRAGMATICS OF NEGATION

Thus for every thought there is a contradictory thought; we acknowledge the falsity of a thought by admitting the truth of its contradictory. The sentence that expresses the contradictory thought is formed from the expression of the original thought by means of a negative word.

The negative word or syllable often seems to be more closely united to part of that sentence, e.g. the predicate. This may lead us to think that what is negated is the content, not of the whole sentence, but just of this part.

(Frege 1918b/1977, 48)

In the previous chapter, a number of possible semantic-pragmatic analyses were considered: according to two of these, the semantics of the linguistic system supplies the full understood content, while according to two others, much of the work of constructing the intended meaning is left to pragmatics. These four options can be summarised as follows:

1. Semantic ambiguity with pragmatic disambiguation.
2. Rich semantic univocality with selective pragmatic cancellation (Cohen's approach).
3. Sparse semantics with conversational implicature (the Gricean approach).
4. Sparse semantics with pragmatic enrichment at the level of truth-conditional content (the relevance-theoretic approach).

In this chapter, I look again at these analytic options and at some further possibilities. I will focus on the multiple understandings of negated sentences in natural language. Trying to find an adequate account of how negation works has taxed millions of brain cells over the centuries. Though the problem remains unsolved, the analyses that it has spawned, and the arguments mounted to support them, are illuminating. I do not expect this whisk through some of the literature to extend the understanding of negation. My
primary aim at this stage is to explore more fully the sorts of analytic options that arise as a result of recognising the existence of two interacting sources of meaning: the semantic properties of the linguistic code and the rich inferential resources of the human mind. This latter, I shall continue to insist, is standardly much underestimated in accounts of verbal communication, including accounts of negation.

5.1 Some data and some distinctions

In accordance with the literature on the topic, I take it that there are (at least) the following two distinctions in the understanding of negative sentences, which have to be accounted for:

I. The scope distinction.
II. The representational distinction.

5.1.1 The scope distinction
It is well-known that the sentence in (1a) may be understood in the two distinct ways given in (1b) and (1c):

(1)  a. All the children haven’t passed the exam.
     b. Not all the children have passed the exam.
     c. None of the children have passed the exam.

(1b) leaves open the possibility that some have passed the exam while this is excluded from the stronger (1c). Standard logical notations for these two interpretations are given in (2) and (3), respectively:

(2)   \(- (\forall x [C x \rightarrow P x])\)
or:    \(- [\text{every } x: \text{child } x] (x \text{ passed the exam})\)

(3)   \(\exists x [C x \rightarrow \neg P x]\)
or:    \([\text{every } x: \text{child } x] \neg (x \text{ passed the exam})\)
The difference lies in whether or not the 'not' is understood as having wide scope over the sentence (specifically, in this case, over the universal quantifier, 'all') as in (2) or as having narrower scope (specifically just over the VP 'pass the exam') as in (3).

Discussions of the problems created by this duality have often been enmeshed with that other deeply explored phenomenon of 'presupposition':

(4) The present king of France is not bald.

This may be understood in two different ways, depending again on the breadth of the scope of the 'not':

(5) a. The present king of France is non-bald (he has an excellent crop of curls).

b. It’s not the case that the king of France is bald (since there is no king of France).

In logical notation these are, respectively:

(6) a. (ix Kx) – Bx

   or: [the x: king of France] – (x is bald)

b. – [(ix Kx) Bx]

   or: – [the x: king of France x] (x is bald)

As widely remarked, interpretation (a) is by far the more natural (considerably more accessible than the other); the (b) understanding, though certainly possible, is highly marked. It requires quite a special context or some sort of follow-up explanation, such as that given in brackets (5b).

5.1.2. The representational use distinction

This is perhaps more familiarly known as the object language/ metalanguage or use/mention distinction. The following two sentences can be understood in two distinct
ways as indicated by the follow-up material in (a) and (b):

(7) We didn’t see the hippopotamuses.
   a. But we did see the rhinoceroses.
   b. We saw the hippopotami.

(8) She’s not pleased with the outcome.
   a. She’s angry that it didn’t go her way.
   b. She’s thrilled to bits.

In the (a) cases the predicate falling within the scope of the negation is being used literally, it is taken to be descriptive of some aspect of the world. The follow-up statement is consistent with the prior negation. The logical structure of the utterances (ignoring scope distinctions) is, schematically: Not P; Q. In the (b) cases, on the other hand, such a descriptive understanding, would lead to a contradiction. In (7b) it's being claimed, first, that we didn't see a certain set of animals and, then, that we did see them. In (8b) it’s being claimed that she doesn’t have some property F (‘being pleased’) and then that she does have some property G (‘being thrilled’) that entails her having property F. The logical structure of these utterances (again ignoring matters of scope) is, roughly: Not P; P.

But, of course, the (b) cases are not understood in this way; they are taken not to be incomprehensible self-contradictions, but to be communicating an objection to some nondescriptive aspect of the material falling within the scope of the negation. In (7b) the plural suffix for ‘hippopotamus’ is being objected to as wrong; in (8b) the adjective ‘pleased’ is being objected to as not the most accurate way of describing the subject’s state of mind. In other words, the material over which the negation has its effect is taken to be mentioned rather than used by the utterer; it is a case of metarepresentational use, of representation by resemblance, rather than descriptive use (see appendix 1 for these terms). The contradiction is blocked because the representation is, as it were, in quotation marks, sealed off from interaction with the propositional content of the follow-up comment. This may be pictured, schematically and roughly, as: Not "R"; S, where R and S express the same proposition.
While the first distinction, the scope distinction, concerns how much or which part of the sentence falls under the mantle of the negation, the second concerns the nature of the material that so falls, whether it is being used descriptively or attributively. Since we have here two two-way distinctions, there are, in principle anyway, four ways in which a given negated sentence may be understood:

a. Narrow scope descriptive.
b. Narrow scope metarepresentational (mention).
c. Wide scope descriptive.
d. Wide scope interpretive (mention).

Let's see if particular examples can in fact be interpreted in these four ways, by employing the usual tack of adding some explanatory follow-up material, appropriate to the four sorts of case.

(9) All of the kids didn't pass the exam.

a. They will all have to resit it.
(The property that the entire set of children is said to lack is the property of having passed the exam.)

b. They all got A grades.
(That is, it's not sufficiently informative/appropriate/relevant to say just that they passed the exam; they in fact got A grades, which entails that they passed it).

c. Some of them failed quite badly.
(What is denied is that the entire set of children have the property of having passed the exam; some, at least, failed it.)

d. All the CHILDREN passed the exam.
(An objection to the use of the colloquial word 'kids' is being registered, the negative sentence most likely receiving heavy stress on the word 'kids'.)
So it does seem that all four possibilities arise and the two distinctions are real and distinct from each other. Consider, however, an utterance of the sentence in (9) followed by:

   e. There weren’t any kids doing the exam; it was for the mature students.

The ground for the use of the negation here is someone’s mistaken assumption that a group of children sat the exam in question. Which of the four cases does this represent? The negation has wide scope but is the material within its scope being used descriptively or interpretively? Opinion in the literature is divided: for some it is just a case of ordinary wide-scope negation providing evidence that the semantics of negation is fundamentally wide scope. For others, it has the same special, marked, ‘meta-’ feel to it that (b) and (d) have, and is to be treated as similarly involving metarepresentation. Much depends here on the relation between the proposition expressed by the sentence in (9) and the (existential) proposition that some children sat the exam. This issue comes to the fore with sentences of the form: ‘The F is not G’, which have received such enormous philosophical attention. Let’s try out the four possibilities raised by the two distinctions on one of these:

(10) The president of New Zealand is not foolish.

   a. He is an intelligent man.
   (Narrow scope descriptive: what’s denied is his having the property of being foolish)

   b. He’s a complete idiot.
   (Narrow scope metarepresentational: the weakness of the adjective used to describe the president is being objected to and the follow-up provides a stronger predicate which the speaker considers more appropriate. It, arguably, entails the original one.)

   c. There is no president of NZ.
   (Wide scope descriptive: one of the logical implications of the unnegated sentence is denied: that there is a president of New Zealand.)
d. There is no PRESIDENT of NZ.
d'. The PRIME MINISTER of NZ is.

(Wide scope metarepresentational: an objection to an utterance of the unnegated sentence is being made on the grounds that it 'presupposes' something false: that NZ has a president.)

In this example, the two wide scope possibilities seem to be falling together. Some, in fact, would say that the third logical possibility (c) does not arise for (10), that of wide scope descriptive negation, that the unnaturalness of this 'presupposition' cancelling case must be captured by the so-called metalinguistic use of the negation operator (in my terms, the mentioned or metarepresented nature of the material falling under the scope of the negation). Now it is clear from the quantified cases that there is a wide/narrow scope distinction to be made. Relying still on an intuitive notion of 'presupposition', I hope it is also clear that it is not confined to existential or factive entailments that emanate from subject position. Consider the examples in (11):

(11)  

a. Mary hasn’t gone to meet the king of France.  
(There is no current king of France.)
b. My neighbour doesn’t regret selling her Saab.  
(She didn’t sell it in the end.)
c. I haven’t stopped being an academic.  
(I never was one.)

The definite description in the predicate of (11a) is responsible for the existential 'presupposition'; (11b) is standardly taken (by those who favour presuppositions) to presuppose 'My neighbour sold her Saab' and (11c) to presuppose 'I have been an academic', both arising from the predicates of their respective sentences. Assuming that the 'not' in each of these cases negates the predicate (i.e is internal, narrow in scope), the question raised by (9e) and (10c) arises here too: are these cases of ordinary internal (narrow scope) negation or instances of metarepresentationational negation which allows for the cancellation of 'presupposition'? The real issue is whether or not 'presuppositions' inevitably fall through the net of ordinary, descriptively used, negation; in other words,
whether or not there are different senses or uses of 'not', such that one is presupposition-preserving and another is presupposition-cancelling. As these last examples indicate, this is an issue which turns out to be independent of the existence of a wide/narrow scope distinction and a descriptive/metarepresentational distinction, both of which are independently motivated, by examples such as those in (1) and (7)-(8), respectively. So there are three possible ambiguities here; this makes for eight logical possibilities in interpreting a negative sentence, but in fact a number of these fall together, as we have seen. Though I want to avoid becoming deeply enmeshed in the 'presupposition' problem, it will inevitably arise in the views about to be canvassed.

Finally in this section, another sort of example to bear in mind, as we look at treatments of negation, is the case of adverbially modified predicates:

(12) a. Fred didn’t scrub the potatoes.
   b. Fred didn’t scrub the potatoes with sand-paper.
   c. Fred didn’t scrub the potatoes with sand-paper in the bath-tub.
   d. Fred didn’t scrub the potatoes with sand-paper in the bath-tub at midnight.

Depending on the particular pattern of stress in each case and on follow-up clauses, different constituents in these may be understood as being the focus of the negation. If, as has been claimed, the unmarked pattern of stress is at the end of the sentence there is a preferred understanding in these cases; for instance, in (12c) the unmarked understanding would be that while Fred did scrub the potatoes with sand-paper he didn’t do this in the bath-tub. However, virtually any other constituent can be the negated constituent, given an appropriate heavy stress, so that all of these sentences can receive a range of interpretations; the more constituents they have the more the possibilities. Does this make them n-ways ambiguous, n equal to the number of constituents?

In what immediately follows I will set aside the clear metalinguistic cases such as the (b) versions of (7) and (8); whatever the best way to characterise them may be, it is standardly seen as not a matter of the semantics of the language. Any bit of linguistic form (from a single speech sound through to whole texts) can be used in this metalinguistic way; I will look at this use of negation with metarepresented material in
its scope in section 5.4. For the moment, the focus is on the scope distinction and the ‘presupposition’ preserving/cancelling distinction. The question to kick off with is whether these distinctions are encoded into the linguistic system as lexical or structural ambiguities, or arise from the way in which humans use a linguistically univocal ‘not’ in communication. My aim is to dispose of the ambiguity option, so as to concentrate on the range of ways in which an account in terms of a univocal semantics with a heavy contribution from pragmatics has been envisaged.

5.2 Semantic ambiguity analyses

5.2.1 Lexical ambiguity and/or scope ambiguity?
There are two ambiguity possibilities:

(a) ‘Not’ is lexically ambiguous, as between a sentence operator, NOT1, and a predicate operator, NOT2, and/or ‘not’ is lexically ambiguous as between a presupposition-preserving and a presupposition-cancelling operator.

(b) Sentences of the form [fp NP [vp not ...]] are structurally ambiguous, i.e. ‘not’ is an element that can take up one of two positions in some underlying level of logico-syntactic structure.

The Russellian position (supported by Grice (1981) and Neale (1992)) is one of scope ambiguity. This is a logical ambiguity and it is not clear that Russell would have meant by this what we nowadays mean by semantic ambiguity given that he did not consider a distinction between (conventional, encoded) semantic content and pragmatically supplied meaning. Grice, however, did recognise cases of linguistic ambiguity and favoured this view. Van der Sandt (1988) says of Russell’s theory of descriptions that it led to the proposal:

... to use the syntactic notion of scope to solve a problem that was regarded as presuppositional by Frege before him, and by many others after him. ... Russell’s analysis has the merit of solving the logical problem posed by non-denoting terms without affecting classical logic. The price is that two logical forms are postulated for sentences that, according to many, are not ambiguous but merely admit of different uses. Furthermore Russell’s analysis does not explain why the reading with narrow scope for the negation is strongly preferred and the other reading strongly marked.

(van der Sandt 1988, 168-9)
Other ambiguists are Karttunen & Peters (1979), (whose analysis is similar in many respects to Russell's conjunction analysis, though the two presuppositional conjuncts are replaced by conventional implicatures), and Seuren (1988), (who claims that natural languages have two negation operators, a minimal negation which preserves presupposition and a radical negation which does not). Horn (1985, 1989) too can be understood as holding an ambiguity position; though he talks of a ‘duality of use’, he characterises metalinguistic negation as if it is semantically distinct from descriptive negation (see discussion in 5.4.2). Without looking at the detail of particular proposals, I shall simply cite general considerations that mediate against ambiguity analyses of negation.

5.2.2 Arguments against ambiguity
The first and most popular argument against a lexical ambiguity is the argument from one-to-one translatability. This has become, by now, a fairly standard argument to trot out against putative ambiguities. I have used it in arguing against the semantic ambiguity of ‘and’ (Carston 1994a). Gazdar (1979, 65-6) points out that lexical ambiguity is, almost without exception, a language-specific phenomenon, that is, a lexical ambiguity in one language is typically not retained by a translation into another language (consider English ‘ring’, ‘pen’, ‘board’); this gives us a test to apply in trying to determine whether a linguistic expression that has two distinct interpretations should be considered linguistically ambiguous or not. For instance, the two understandings of ‘ring’ are translated by two different forms in other languages, while the various different interpretations of a ‘P and Q’ sentence are not, suggesting that general pragmatic processes are responsible for the diversity of interpretations.

Care is needed in applying the test, however, since it is not the case that if a single form in one language is translated by more than one form in another language, the form in the first language is necessarily ambiguous. For instance, the term ‘brother-in-law’ in English may be translated into Russian by one of several forms, depending on whether the property in question is one of being a sister’s husband, wife’s brother, or a husband’s brother, and there are languages which have a single form for the relations we express with the words ‘sibling’ and ‘cousin’. So the line of reasoning is
not that if a single form in L1 has two understandings and these are translated into L2 by two forms, then the form in L1 is necessarily ambiguous; no decision can be made between ambiguity and sense-generality on that sort of basis. Rather, the reasoning is that if a single form in L1 has two understandings and this form is translated into all/most other languages by a single form which also evinces the same understandings, then the form (in all the languages) is not ambiguous, but is sense-general as regards the two understandings. The wide scope/narrow scope distinction in the interpretation of negation, manifested by a single linguistic form, is found across a wide range of languages, quite possibly all, a matter discussed by Horn (1989, 366). So it looks very much as if we are not dealing here with two lexical items which just happen (by accident as it were) to have the same phonological (and graphological) form, but rather that the distinction arises quite systematically due to perfectly general cognitive/pragmatic factors acting on a single lexical item.

Just about everyone who mentions this argument of Gazdar's finds it a compelling one, for instance, Burton-Roberts (1989b, 39), van der Sandt (1988, 91), and Horn (1989, 366). Even those in favour of an ambiguity account, such as Seuren (1988, 222), take Gazdar's point and concede that the sort of ambiguity that characterises 'not' is very different from ordinary cases of lexical ambiguity. But just how strong is this translatability argument? I think it's a pretty good argument against the idea that there are really two unrelated homophonous lexical items, 'not₁' and 'not₂'. But would any sane person claim that? Unrelated senses? I assume that the only lexical ambiguity position which could be up for consideration is one of polysemy, that is, that there is a single lexical item 'not' which has two (related) senses. Even that's putting it a little too strongly, since the difference between the two meanings is hardly a difference in sense - it's not something conceptual or procedural - it's a difference in what they apply to, whole sentences or merely predicates, or, for Seuren, all semantic content including presuppositions or semantic content minus presuppositions. Polysemy may show up across languages, since universal properties of conceptualisation may lead to certain basic senses or uses of words being extended in predictable ways.³ This, then, gives the ambiguist, like Seuren, a better case than he has so far made for his ambiguity position, assuming he would be happy with a polysemy rather than an homonymy.

So we must look for further arguments against viewing 'not' as a polysemous
lexical item. Van der Sandt (1988) and Atlas (1989) discuss the famous tests from Zwicky & Sadock (1975) for distinguishing between cases of ambiguity and cases of sense-generality, with a view to applying it to negative sentences with two different interpretive possibilities. The structure of the tests is as follows, the particular one discussed here being the VP-anaphor test:

Suppose a sentence is ambiguous as between two interpretations. Then in a conjunction in which this sentence is the first conjunct, VP-pronominalisation can take place only if the interpretation assigned to the anaphoric expression is the same as that assigned to the antecedent. Thus crossed interpretations, that is interpretations on which the antecedent receives one interpretation and the anaphoric expression another, are excluded. If crossed interpretations are permitted, then the sentence in question is vague or unspecified with respect to the two interpretations.

(van der Sandt 1988, 90)

Let’s show how the test works for a clear case of each of ambiguity and sense-generality. First as a clear case of ambiguity, bank: bank1 = financial institution; bank2 = side of a river.

(13) John went to a bank and Bill went to a bank.

There are four possible understandings:

(a) John went to a bank₁ and Bill went to a bank₁.
(b) John went to a bank₁ and Bill went to a bank₂.
(c) John went to a bank₂ and Bill went to a bank₁.
(d) John went to a bank₂ and Bill went to a bank₂.

Now consider a case of VP pronominalisation of the second conjunct:

(14) John went to a bank and so did Bill.

This can only be understood as either (a) or (d) (except in cases of jokes and verbal games), which is as we would expect given the ambiguity of ‘bank’ and the "fact" that the VP anaphor gets its sense from its antecedent: ‘went to a bank’. The ‘crossed’
understandings are ruled out. The point seems to hold for what is generally thought to be a case of polysemy: 'may' which has a root (permission) sense and an epistemic sense:

(15) Mary may leave tomorrow and the same goes for Jane.

Either both Mary and Jane are permitted to leave, or the speaker is expressing a low degree of strength in the two assumptions, that Mary will leave and that Jane will leave. A crossed interpretation does not arise.

Now, take a case of a sense which is clearly general as regards some feature of meaning, for instance, 'neighbour', which is unspecified for gender:

(16) I've come to depend on my neighbour and so has Jane on hers.

Here it seems that all four understandings are possible; that is, the crossed understandings, on which my neighbour and Jane's are of different gender, are fine. Gender is not a feature of meaning that the VP anaphor picks up from its antecedent, which reflects the fact that 'neighbour' is unspecified for gender.

This test and others (for example, conjunction reduction) have been used successfully to settle some contentious cases; for instance, whether a feature of 'purposiveness' is part of the semantics of verbs like 'cut', 'hit' and 'knock over':

(17) a. John cut the chicken and his thumb.
  b. Enraged, Brian knocked down his wife and also an innocent bystander.
  c. Pat hit the wall and so did Mary.

In each of these cases, crossed understandings seem all right; for instance, Pat can be understood as having purposely hit the wall and Mary as having done so accidentally, and vice versa. So the test tells us that the verb is not semantically specified for purposiveness (though this can be built in pragmatically).

Unfortunately, negation is a difficult case for these tests. It is often pointed out that there is a relation of privative opposition between the two scope interpretations: a
narrow scope reading entails a wide scope reading, but not vice versa.

(18)  [Every x: child x] - (x pass the exam) entails:
- [Every x: child x] (x pass the exam)

This gives rise to particular problems in trying to assess the status of the different readings. Zwicky & Sadock (1975) themselves believe that their tests cannot distinguish ambiguity from sense-generality in cases of privative opposition, such as the case of the two senses of ‘dog’, where the one sense ‘species canis’ is entailed by the other ‘male canis’, but not vice versa. Kempson (1975) follows them in this and claims that it is therefore impossible to establish empirically that there is a genuine semantic ambiguity; if that is true, I assume it is also impossible to establish that negation is not ambiguous. Atlas (1977, 1989)*, on the other hand, believes the test can be used to dispose of the alleged ambiguity of ‘not’. He considers the following sort of case:

(19)  The King of France is not wise (since France is a monarchy) and the same thing goes for the Queen of England (who is a typical Windsor).

The bracketed material shows the interpretation intended in each case: the first conjunct is to be taken as wide-scope, presupposition-cancelling and the second as narrow scope, presupposition-preserving. Atlas (1989, 74-75) claims to find the crossed non-factive/factive readings quite acceptable, thereby finding support for his sense-generality of negation view, against the various ambiguity views. Like van der Sandt (1988, 91), my intuitions fail me with this example; too many factors seem to intervene. Without the bracketed material there is clearly one interpretation that comes to mind first and that is the one on which the two conjuncts are understood as preserving the existential presupposition, but this is because this is the much preferred reading for pragmatic reasons. If the conjuncts were reversed, it is clear that this particular crossed interpretation would not be possible: ‘the same’ could not go for ‘the King of France’ as nothing can go for the king of France. The most I feel able to say is that, assuming the possibility at all of the presupposition-cancelling understanding of the first conjunct, the crossed reading is not obviously ruled out here, but it is certainly mighty weird.
Let's give it another try, by setting up a rather more natural conversational context, but one which strongly biases for one of the negations to be understood as presupposition-preserving and the other as presupposition-cancelling (i.e. biases in the direction of a crossed reading):

(20) A: I think Clinton’s a real intelligent guy.
B: I hear the president of New Zealand is a bit thick.
C: New Zealand doesn’t have a president.
A: That's right; so the president of the USA isn’t thick (he’s intelligent) and the same goes for the president of NZ (since NZ doesn’t have a president).

This still has a very contrived feel to it, in my view, not too far removed from cases like (21), which is given by Atlas (1989, 46) as a case of crossed readings not being possible, indicating the ambiguity of ‘toss down’:

(21) ? Morton, always a greedy eater, tossed down his lunch and Oliver, who likes to watch egg mayonnaise ooze over the floor, did the same.

The test isn’t any more decisive if we try to run it on a case where different scopes of negation are at issue without affecting presuppositions:

(22) a. All the girls didn’t pass the exam and the same goes for all the boys.
b. Not all the girls passed the exam and none of the boys passed it.
c. None of the girls passed the exam and not all of the boys passed it.
d. All the girls didn’t pass the exam and all the boys didn’t pass the exam.

The logically possible crossed readings of (22a) are given in (22b) and (22c); I find it difficult, if not impossible, to get these readings of (22a). But note that it is also quite difficult to get crossed readings from the unreduced conjunction in (22d). What this shows is that there is a general problem here in separating out bare semantic intuitions.
from those having to do with strongly preferred understandings: uncrossed parallel readings of conjuncts are generally preferred and this tendency increases when the differences involve logical scope relations such as those between negation and quantifiers. It seems reasonable to suppose that crossed interpretations of this sort take considerably more processing effort than do the crossed interpretations involving the two senses of a lexical item such as 'bank'.

The tests as applied to the negation sentences are inconclusive. If we do not want to accept an ambiguity, we need to look for some other support for sense-generality. It has been pointed out by many that a semantic theory of presuppositions requires a semantic ambiguity of negation and, though the opposite does not hold, it follows that at least one brand of ambiguity of negation is part of a wider picture which involves semantic presuppositions. This has been used by some as, if not an argument exactly, a consideration weighing against the ambiguity account (see Thomason (1973), Kempson (1975), Wilson (1975), Atlas (1989), Gazdar (1979), Martin (1982), Horn (1985)). The semantics of natural language is greatly complicated if it is taken to include, in addition to entailment, a logical relation of presupposition, since this requires either a trivalent logic or a bivalent logic with truth value gaps. Other things being equal, the usual considerations of theoretical parsimony weigh against both a presuppositional semantics and an ambiguity of negation; if we can dispense with them, we should.

However, Burton-Roberts (1989a, 1989b) has argued that a presuppositional semantics, far from carrying with it a commitment to a semantically ambiguous negation operator, is INcompatible with it. Here are a couple of points he makes in this regard: (a) The first is an observation that Russell, who advocated a nonpresuppositional semantics for natural language, had a scope-ambiguous negation operator. The sentence 'The king of France is bald' (x) is to be analyzed as a conjunction of three clauses and on one reading the negation has broad scope over the description and on the other its scope is confined to the third clause. Strawson and Frege, on the other hand, exponents of a presuppositional semantics, took the negation operator to be the *univocal* presuppositional-preserving internal negation. For them, the sentence (x) has only one reading, on which the property of baldness is negated.

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(b) A structural ambiguity, of the sort Russell envisaged, would simply be incompatible with a presuppositional theory, since such a theory predicts (requires) that its presuppositions cannot be cancelled. The salient presuppositionalist intuition is that of preservation of the crucial element of meaning under negation. A presuppositional semantics entails that presuppositions cannot be cancelled (at least not within the semantic means of the system). Adding a further negation operator, capable of presupposition-cancellation would render the presuppositionalist theory incoherent; it would become, as Burton-Roberts puts it, 'a theory which is capable of explaining its own counterexamples' (B-R 1989b, 42).

So, as Burton-Roberts maintains, the issue of ambiguity/univocality of negation is in fact independent of the presuppositional issue. I will look at his univocal semantics for negation within a presuppositionalist view of natural language in section 5.4. It looks as if the arguments against an ambiguity of negation are not very compelling; at this point Grice’s Modified Occam’s Razor could be employed, suggesting that if we can give a pragmatic account of what is going on here, that is, if we can derive the understandings of negative sentences by pragmatic inference from a single semantics, then that is preferable. As mentioned in chapter 3 (section 3.6), however, it is not at all obvious that MOR is a valid principle in a cognitively-based pragmatics, in which processing effort plays an important part. I must hope that the pragmatic account I ultimately offer is so appealing that this in itself makes up for the lack of strong arguments against an ambiguity account.

Finally, while in the context of looking at strong semantic positions, we might wonder what a Cohen sort of account would involve; recall the rich univocal multi-featural semantic entry for ‘and’ that he advocated. I hope it is fairly clear that this has to be instantly dismissed as a possibility for negation; it would be transparently internally contradictory, with an entry like [+presup, -presup] or [+wide scope, +narrow scope].

As soon as one starts to look to a pragmatic account the question arises as to which reading, if either, is to be taken as the semantics and which derived pragmatically. Given two understandings or readings, R+ and R-, of a linguistic form, L, there would appear to be three possibilities:
1. R+ is semantically encoded in L and R- is derived pragmatically from R+.
2. R- is semantically encoded in L and R+ is derived pragmatically from R-.
3. Neither R+ nor R- is semantically encoded in L; rather, both are derived pragmatically from the encoded content of L, whatever that is.

Examples of all three of these proposals will be shown in what follows; I will try to assess the arguments presented for each, before (tentatively) settling on the only position that, I believe, is both coherent and accommodates the range of data given above and the intuitions regarding preferred and marked understandings.

5.3 Strong pragmatic analyses

5.3.1 Analyses in the Gricean Spirit

The rather odd title for this section is motivated by a disparity between standard assumptions about a Gricean account and the actual account Grice gives of sentences of the form 'The F is not G' in Grice (1981/89b). I will consider the latter in the next section. Here, I look at what, before reading Grice (1981), I took to be the Gricean account of negation and what many others too have assumed to be a standard Gricean account. Following the methodological dictates of MOR, this account favours a univocal weak semantics and a pragmatic derivation of the stronger understanding in terms of conversational implicature.

Atlas (1989) characterises the Gricean account of the wide/narrow scope difference as follows:

The Gricean view, ..., permits a negative utterance semantically interpreted as a sentence negation to [conversationally] implicate a predicate negation that entails the existential presupposition. (A negative utterance semantically interpreted as a predicate negation would straightforwardly entail it.) And of course there are contexts in which no implicature of the sentential negation is intended. Letting L- stand for the sentential negation, L+ for the predicate negation, the function PRAG for the Gricean inference, and K for kinds of context, we may abbreviate the Gricean claims by the formulae:

\[
\text{PRAG (K*, L-) = L+} \\
\text{PRAG (K**, L-) = L-}
\]

(Atlas 1989, 143-4)
He is principally concerned with example (4), repeated here:

(23) The king of France is not bald.

The Gricean analysis of the internal negation understanding that he assumes is as follows:

(24) what is said: – ((ix: king of France x) [bald x])

what is conversationally implicated:

(ix: king of France x) – [bald x]

where the implicated assumption entails the existence of a unique king of France and so is 'existential presupposition' preserving (reinstating) although the semantics (logical form) is 'presupposition' cancelling. Atlas (1989, 143) gives a sketchy account of how the inferential account based on Gricean maxims of informativeness and relevance might go; I won’t look at this here.

Let’s briefly consider how the analysis might go for a case of the interaction of negation and quantification, not involving a definite description:

(25) Everyone isn’t hungry.

Here the preferred reading appears to be the wide scope one giving the 'Not everyone' interpretation. This may be because of the ready availability of an unambiguous lexical item, hence of a compact way of expressing the alternative: ‘No-one is hungry’. Assuming, as on a Gricean analysis, that wide scope is semantically ordained for negation, there is no pragmatic adjustment to this; what is said is what is communicated:

(26) what is said: – ((every x: person x) (hungry x))

The narrow scope interpretation is possible and, presumably, would be pragmatically derived when the context was such that predicate negation would be the more relevant/informative, etc, interpretation. In such a (special, particular) context the
communication would come out as follows:

(27) what is said:  ¬ (\{every x: person x\} (hungry x))
    what is implicated:  [every x: person x] ¬ (hungry)

However, from a natural language utterance point of view, there seems to me to be something missing from the representation of example (25), which is, one might say, a 'presupposition' that there are (exist) some entities about which one is talking. This is as much presupposed here, and in many ordinary uses of the universal, as it is in uses of the existential. It is assumed that there is a nonempty set or domain of entities over which the quantifier ranges (as it is put). Let's assume a particular context in which the relevant domain is a group of friends at a picnic, then clearly what is communicated is that not all of the picnickers are hungry, or, less likely but possible, that no-one in this group is hungry. Either way, though, and this is the point I'm trying to get at, there is some sort of existential 'presupposition' lurking here, to the effect that a certain group of people exist. The point is that it lies outside the scope of the negation on both of these interpretations.

These observations naturally carry over to 'the king of France' type of example. On the standard wide scope negation interpretation of a universally quantified case the existence of some (more than one) kings of France is presupposed.

(28) Not all of the present kings of France are bald.

The same point holds, of course, for the standard narrow scope negation interpretation such as:

(29) None of the present kings of France are bald.
or:  All of the present kings of France are non-bald.

where, again, the existence of a bunch of kings of France is assumed. This is not to say that a wide scope negation which cancelled this presupposition is impossible. If we create an even more off-the-wall variant of the famous example, we might have such a
(30) All of the present kings of France aren't bald; there aren't any present kings of France.

This underlines the point made earlier, that narrow versus wide scope negation should not be equated with presupposition-preserving versus presupposition-cancelling negation.

This has taken me some way off course; I return now to those who have taken up what I am calling the Gricean mode of analysis of negation; that is, those who take the weak, wide (widest) scope for negation and derive the stronger (narrower) scope understandings pragmatically. They include Horn (1972, 1984a, 1988, 1989, 1992a), Kempson (1975), Boer & Lycan (1976), Gazdar (1979), Atlas (1977, 1989) and Levinson (1983, 1987a, 1988). Horn points out that there is a fairly systematic pattern of implicature where:

... logically contradictory negation is pragmatically strengthened to contrary negation. This arises, for example, in the default interpretation of the following negative sentences, where neither is standardly understood as the straightforward denial of its positive counterpart:

(A) I don't like you. (implicates that I dislike you)
(B) I don't think I can come. (implicates that [I think] I can't come)

(B) is an instance of so-called "neg-raising". The motivation for expressing each of the negative sentences in a weaker form, with the stronger understanding conveyed pragmatically, is essentially one of hedging or politeness. In such cases, as Harnish (1976, 360) says, "the speaker wants to communicate a certain belief ... without saying it, as if he might want to leave the 'I didn't say that' bridge unburned."

(Horn 1992a, 262)

This 'standard Gricean' account would, I assume, generalise quite naturally to the cases such as (12) above, repeated here as (31), where the scope possibilities are more numerous:

(31) Fred didn't scrub the potatoes with sand-paper in the bath-tub at midnight.
This too would be taken as a case of external negation at the level of what is said and, for any case of understanding where the 'not' is taken to focus on some greater or smaller internal constituent, this would be captured at the level of conversational implicature: 'not (in the bath-tub)'.

In short, the Gricean analysis takes the semantics of 'not' to be external (wide scope), truth-functional negation and derives internal (narrow scope) negation understandings pragmatically. The weakest meaning is taken to be the encoded (or conventional, in Grice's terms) meaning and the stronger internal meanings (all of which entail the external reading) are derived via the conversational maxims, in particular the maxims of informativeness and relevance, as conversational implicatures.

Van der Sandt (1988, 69-84) has mounted a punchy attack on the use of the Gricean apparatus to account for the 'presupposition-preserving' preferred interpretations of utterances of negative sentences. There is a common structure to the counterexamples he presents, which I would like to point out in order to show that, whether or not they present real difficulties for the Griceans, they are comfortably accommodated by Relevance Theory. He takes truth-conditionally equivalent sentences, which intuitively give rise to quite different interpretations, and shows that Gricean inference, mainly based on the first quantity maxim, predicts, contrary to these intuitions, that they have the same preferred interpretations. For instance:

(32) The chief of Buru Buru is not bald.

(33) Either Buru Buru has no chief or Buru Buru has a chief and this individual is non-bald.

Given the standard Russellian conjunctive analysis of the definite description sentence and a wide scope negation, (32) is logically equivalent to the disjunction in (33). According to standard Gricean analyses of disjunctive utterances, (33) would conversationally implicate that the speaker does not know which of the disjuncts is true. This is because, if the speaker did have evidence for the truth of one of the disjuncts, the utterance of this disjunct would be both more brief and more informative. By the same reasoning, then, a speaker of (32) is predicted to be implicating that she does not know which of 'Buru Buru has no chief' or 'Buru Buru has a chief but he is not bald'
is true, which, of course, is very far from the preferred interpretation.

Another logically equivalent pair of sentences (which therefore have the same truth-conditions) is given in (32) and (34):

(32) The chief of Buru Buru is not bald.
(34) It is not true that Buru Buru has a chief and that the chief of Buru Buru is bald.

Again, according to van der Sandt, the Gricean analysis that leads to the preferred interpretation of (32) as implicating the existence of a chief of Buru Buru would predict exactly the same preferred interpretation for (34), which does not seem to be the case.

I think these worries are partially and indirectly countered by Grice's analysis in his 1981 paper, where he employs a manner maxim of conversational tailoring which is sensitive to the choice of the abbreviated form 'The F' instead of the conjunctive (or disjunctive) expansion. Nevertheless, problems of different maxims giving different predictions remain, unless some ordering is imposed (manner maxims always given precedence over quantity, for instance). I believe that a move away from the maxim-based pragmatics to the relevance-based account, with its emphasis on processing effort differentials, will obviate these criticisms. Within this sort of approach the crucial differences that the formal properties of truth-conditionally equivalent expressions can make to interpretation, in particular to the allocation of processing effort and so to the locus of cognitive effects, is captured.

Another non-presuppositional, univocal negation account was given by Wilson (1975). I would like to look at this in a little detail, as her employment of the Gricean manner maxims (rather than informativeness or relevance) and her discussion of different weightings of processing effort is an interesting early recognition of the very significant role played by this factor in our intuitions about the acceptability of interpretations. Her observations anticipate the central role given to processing effort in the relevance-theoretic account of cognition and communication which she and Dan Sperber subsequently developed. She considers the following example:

(35) John regrets that Bill is ill.
which, for believers in presupposition, involves a factive ‘presupposition’ (Bill is ill) and an epistemic ‘presupposition’ (John knows that Bill is ill), as well as two existential ‘presuppositions’, the falsity of any of which, according to her, would render the corresponding negative sentence true:

(36) John doesn’t regret that Bill is ill.

(a) John does not exist.
(b) Bill does not exist.
(c) Bill exists but is not ill.
(d) John exists and Bill is ill but John does not know that Bill is ill.
(e) John knows that Bill is ill but is not sorry about it.

Wilson’s discussion of why it is that (e) rather than any of (a)-(d), involving falsity of one of the ‘presuppositions’, is the preferred interpretation, is in terms of Grice’s manner maxims:

First, notice that except when explicitly contradicting a previous remark, there would be no point at all in using [36] to convey the information in (a)-(c) above. If, for example, Bill is not ill, then the shortest way of conveying this information is by saying that Bill is not ill. Brevity, or the avoidance of unnecessary prolixity, is one of the Gricean goals of conversation. Moreover, if I want to convey the information that Bill is not ill, [36] is a remarkably inefficient way of conveying this information, since it merely entails that one of (a)-(e) is true. The avoidance of obscurity or ambiguity is another of the Gricean goals of conversation. In other words, someone who was obeying the Gricean maxims would simply never use [36] on the basis of (c), since there is another, shorter, more explicit and less misleading way to convey the information in (c). The same holds of (a) and (b). The choice between (d) and (e) interpretations can be similarly weighted in favour of (e) in the following way. If a speaker had wanted to convey (d), the most efficient way of conveying this information would be by saying [37]:

[37] John does not know that Bill is ill.

While [36] has [37] as a possible interpretation, it also has the possible interpretation given in (e) above. Since there are two available ways of conveying the information in [37], of roughly the same length, one of which is open to other interpretations, the Gricean goal of clarity will dictate [37] as the
correct form in which to convey this information. This leaves (e) as the most likely interpretation of [36] according to Gricean principles - as it in fact is.

(Wilson 1975, 102-3)

This sort of account would carry over fairly straightforwardly to the definite description cases. Why produce the utterance 'The king of France is not bald' if the grounds for the negation are the nonexistence of the king of France which can be communicated more briefly and less obscurely by 'There is no king of France'. In subsequent relevance-theoretic terms, a speaker trying to be optimally relevant would not use (36) to communicate any of (a)-(d), since to do so would be to put her hearer to some quite pointless processing effort: he would be directed to access certain concepts from which no effects would follow. The intended effects could be communicated much more economically, by simply asserting any one of these short sentences.

Wilson (1975)'s work is important in pulling apart semantic issues from issues of interpretation. Her idea was that, while certain interpretations of negatives are semantically possible, they are generally ruled out at the performance level on the grounds that the information they contain could have been conveyed much more simply, briefly and explicitly. She gave the following extreme example to press the point home, saying that a speaker would not use this as a means of communicating that there is no king of France:

(38) I don't believe that the king of France understood what you said when you congratulated Prince Philip on having a nose only slightly shorter than that of the late General de Gaulle.

On her account, and on Gricean accounts generally, this would be true if there were no king of France. But it would not be used to convey that information, because it would not convey it very well. She suggests that we might take it as a general principle that the more semantically complex a sentence is, the more strongly it will suggest something which it does not in fact entail; in the case of (38), a vast amount of the material falling in the scope of the negation (hence not entailed) is in fact suggested (implicated). In relevance-theoretic terms, the length and complexity of Wilson's (38) would lead a hearer to expect a range of effects that are commensurate with the processing effort that
the utterance demands, a range that could not have been communicated by the relatively much shorter and less complex utterance: 'the king of France does not exist.'

The various analyses mentioned in this section have the following features in common:

1. A semantically univocal negation operator.
2. A weak, wide scope semantics for negation.
3. This semantics is taken to be 'presupposition' cancelling, i.e. it suspends all and any of the entailments of the positive sentence; it has no entailments itself.
4. A derivation of the preferred narrower scope understandings through a Gricean inferential procedure, employing one or other of the maxims, and giving rise to conversational implicatures which capture those aspects of the utterance which are taken to fall outside the scope of the negation.

These are just the analytical components one would expect of a follower of Grice, given his general position in the 1967 William James lectures on Logic and Conversation that, semantically, the natural language expressions 'not', 'and', 'or', 'if', 'all', 'some', and 'the' do not diverge from their logical operator counterparts, their other interpretations following from facts about language use. However, as I shall go on to discuss now, Grice's own story has a further twist to it.

5.3.2 Grice: structural ambiguity and implicature

In his discussion of sentences of the form 'The F is G', Grice (1981/1989b) follows Russell very closely. He wishes to preserve the Russellian quantificational unpacking of definite descriptions and (most significant in the present context) the scope ambiguity of the negation operator. First, he establishes that the most satisfactory formal counterpart of (the surface form of) the sentence 'The king of France is bald' is one employing a term-forming iota-operator: \( G (\iota x. F x) \), rather than one for which the iota-operator functions like a quantifier. Given this, the corresponding negative sentence has the single representation: \(- G (\iota x. F x)\), that is, a representation which, like the English sentence, masks the two scope possibilities. He continues:
We are then committed to the structural ambiguity of the sentence 'The king of France is not bald'. The proposed task may now be defined as follows: On one reading 'The king of France is not bald' entails the existence of a unique king of France, on the other it does not; but in fact, without waiting for disambiguation, people understand an utterance of 'The king of France is not bald' as implying (in some fashion) the unique existence of a king of France. This is intelligible if on one reading (the strong one), the unique existence of a king of France is entailed, on the other (the weak one), though not entailed, it is conversationally implicated. [my highlighting (RC)]

(Grice 1981, 188)

Much of the rest of the paper is taken up with developing a pragmatic account of how this implicature arises. It involves introducing a new manner maxim of 'conversational tailoring', which indicates that of the 'Gricean' accounts mentioned in the previous section, Wilson (1975)'s is the most at one with his own intuitions. Omitting the details of his account for the moment, my concern is to highlight the difference between the 'Gricean' analyses above and what Grice is advocating here. The salient and (to me) surprising part of Grice's analysis of 'The F is not G' is his assumption of a structural ambiguity AND an implicature account of the preferred narrow scope understanding. Neale (1990, 163-4) notices this difference between the Russell-Grice account and that of Kempson (1975) (given in the previous section) and says: 'Kempson (1975) appears to disagree with Russell by suggesting that (i) (= "The king of France is not bald") is unambiguously represented as (i2) (= wide scope reading), presumably in deference to the fact that (i1) (= narrow scope reading) entails (i2). It is not clear to me that this approach has any advantages over the Russellian-Gricean account.'

It seems reasonable to wonder whether the Russell-Grice account has any advantages over the Kempson-Wilson account? They are not identical positions and there should be some way of choosing between them. On economy grounds it seems clear that the position of Kempson and others is preferable. What point is there in having both a (strong) reading R', and a (weak) reading R" which is standardly interpreted, via pragmatics, as R'? There is an odd and unmotivated duplication in the account. The equivalent setup for another connective, say 'or', would be for 'p or q' to have one reading R on which it is exclusive and another reading R" on which it is inclusive, but this reading R" is standardly interpreted, via pragmatics, as R'. As far as
I know neither Grice nor any Gricean has advocated such an analysis, and it would run counter to Modified Occam’s Razor, which is grounded in general economy considerations in theory building.

However, in the negative sentence we are considering, the alleged ambiguity is structural rather than lexical. The two readings characterised by a difference in particular symbols at any point, say two different negation operators, $\neg$ and $\sim$. The difference is captured in the syntax of the logical representations, the arrangement of the symbols:

(a) $\neg \exists x [KFx \& \forall y (KFy \rightarrow x = y) \& Bx]$
(b) $\exists x [KFx \& \forall y (KFy \rightarrow x = y) \& \sim Bx]$

So talk of ‘multiplying senses’ doesn’t carry over directly here. Further, it might be argued that postulating a syntactic (as opposed to a lexical) ambiguity does not lead to any proliferation of the elements needed in giving an account of the semantics of the language (English) since the syntactic rules (of the logical language employed for the task) involved are required anyway. Perhaps this is the reason for finding an ambiguity acceptable here, but not in the case of ‘and’ or ‘or’. Still, this account involves postulating two types of logical form (or sentence senses) in the language, when a full explanation postulating only one can be given. It combines ambiguity and implicature in an account of the two understandings of a particular linguistic form; these are usually taken to be mutually exclusive alternatives in explaining an interpretation. Furthermore, given these syntactic possibilities there seems to be something missing in the account which is why it is that the negation doesn’t turn up just as freely in front of the conjunct headed by the universal quantifier; that is, why there isn’t a narrow scope reading on which non-uniqueness is taken to be what falsifies the positive sentence.

Grice’s assumption of a structural ambiguity seems at odds with the implications of the distinction between semantics and pragmatics, a distinction for which he is primarily responsible. It might be that what underlies this is that uneasy conjunction of ideas about the notion of ‘what is said’: it is the truth-conditional content of the utterance and (yet) it is closely related to the conventional meaning of the sentence uttered. Perhaps, the (implicit) line of reasoning runs as follows: on some uses, the
truth-conditional content of 'The F is not G' includes the condition that there exists an
F and, on others, it does not, so both meanings must be conventional meanings of the
sentence. Perhaps this is why he does not consider the conversational implicature
account of how the existential implication arises to be sufficient; implicatures are not
supposed to contribute to the truth-conditional content of an utterance. This line of
reasoning comes apart once the radical underdeterminacy of truth-conditional content by
linguistic content is taken on board. The notion of semantics that applies when we
speak of the semantics/pragmatics distinction is the notion of meaning encoded in the
forms of the linguistic system and these seldom provide more than a schematic structure
on which to build a fully truth-conditional representation.

I move on now to an account which gives full weight to the underdeterminacy
thesis and favours a quite abstract semantics of sentence-types of the form 'The F is not
G', a semantics which does not constitute the truth-conditional content of any utterance
of the sentence.

5.3.3 Sense-generality and implicature
In a series of papers culminating in his 1989 book, Jay Atlas has developed and
defended his semantic generality thesis, which is a particular manifestation of the
underdeterminacy thesis: 'The sense-generality of a sentence radically underdetermines
(independently of indexicality) the truth-conditional content of its utterances.' Atlas
(1989, 31). With regard to the issue here, what this comes to is the view that 'not' is
semantically unspecified as regards its scope: it has neither wide nor narrow scope as
a matter of its semantics. Whether the understanding of a negative sentence on a
particular use is one of narrow or of wide scope, that understanding will involve
pragmatic 'construction'; neither is a direct reflection of the semantics of the negation
operator.*

He describes his approach as 'radically radical pragmatics', to distinguish it from
the so-called radical pragmatics position which developed as a result of the work of
Grice and is exemplified by the analyses given above in 5.3.1. I will try to pull out the
features of his position which distinguish it from the standard Gricean positions:
(a) The semantics is neutral between the two readings (understandings) in question.

(b) Pragmatic specification is essential in arriving at the proposition expressed (the truth-conditional content of the utterance); it is a 'completion' process.

(c) So some of those aspects of utterance meaning which are treated as implicatures by the neo-Griceans are, for Atlas, part of truth-conditional content.

(d) Hence the work of pragmatic (conversational) maxims is not confined to the derivation of conversational implicatures but is crucially involved in arriving at the proposition expressed.

(e) So, according to him, there is no clear distinction between 'what is said' and 'what is implicated'.

What the two approaches (the Gricean and Atlas's) have in common is an anti-ambiguist stance. Atlas (1989), entitled *Philosophy Without Ambiguity*, gives considerable space to discussion of the difference between linguistic ambiguity (lexical and structural) and generality of sense, and to the various tests that have been proposed in the literature to decide which is in play on any given instance of two (or more) understandings of a linguistic expression. He uses a number of these to provide evidence against the ambiguity of 'not', and, by implication, for his sense-generality approach thesis. I reviewed these in section 5.2.2. However, while the tests (perhaps) remove the ambiguity option, they do not choose between his scope-neutral semantics and the weak, wide-scope, semantics of the Griceans. He is bound then to advance some independent arguments which support his more abstract semantics and this he does in Atlas (1977, 1979, 1989). Let's consider these now.

First, he highlights the salient differences by the use of the stark formulae in (I) and (II), where the notation is to be understood as follows:

L- stands for the externally negated understanding
L+ stands for the internally negated understanding
^N stands for the semantic representation on which the negation is unspecified for scope
K_{ij,krec} are kinds of contexts
PRAG is a function, representing the Gricean inference, which takes as input the
semantics and the context and delivers an "understanding" as output.

I. The Gricean position: II. Atlas's position:

PRAG (K_i, L-) = L+
PRAG (K_i, ^N) = L+

PRAG (K_j, L-) = L-
PRAG (K_j, ^N) = L-

(Note: this is simply a useful way of showing the difference between the two positions;
it's not clear whether Atlas places any theoretical or explanatory weight on the PRAG
function; I don't.)

As he says (Atlas 1977; 1989, 140-149), the crucial difference is that, on his treatment
both understandings require some pragmatic work, while on the Gricean account only
the internally negated understanding does, the externally negated being a direct reflection
of the encoded sense. Atlas seems to be convinced that his 'symmetrical' treatment is
to be preferred to Grice's 'asymmetrical' treatment. He has, as far as I can see two lines
of thought, which are intended to establish this.

In the first of these, he (Atlas 1989, 140-141) makes an interesting analogy with
a theory of navigation which is successful in getting sailors from a point, say, Dover,
England, to a distant point on the globe, say, Wellington, New Zealand, but is based on
the false premise that the earth is flat. His point seems to be that while the general
Gricean theory of conversational inference (language use) is successful in accounting for
how hearers arrive at the full signification of an utterance (at speaker's meaning), it is
less clear that such a theory can tell us anything about 'the ACTUAL meanings of
English expressions'. I don't have much to say about this; it could be that on the
Gricean analysis, the starting point (i.e. the semantics) for a pragmatic construction is
misconstrued despite the theory leading to the right result but this of course applies
equally to Atlas's own analysis. He is assuming the standard Gricean inferential
apparatus for his own analyses so the property of having an enlightening theory which nonetheless involves a false premise might apply just as well to his own semantics. So far we have no way of telling who the flat-earther is here.

The second line of thought is more clearly geared towards choosing between the analyses. I summarise it:

a. The two understandings (external ('presupposition-cancelling) and internal ('presupposition'-preserving)) of a negative sentence, abstracted from particular contexts, are phenomenologically of equal status.

b. On the standard Gricean account they are treated as asymmetric, in that only for the narrow scope understanding does the function PRAG do any work. The wide scope case is ‘degenerate’, in that it is a direct reflection of the semantics.

c. On Atlas’s scope-neutral semantics the two understandings are treated as symmetric; neither is a direct reflection of the semantics; the function PRAG has work to do in both cases.

d. So, while the Gricean account fails to represent the phenomenological equality of the two understandings, the Atlas account succeeds in capturing it.

e. Therefore, Atlas’s semantics is to be preferred.

What’s to be made of this? First, let’s try to be clear what he means by the property of ‘phenomenological equality’ and second, let’s consider whether he is correct in ascribing it to the understandings of negated sentences. He says that, when confronted with a negative sentence, abstracted from any particularities of context, competent speakers know that it has (at least) these two understandings and do not judge one as ‘less a function of the meaning of the sentence than the other’ (p.142). I assume he is referring to native speaker intuitions about natural interpretations of ‘The F is not G’ and that what is meant here is that a native speaker will find each understanding as likely to come to mind as the other. Assuming for the moment that this is true, I take it that it would be a point in favour of an ambiguity treatment had that not been ruled out on independent grounds. I suppose the two (at least) understandings that common homonyms like ‘bank’ or ‘ring’ have should be phenomenologically equal, if anything is in the area of "understandings". Of course, one sense is quite likely to come to (the
conscious) mind before the other as dictated by all sorts of factors affecting accessibility: the greater frequency of one sense over the other, recency of one sense in the experience of the particular native speaker, etc., but I don’t suppose a competent native speaker would insist that one is somehow more basic than the other, that one is ‘less a function of the meaning of the [linguistic expression] than the other’.

But what of this claim as applied to negated sentences? I have no clear-cut intuitions across the full range of negation cases, including the various possibilities of negation interaction with quantifiers. However, like most people, I do have immediate intuitions about the sentence-types Atlas is concerned with, of the form ‘The F is not G’, abstracted from specific contexts, and they do not mesh at all with his. His appeal to the phenomenological equality of the wide and narrow scope understandings of this sort of sentence seems especially wayward, given that hardly a person writes about these without pointing out that the narrow (‘presupposition-preserving’) understanding is "preferred" (Grice 1981, Kempson 1975, Wilson 1975, Burton-Roberts 1989b, etc.). Even though these writers favour a wide-scope semantics, they recognise that, as an understanding of a negative sentence, it is frequently marked as compared with the narrow (‘presupposition’ preserving) understanding; Kempson (1975, 87), for example, writes of these cases as ‘unnatural interpretations of negative sentences’. Isn't it precisely because we (native speakers and theorists alike) do not find the two understandings to be phenomenologically equal that the case for the special category of logical implication known as ‘presupposition’, has been made, has enjoyed a lengthy life and is still far from extinct (see Seuren 1988, Burton-Roberts 1989a, 1989b)? It is the very phenomenological INequality of the understandings that underlies the anti-presuppositionalists’ assumption that they had better find a way of accounting for why one reading (the predicate negation) is so clearly preferred to the other.

The upshot then, as far as I can see, is that we have not been given any reason for preferring the sense-general account to the weak wide-scope semantics. In fact, I believe there may be reasons for preferring the Gricean semantics. What about the widespread intuitions of unequal phenomenological status - do they move us in this direction? Given the way in which Atlas thinks he can use his intuitions of equality, it might seem so: for him, natural, phenomenologically salient, readings/understandings of a sentence, in the absence of a specified context, are the outcome of general pragmatic
processes. Since Grice and the Griceans look to pragmatics to account for "preferred" understandings, they seem to assume this too. Given this common ground between the contenders, the overwhelming consensus of intuitions that one understanding is marked and the other unmarked should favour the Gricean over the Atlas account.

It should be noted, though, that not everyone shares the basic assumption here: Burton-Roberts (1989b) takes the unnatural, marked nature of the wide-scope interpretation to be evidence against a wide-scope semantics for 'not' and in favour of a univocal narrow-scope (=presupposition-preserving) negation. I shall look at his views in some detail in section 5.4 and will argue that his conclusion is based on a very impoverished, insufficiently cognitive, conception of the role of pragmatics in interpretation. I doubt that we should draw any general conclusion about the role of semantics or pragmatics from a perceived asymmetry in the salience of possible understandings of any given linguistic form. All such an asymmetry indicates is that one understanding is more accessible than the others, so more likely to be relevant, in the absence of particular contextual assumptions. This might arise because one is the result of standard cognitive processes while the other (less salient one) reflects the bare semantics; alternatively, though, there could be several pragmatically derived possibilities, one of which is more accessible than the others.

A surer consideration in favour of the Gricean account is that it does, at least, give us a semantics to work with. We have some idea of what it means for the negation operator to be semantically wide in scope. Apart from a few remarks to the effect that semantic representations should be given the form of computer programmes (Atlas 1977, 335; 1979), remarks which were not repeated in his 1989 book, Atlas stalwartly refuses to address the issue of what a scope-neutral semantics for 'not' would look like. He can only tell us that it is not wide-scope nor narrow-scope and it is not (therefore) equivalent to the truth-functional negation operator.

As a result of this blank as far as the semantics is concerned, we can have no idea what the input to the Gricean inferential procedure (PRAG), that Atlas advocates, is to be. Burton-Roberts (1991, 171-2) also makes this point. He goes on to question Atlas's unexplicated recourse to Gricean pragmatics. He points out that Atlas is clear that a major implication of his work is that 'There is no straightforward distinction between "what is implicated" and "what is said"' (Atlas 1989, 146). Burton-Roberts
says that it follows that PRAG cannot be Gricean inference since Gricean pragmatics consists of inferential mappings from propositions ("what is said") into propositions ("what is implicated"), requiring the very distinction that Atlas is undermining. As an advocate of pragmatic enrichment at the level of the proposition expressed, I am not convinced by this criticism; what Atlas is showing here is just one of the many cases where pragmatic inference (not obviously different in kind from the inferential processes involved in deriving implicatures) contributes to the proposition expressed by the utterance. Still, Atlas does owe us some account of this function PRAG, of its input and its inferential nature.

Finally, let's compare the putative sense-generality of negation with some other established cases of sense-general terms in the language in a bid to better understand Atlas's proposal and see if there is any reason for preferring it to the Gricean weak external semantics. The paradigmatic sort of example in all writing about sense-generality is the one of a word which is unspecified for gender, for instance, 'neighbour', 'cousin', 'teacher', 'person', 'I', etc. Atlas himself uses this sort of example in setting the scene for his sense-general analysis for 'not' (Atlas, 1977, 1989). On the general assumptions that a human being is either female or male, and that a neighbour, a cousin, etc., are human beings, then a neighbour, a cousin, etc., is either male or female and it is often of interest to know which, so although the words themselves carry no gender information whatsoever, they may well be understood on occasion as gender-specific. However, there is a striking difference between this sort of example and the negation case, in that there are instances of the use of these words where gender is immaterial and the term is satisfactorily understood without any gender consideration. The following are probably such cases:

(39) a. My neighbour has just bought an incredibly noisy dog.

   b. We have to go to my cousin's funeral tomorrow.

A fully truth-conditional proposition is expressed by these without any process of gender specification; interpretation in accordance with the principle of relevance would, in a great many instances, require no gender decision. On the other hand, as Atlas is at pains to emphasise, the understanding of a negated sentence inevitably requires specification
of scope; a scope-neutral understanding isn’t any kind of understanding. In the terms
in which he criticises the Gricean semantics for negation, then, the gender-unspecified
term ‘neighbour’ is "degenerate" in these cases, in that the function PRAG has no work
to do. Even in those cases where PRAG will lead to the ascription of a specific gender
it is not clear that this pragmatically derived ascription is necessarily understood as
contributing to the truth-conditional content of the utterance, as is the case with the
fixing of negation scope:

(40)  a.    My cousin plays rugby for Wales.
     b.    My neighbour takes in other people’s ironing to help make ends meet.

It cannot be assumed that the understanding of ‘cousin’ in (40a) as male and of
‘neighbour’ as female in (40b) are cases of pragmatic contribution at the level of the
proposition expressed rather than conversational implicatures. This would have to be
established independently, since the contribution of the sense-general terms is fully truth-
conditional to begin with. So the structure of the two cases is quite different: gender-
neutral ‘neighbour’ (with a semantics along the lines of ‘nearby dweller’) does not
require any pragmatic specification in order to be fully understood; scope-neutral ‘not’,
on the other hand, does require that scope be specified on any given understanding and,
inexitably, this specification contributes to the truth-conditional content of the utterance.

Recall that the two possible specifications of a negative sentence are in an
entailment relation with one another: the narrow scope reading, L+, entails the wide
scope, L-. This is not the case for the two possible gender specifications of ‘neighbour’:
there is no entailment or hyponymy relation between ‘male’ and ‘female’, rather they
are co-hyponyms of the gender-neutral ‘neighbour’. The entailment relation holds
between each one of the specifications and the general sense of the term: ‘x is a female
neighbour’ entails ‘x is a neighbour’. The same point holds with regard to another
example of sense-generality that Atlas (1989, 26, 29-30) discusses: ‘the girl with the
flowers’ which may be interpreted as ‘the girl wearing the flowers’, ‘the girl selling the
flowers’, ‘the girl carrying the flowers’ and so on. Each of these pragmatic
specifications of the general sense is independent of the others and each, arguably,
entails the general sense. It seems to me that Atlas’s use of these examples, in preparing
the ground for a sense-general account of negation points, more clearly to the Gricean wide-scope semantics, than to his own more abstract (and obscure) semantics. Consider (41):

(41) The king of France didn’t visit the queen of Belgium in secret at Versailles.

This might be understood as: (a) the visit didn’t take place; (b) the visit wasn’t secretive; (c) it didn’t take place at Versailles; (d) there isn’t a king of France, though for reasons already given, this is marked and would only arise in fairly special contexts; and there are further possibilities. Each of these entails the wide-scope negation as does each of the gender-specifications of ‘neighbour’ entail the unspecified sense.

Recall that, assuming the ambiguity tests deliver a verdict of sense-generality for negation, what this means is merely that the multiple understandings have been shown not to issue from an ambiguity in the linguistic form ‘not’. It does not follow from this that the scope-neutral semantics is to be preferred to the wide-scope semantics. These are both sense-general accounts (as opposed to ambiguity positions) and, as far as I can see, the considerations of the last few paragraphs mediate in favour of the wide-scope semantics. I am in total sympathy with Atlas’s wider claims: that, in general, natural language sentences do not have truth-conditions and there is a great deal of what he calls ‘pragmatic construction’ in determining the proposition expressed by a given utterance. However, a semantics for negation in terms of the understood concept of wide-scope is entirely at one with these assumptions, most clearly so on the account of the strengthening to narrow-scope that I move to in the next section.

5.3.4 Pragmatic enrichment of negation

Whenever the relationship between two understandings of a linguistic expression is one of entailment, that is, when one of the readings is stronger (more informative) than the other, there is another pragmatic tack to be considered: enrichment at the level of the proposition expressed. On this sort of analysis, the semantics of the expression is taken to be the weak understanding (as in the Gricean accounts above) and the stronger understanding is arrived at by a pragmatic process of local strengthening (‘free enrichment’, in Recanati’s terms).
I have argued, against Atlas, that we have been given no good reason to adopt any more abstract a semantics for the negation operator than that of wide-scope. On the other hand, Atlas's intuition that the various scope possibilities affect the truth-conditional content of the utterance seems exactly right, an intuition which may also have lain behind Grice's assumption of a structural ambiguity. The pragmatic enrichment account captures both of these features.

As far as I know, the earliest published proposal to treat the external/internal negation distinction along these lines, appears in Wilson and Sperber (1981, 176, note 5), where they discuss the following example, (42), which is standardly interpreted as an internal (predicate) negation, entailing ('presupposing') (43):

(42) Lydia's sister didn't play a piano sonata.
(43) Lydia has a sister.

Suppose that (42) is semantically interpreted as expressing the external negation (44):

(44) It is not the case that Lydia has a sister who played a piano sonata.

(44) is entailed by the more specific internal negation (45):

(45) Lydia has a sister who didn't play a piano sonata.

A properly defined maxim of informativeness could lead the hearer to interpret (42) as expressing (45) rather than (44) ... (43) is neither entailed nor conversationally (nor conventionally) implicated by (42): it is part of the proposition the speaker is taken to have expressed, but a part not determined by semantic rules alone.

(Wilson & Sperber 1981)

In other words, the specification or narrowing down here constitutes a pragmatic contribution to the truth-conditional content of the utterance, rather than a conversational implicature. The case of negation is just one manifestation of the widespread interpretive phenomenon of strengthening a lexical concept. The pragmatic enrichments here, like the enrichments of 'and' discussed in the previous chapter, are standardly those that have been treated by Griceans as 'generalised' conversational implicatures, or default pragmatic inferences (Levinson 1988, 1989, forthcoming). This characterisation is based on the fact that they seem to arise when the sentence is presented without any particular context.
The relevance-theoretic line of reasoning was anticipated in Wilson (1975)'s account, discussed in 5.3.1. There are very few contexts in which the weak wide-scope negation reading will have sufficient effects to meet the optimal relevance criterion. The enrichment process has to be one that preserves the assumption that the hearer is not required to expend processing effort gratuitously, and, in most instances, this will involve a narrowing to the predicate, since there are obviously more economical ways of communicating the non-existence or non-uniqueness of an entity.

The positions considered so far are summarised in the following diagram:

```
'not'
  /\         /
 semantic ambiguity  semantic univocality
   v            v
  'not'

semantic ambiguity (pragmatic disambiguation)

semantic univocality

semantics =
wide scope;
narrow scope
pragmatically derived

implicature
(Gricean)

enrichment
(Relevance Theory)

semantics =
scope-neutral;
both wide and
narrow scope
pragmatically derived
(Aatlas)

This is very schematic of course; I have not distinguished a range of quite different ambiguity positions (for instance, Russell/Grice, Seuren) and have not included as a possibility a rich univocal semantics such as Cohen suggested for 'and' since it seems simply incoherent. Granted these omissions, it might look as if this exhausts the range of possibilities. But this is not so; there is a further logical possibility which is that of a univocal internal 'presupposition'-preserving semantics with the wide-scope 'presupposition'-cancelling understanding derived pragmatically. This is exactly what has been proposed by Burton-Roberts (1989a, 1989b), an option that must be considered to complete this survey of positions.
In his book *The Limits to Debate* (1989b) and a series of papers (1989a, 1989c, 1991), Noel Burton-Roberts has forcefully expounded and defended the view that natural languages are presuppositional and the logic that they reflect is a two-valued one with gaps. He has concentrated his attention on sentences of the shape ‘The F is G’, which he claims semantically (that is, as sentences of the language) presuppose, rather than merely entail, the existence of an F. In defending this thesis, he has, of course, had to discuss negation in some detail. The main tenets of his position are as follows:

1. English is a presuppositional language, some of whose sentences (those with false presuppositions) may be truth-valueless (neither true or false).
2. ‘Not’ is an unambiguous operator; it is wide in its scope, but is neither presupposition-cancelling nor, strictly speaking, presupposition-preserving, though its default value is p-preserving (and he conceives of this as a ‘semantic’ default). (More on this rather complicated view below.)
3. ‘Not’ is identical in its semantics to the logical truth-functional operator.
4. There is no presupposition-cancelling descriptive negation in the language.
5. Where p-cancellation is made to take place, it gives rise to an unnatural, marked understanding, which involves a semantic contradiction at the literal level and consequent pragmatic reanalysis of the negated sentence as containing some mentioned (metarepresented) material.

Let’s consider the second point more closely. The negation operator is neither P-cancelling nor P-preserving; it is semantically wide in scope but ‘not expressive of presupposition cancellation’ (Burton-Roberts 1993, 33). P-preservation does not involve Gricean maxims or relevance considerations or any other pragmatic mechanism; if we take utterance interpretation to be exhausted by semantic decoding and by pragmatic inference, it seems that P-preservation is essentially a semantic matter for Burton-Roberts (henceforth B-R). B-R (1989b, 148-50) describes the existential presupposition of ‘The F is not G’ as a default semantic implication and B-R (1993, 36-38) explains it as the result of an interaction of the negative sentence (which cannot cancel
presuppositions) and a fundamental cognitive principle of bivalence: the proposition is
 tacitly affirmed by virtue of being in the domain of denial (negation) but not itself
denied. This is weaker and subtler than Strawson’s presupposition-preserving
negation operator, which, B-R (1993) shows, does not yield an internally coherent semantic
account of presupposition and negation. B-R’s view that the preservation of
presupposition in negative sentences does not require a negation operator which itself
encodes P-preservation is an interesting development. However, the details can be left
aside; what matters to me is that, according to him, p-preservation does not require any
pragmatic inferential process. The common core of Strawson’s and his presuppositional
views is that the negation operator does not (cannot) cancel presuppositions. It is this
broad distinction between semantic presuppositional views and anti-presuppositional
views which is relevant here.

In considering B-R’s account of negation I will try not to become embroiled in
the arguments for and against the existence of semantic presuppositions. As will be
clear from my position outlined in the previous section, I go along with the Griceans in
assuming that there is no call for a semantic concept of presupposition. B-R, however,
presents a tightly argued case for the affirmative and his revised logical definition of
semantic presupposition does seem to be immune to many of the criticisms levelled at
the standard definition. Since I wish to raise objections to his analysis of negation, to
the extent that he uses it to bolster the case for his presuppositional view, my
observations will be anti-presuppositional, albeit at one remove.

In his review of Atlas (1989), B-R (1991, 170-1) employs Atlas’s notation to
contrast three positions on negation. Positions (A) and (B) are already familiar to us:
the Gricean wide-scope analysis and Atlas’s scope-neutral analysis respectively. B-R
adds (C) as the third logical possibility and as a rudimentary representation of his own
position:

<table>
<thead>
<tr>
<th></th>
<th>Wide Scope</th>
<th>No Scope</th>
<th>C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. PRAG (K_L) = L+</td>
<td>PRAG (K_\wedge N) = L+</td>
<td>PRAG (K_L) = L+</td>
<td></td>
</tr>
<tr>
<td>B. PRAG (K_L) = L-</td>
<td>PRAG (K_\wedge N) = L-</td>
<td>PRAG (K_L) = L-</td>
<td></td>
</tr>
</tbody>
</table>

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This is a usefully clear way of presenting both the similarities and the broad differences between the positions. They are similar in that they are all committed to the semantic univocality of negation; as noted in section 5.2.2, B-R has effectively countered the prevailing assumption that a presuppositional semantics commits you to an ambiguity of negation. The particular semantics in each case is different. It might look as though what we have here is (A) wide-scope, (B) neutral scope, and (C) narrow scope. However, this is not quite right, and in this respect the L+ and L- notation used across the three analyses is misleading; (C) has been left unlabelled for a reason. It is not to be taken as narrow-scope, in the general sense, but as presupposition-preserving. While these come to the same thing in the simplest instances of 'The F is not G' sentences, they are to be distinguished, as we saw above, in more complex examples involving quantifiers and/or relational predicates. As B-R puts it (1991, 173): '... presuppositions of positive sentences ARE within the scope of negation in negative sentences but, by the definition of presupposition, negation does not apply to them. If you like, they are in the net of negation but, by their nature (as characterised in the definition), they slip through that net.' Another difference, not evident from these schematic pictures, lies with the function PRAG in (C), which is not some simple mirror-image of (A) but, at least as envisaged by B-R, a very different kind of process of 'pragmatic reanalysis', as we shall see.

Like everyone else (except perhaps Atlas), B-R takes the preferred reading of the following negated sentences, (46a) - (48a), to be one on which their presuppositions, (46b) - (48b) respectively, are preserved:

(46) a. The king of France isn't bald.
   b. There is a king of France.
(47) a. I don’t regret inviting him to my party.
    b. I invited him to my party.

(48) a. I haven’t stopped smoking.
    b. I have smoked (in my life).

On his account, these are straightforward reflections of natural language semantics and the bivalent nature of thought; no pragmatic explanation is called for. As he puts it, the expressive capacity of the language is such that these understandings are the only ones it sanctions. He then has the task of explaining how it is that utterances in which a presupposition is cancelled can be acceptable, especially when followed by an explicit denial of the presupposition.

5.4.1 The problem of ‘presupposition’- denials
Examples (49a) - (51a), though marked, are quite acceptable utterances. On B-R’s account, they are predicted to be contradictions, as shown in (49b)-(51b), respectively, where the semantically-based presuppositional analysis is spelled out:

(49) a. The king of France isn’t bald: there is no king of France.
    b. There is a king of France and he is non-bald, and there is no king of France.

(50) a. I don’t regret inviting him to my party - he’s a gate-crasher.
    b. I invited him to my party and I don’t regret doing so, and he is a gate-crasher.

(51) a. I haven’t stopped smoking - I’ve never smoked in my life.
    b. I have smoked in my life and I have not stopped smoking and I have never smoked in my life.

B-R (1989a, 1989b), like Horn (1985, 1989), treats (49a)-(51a) as involving what they call metalinguistic negation (MN), which they take to be a pragmatic phenomenon quite
distinct from standard truth-functional descriptive negation. It has the approximate meaning ‘I object to U’ or ‘U is inappropriate/unassertable’, where U is an utterance of the positive counterpart of the negative sentence. For the examples under discussion, the idea is that the positive form, say ‘The king of France is bald’, is being rejected as inappropriate because one of its presuppositions, here the existential one, is not fulfilled, as the follow-up clause makes explicit. The metalinguistic understanding of the negative sentence is derived by a hearer when the descriptive, truth-based, understanding, which is accessed first, is rejected for some reason.

On B-R’s account it is the contradictory, and so unacceptable, interpretation, encoded in the language itself, which triggers the search for some other way of construing these utterances and results in the metalinguistic interpretation. I will look more closely at the phenomenon of metalinguistic interpretation in the next section. B-R’s primary commitment is to establishing the presuppositional nature of natural language and his interest in a metalinguistic analysis of (49a)-(51a) is geared to this end. Horn, on the other hand, stands with the anti-presuppositionalists, in that he believes that there is no such semantically-based relation, additional to the semantic relation of entailment, and that ‘presuppositional’ effects are to be understood entirely pragmatically.

B-R (1989a, 1989b) claims that Horn’s commitments lead him into a double bind whereby he is explicitly supporting the view which disavows the existence of semantic presupposition and, simultaneously, due to his treatment of these examples as metalinguistic negations, implicitly supporting the semantic presuppositionalists. Horn (1990) continues to protest his freedom from this error, maintaining his overt support for a presupposition-free semantics. In my attempt to find an adequate account of the interpretation of these p-denial examples and of the processes involved in arriving at that interpretation, I shall explore the alleged Hornian dilemma. I believe that one consequence of my account is a vindication of Horn’s general stance with regard to these examples and the evaporation of any appearance of dilemma.

Before proceeding with the problem examples, we need to look at the phenomenon of metalinguistic negation; in the next section, I look at Horn’s account of this, and, in the following one, I suggest a different account worked out within the relevance-theoretic framework. In section 5.4.4, I return to Burton-Roberts and present
some problems for his view of negation as essentially p-preserving.

5.4.2 Metalinguistic negation

Here's a set of examples that everyone agrees are instances of metalinguistic negation:

(52) a. The points aren't at different locuses; they're at different loci.
    b. She hasn't read some of Chomsky's books; she's read everything he ever wrote.
    c. I won't deprive you of my lecture on negation; I'll spare you it.
    d. We're not halfway there; we've got halfway to go.
    e. Poor old Mr Dean's not a bachelor; he's an unmarried man.

These have all the properties of the most often cited types of cases: (a) they consist of a negative sentence followed by a 'rectification' clause; (b) taken descriptively they are (truth-conditional) contradictions; (c) readers may be garden-pathed by them, in that their first interpretation of the negative sentence is descriptive, and, when they process the second clause, they find they must 'go back' and reanalyse the negative sentence as metalinguistic; (d) if read aloud, these examples would tend to receive the so-called contradiction intonation contour (involving a final rise within the negative clause), with contrastive stress on the offending item and its correction in the second clause.

These examples with these properties are perfectly representative of the sort of example given by B-R (1989a, 1989b) and reasonably representative of the type of example given by Horn (1985, 1989 chapter 6). The negation operator itself is said by Horn and B-R to be interpreted as 'I object to U', where U is a prior (or, perhaps, potential) utterance of the corresponding positive sentence (e.g. 'She's read some of Chomsky's books' in the case of (52b)). The aspect of the utterance that is objected to is something other than its truth-conditional content: morphology in (52a), a generalised conversational implicature in (52b), a conventional implicature in (52c), an attitudinal element in (52d), stereotypical connotations in (52e). This is summed up by Horn (1989, 363): '[metalinguistic negation is] a device for objecting to a previous utterance on any grounds whatever, including the conventional or conversational implicata it potentially induces, its morphology, its style or register, or its phonetic realization.' This
statement is quite typical: while ‘any grounds whatever’ might seem to include truth-
conditional content (believing someone’s utterance to be false is a good ground for
objecting to it), it is always followed up by a list which does not include it. Most
people seem to assume that since descriptive negation deals with truth-conditional
content, this other kind of negation, used to register an objection, need not and does not.
I shall return to this matter in the next section.

So we have two uses of the negation operator; the question is whether the
distinction between them is to be captured pragmatically, or is a semantic matter. Horn
wrestles with the issue of how to characterize the relationship between these two ways
of interpreting a negation; he insists that it does not amount to a semantic ambiguity, an
ambiguity within the linguistic system itself, and calls it a pragmatic ambiguity, a ‘built-in
duality of use’, which extends to other linguistic operators such as ‘if’, ‘or’ and ‘and’
(see Horn 1989, 379-382). However, in the absence of any further specification, the
concept of ‘pragmatic ambiguity’ is vague, and does not seem to have any specific
application; given the linguistic underdeterminacy thesis, every linguistic expression is
pragmatically ambiguous. A number of writers have puzzled over what it might be
taken to mean (Burton-Roberts 1989b, Foolen 1991, van der Sandt 1991, Carston
1994b/96a), without reaching any concrete conclusions.

Horn himself is inconsistent in his discussion, writing of ‘an extended
metalinguistic use of a basically truth-functional operator’ (Horn 1985, 122), followed
soon after by reference to ‘this special or marked use of negation, irreducible to the
ordinary internal truth-functional operator’ (Horn 1985, 132). Despite his avowals to the
contrary, it seems to me (and to van der Sandt (1991, 333)) that Horn’s is essentially a
semantic ambiguity position. In fact, it involves a two-fold ambiguity. There is an
ambiguity in the negation operator itself: the one is the logical, truth-value reversing,
negation, the other is a non-truth-functional operator expressing objection. And the
further ambiguity lies with the nature of the material falling in the scope of the negation,
whether it is a proposition or an utterance. This is unsatisfactory on at least two counts:
first, intuitions are violated by the idea that ‘not’ itself is ambiguous, and second, there
is an odd redundancy in this double ambiguity. In the next section, I outline an account
which I think is not prey to these defects.
5.4.3 Truth-functional negation and echoic use

I have argued, in Carston (1994b/96a) and Carston & Noh (1995), that none of the standardly cited properties of metalinguistic negation is necessary. I won’t repeat those arguments here, except for presenting one type of example which will prove relevant to later discussion. Consider the following:

(53) a. Maggie’s not patriotic or quixotic; she’s patriotic and quixotic.
    b. Maggie’s patriotic and quixotic; she’s not patriotic or quixotic.

(54) a. I won’t deprive you of my lecture on negation; I’ll spare you it.
    b. I’ll spare you my lecture on negation; I won’t deprive you of it.

The difference between the (a) and (b) cases is simple and obvious: the two clauses are presented in opposite orders. The (a) versions are instances of the general pattern of cases given above in (52), with the various properties outlined there, including contradictoriness and garden-pathing potential. What, if any, affect does reversing the order have, as in the (b) cases? It clearly doesn’t alter their contradictoriness (‘P; not P’ is no less contradictory than ‘not P; P’) or the metalinguistic nature of the negative utterances:

(55) A: Don’t deprive us of your lecture on negation.
     B: I’ll SPARE you my lecture on negation; I won’t DEPRIVE you of it.

However, in the (b) cases, since the correction clause is processed first, it is part of the context in which the negative clause is processed, so it is very unlikely that there is any garden-pathing, requiring double processing of the negative sentence. The metalinguistic nature of this utterance of the negative sentence will be recognised on the first pass through the utterance, without any preliminary stage at which it is analyzed descriptively. The first clause makes it clear to the hearer that the speaker does not dispute the truth-conditional content of the positive counterpart of the negative sentence (that Maggie is patriotic or quixotic, in (53b), and that the speaker won’t be giving her lecture on negation in (54b)), since the first clause either expresses the same proposition
as the positive utterance would (in (54b)) or a stronger one that entails it (in (53b)). The point is that the negative clause will be processed straight off as a case of metalinguistic use. While this simple observation is relevant here, in that it undercuts much of what has been taken to be typical of metalinguistic negation, its real interest will emerge later (in section 5.4.4), when I look at reversed presupposition-denial cases.

I will mention briefly now the positive aspects of my account of metalinguistic negation. They are: (a) the essential property of these cases is that (some, at least) of the material falling within the scope of the negation operator is to be understood as 'echoically used' in the sense of Sperber & Wilson (1986a/95), Wilson & Sperber (1988b, 1992), and (b) the negation operator itself acquires no special meaning/interpretation ('I object to U') in these cases, but is standard descriptive truth-functional negation. Let's take each of these in turn.

A representation is used echoically when it attributes some aspect of its form or content to someone other than the speaker herself at that moment and expresses an attitude to that aspect. The attribution may be explicit (encoded) or implicit (to be inferred), and the expression of attitude may be explicit or implicit. Hence all of the following can involve echoic use:

(56) a. A good time to buy, he said.
    b. A good time to buy, I don't think.
    c. A good time to buy, indeed.
    d. She eats [tameiDouz].
    e. I don't eat [tameiDouz]; (I eat [ta:ma:to:uz].)

In (56a) the attributive nature of the utterance is made explicit; the speaker may be merely reporting someone's utterance or she may be echoing the proposition that it is/was a good time to buy in order to express (implicitly) her own attitude to it, an attitude of either an endorsing or a dissociating nature. In (56b) a dissociating attitude is made explicit. In (56c) both the attribution of the propositional content and the attitude to it are implicit; when that attitude is dissociative (which would have to be pragmatically inferred) the utterance is a case of irony (see Wilson & Sperber 1992). In the last two examples what is attributed is a formal aspect of the utterance, here
phonetic form; in (56d) the attribution (presumably to the person referred to by ‘she’) and the speaker’s attitude are implicit. In (56e), a standard case of metalinguistic negation, the attribution is implicit while the attitude of dissociation is made perfectly explicit by the use of the negation. This, I have argued, is the only essential property of metalinguistic negation.

Both Horn and Burton-Roberts make occasional gestures in the general direction of the quotational or metarepresentational nature of material in the scope of the negation operator. Horn (1989, 392) talks of the negation operator and the material in its scope as ‘operating on different levels’; B-R (1989b, 235) homes in more closely on this feature when he writes of negation operating ‘on the MENTION of a proposition previously used - i.e. operating on the speaker’s QUOTATION of a previous speaker’s USE of [a sentence]’. However, neither makes much of this; they tend rather to emphasise such features as those given in the previous section. B-R, in particular, takes one of these features to be the fundamental unifying property of all cases of metalinguistic negation, the fact that they are all literal contradictions. As we will see in the next section, this is crucial to his metalinguistic account of the presupposition-denials and, more fundamentally still, to his non-pragmatic stance with regard to presupposition.

Probably, the more contentious part of my view is that the negation operator here is no different from the negation in any descriptive (non-metalinguistic) case. This is inimical to both Horn and B-R, who are adamant that the word ‘not’ in cases of metalinguistic negation is interpreted non-truth-functionally. B-R has to take this line, as the only truth-functional negation operator he can countenance in his presuppositional semantics is one that does not cancel presuppositions. Horn’s conviction, on the other hand, comes from the fact that a truth-functional negation, by definition, takes as its argument a (truth-evaluable) proposition, while the target of negation in the metalinguistic cases can be any one of a ragbag of formal and other non-truth-conditional properties of an utterance. On the surface this does seem compelling, but there are some considerations, which I’ll briefly indicate now, that may mediate against it (these are presented more fully in Carston (1994b/6a)).

Quotations, echoes and other representations employed for purposes other than referring to or describing aspects of situations in the world are very common elements

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of verbal communication generally, by no means confined to negations. As shown in
the examples in (56), this non-descriptive use of a representation may or may not be
explicitly signalled. When explicitly signalled, by, for example, a verb of saying or
quotation marks, there seems to be no problem in grasping the proposition(s) falling in
the scope of truth-functional operators:

(57) a. Americans say [təmeiDouz] and Brits say [təma:touz].
    b. The army slaughtered everyone in the village or, according to them,
       ‘ethnically cleansed’ it.
    c. The correct plural of ‘mongoose’ is not ‘mongeese’ but ‘mongooses’.

We have here a conjunction, a disjunction and a negation; within the scope of each of
these operators some part of the representation is used non-descriptively. However,
there seems to be no temptation to say that, as a result, these operators must be
understood as having some interpretation other than their standard truth-functional
meaning. The truth-conditions are clear enough in each case; for instance, (57a) is true
if and only if it is the case that Americans pronounce the word in question as [tə
meiDouz] and the British pronounce it as [təma:touz].

In the next set of examples, there is no encoded indication that there is an
element of non-descriptive or echoic use; this has to be pragmatically inferred:

(58) a. Americans eat [təmeiDouz] and Brits eat [təma:touz].
    b. The army annihilated, or ethnically cleansed, the village.
    c. They’re not mongeese but mongooses.

The question to ask at this point is whether or not it is reasonable to suppose that these
operators, which are, let us assume, semantically truth-functional, lose their truth-
functionality as a result of the absence of an explicit signal that material in their scope
is being used non-descriptively. Surely not. What sort of causal connection could there
be between the move from explicit to implicit echoic use and a fundamental change in
the meaning of a logical operator? I contend that there is none and that the
interpretation of the operators in (58) is the same as that in (57): ordinary descriptive
conjunction, disjunction and negation. There remains the issue of how to articulate the truth-conditional content of these examples, an interesting problem which I am happy to be able to sidestep here.\textsuperscript{13}

A further observation mediating against Horn’s ‘I object to U’ interpretation of negation in the metalinguistic/echoic cases is that it is very difficult to see how it will accommodate the variety of encodings of negation that we can find in such cases, including ‘not at all’, ‘not any more’, ‘not ever’, ‘not anywhere’, ‘neither ... nor’, ‘it is unlikely that’, ‘I doubt that’:

(59) A: I want some tom[a:touz].
   B: We’re not eating tom[a:touz] any more; from now on its tom[eiDouz].

(60) A: Johnny’s eaten some of the cakes.
   B: It’s highly unlikely (I very much doubt that) Johnny’s eaten SOME of the cakes; he will have eaten ALL of them.

(61) a. I haven’t seen monGEESE anywhere; I have seen monGOOSES.
   b. Sally doesn’t ever have aches and pains like the rest of us; she is tortured beyond endurance.
   c. Neither Mary nor Bill LIKES rock music; they both have an all-consuming PASSion for it.

Many of these involve negative polarity items, e.g. ‘any’, ‘ever’, ‘anywhere’, ‘at all’, which is a clear sign that they are not part of the echoed representation (within which the polarity will reflect that of the (positive) echoed representation) but rather contribute to the expression of the negation. On Horn’s view, these presumably acquire a metalinguistic interpretation, which distinguishes them from their meaning in fully descriptive utterances. Let’s take just one of the examples above, though the problem arises for all of them. The Hornian interpretation of B’s utterance in (59) would be ‘I object to the (potential) utterance that ‘we are eating tom[a:touz] ...’’. How does the ‘any more’ mesh with this? As far as I can see, it doesn’t. However, if we assume that the negation here is no different from a negation in an entirely descriptive utterance, there is no problem, since the meaning of ‘not ... any more’ remains constant whether or not
there is echoed material in its scope.

These considerations are highly suggestive though by no means definitive. I hope to have at least cast doubt on the view that the negation operator itself, in cases of metalinguistic/echoic negation, loses its basic descriptive semantics, which is usually assumed to be truth-functional.¹⁴

5.4.4 ‘Presupposition’-denials and contradiction

Recall the two main types of semantic/pragmatic analysis of utterances of negative sentences that are still in play: the Gricean wide scope negation, on which all the positive truth-conditional content is cancelled, and the Burton-Roberts presupposition-preserving account. They agree in just one respect: semantically (that is, in terms of the meaning encoded in the language system), there is a single negation operator or a single meaning for ‘not’. However, they differ in every other respect: this single negation operator is quite different in its functioning, on the two views, and the respective roles of semantics and pragmatics in accounting for the P-preserving and P-cancelling cases are virtually the opposite of each other. This is perhaps made more vivid by the following contrasting schematic representations of the way the two approaches treat negative sentences of the form ‘The F is not G’:

A. Burton-Roberts (presuppositionalist):

Semantically: The F is not-G (P-preserving)¹¹
Pragmatically: not [The F is G] (P-cancelling)

B. ‘Griceans’ (anti-presuppositionalists):

Semantically: not [the F is G] (P-cancelling)
Pragmatically: The F is not-G (P-preserving)¹⁵

This apparent symmetry should not mislead us, though, into assuming that the P-cancelling representations here (pragmatically derived in the one case, semantic in the other) are in fact identical. While this is descriptive truth-functional negation on the Gricean view, it is a special (pragmatically derived) metalinguistic negation on Burton-Roberts’s view. What I will do in this section is launch a two-pronged attack on B-R’s
position: against the view that the P-denial examples are contradictory and against his contention that they are necessarily metalinguistic (echoic). If these arguments hold, then his account cannot stand and the way is open for the alternative account, building on the Gricean picture, that I develop in section 5.5.

B-R characterises P-denial cases as descriptive contradictions (B-R 1989b, 234-35); he takes it that this follows from his presuppositional story, according to which the negation operator is semantically incapable of cancelling presuppositions. It follows that P-denials, which are interpretable in a non-contradictory way, are necessarily metalinguistic (and so fall outside the descriptive power of the language system). Finally, he argues that consistency demands, of anyone who includes P-denials in the class of MN (e.g. Horn), that they embrace a semantically-based account of presuppositions. If the contradiction claim is incorrect then all of this collapses. In the first half of this section I do little more than gather together evidence, already presented in different places by various writers (pro- and anti-presuppositionalist) which mounts a very strong case for the non-contradictory nature of the 'presupposition'-denial cases. I draw on Kempson (1986a), Seuren (1988, 1990), Horn (1990) and Turner (1992).

As a first observation, notice that the 'correction' clause in the 'presuppositional' cases (as opposed to the 'standard' cases, given in (52)) is standardly a negative; it is of course the negation of a presupposition (or, as an anti-presuppositionalist would prefer to say, of an 'entailment') of the positive counterpart of the negative sentence under consideration. This is interesting because it indicates that what the 'correction' clause is doing is making it clear to the hearer which one of the truth-conditions/entailments of the positive sentence is to be taken as the grounds for the negation. This is not a point against B-R's semantic contradiction view since, while both presuppositions and ordinary (strong) entailments contribute to truth-conditions, presuppositions, on his view, are a special sort of truth-condition in that they are not cancelled under negation. On the view I would argue for, however, at the descriptive (semantic) level the 'correction' clause in the 'presuppositional' cases is more akin to the 'specification' clause in the following cases:

(62)  a. I didn't pass all my exams and get a good job; I only passed five out of the six.
b. He didn’t butter the toast with a knife in the bathroom at midnight; he didn’t use a knife/he used a toothbrush.

What the follow-up clauses do in these examples is specify which of the entailments of the corresponding positive sentence is false, and so make explicit the grounds for the negation in the first clause. There are, of course, strongly felt intuitive differences between these examples and the P-denials; the reader/hearer is not so likely to ‘misinterpret’ the negative sentence on a first pass as s/he is in the case of a P-denial, so these do not feel as marked as the P-denials. However, this difference is consistent with an anti-presuppositionalist view, I would argue, in that it can be explained as purely a matter of pragmatic processing (rather than anything to do with the semantics of the sentences). In (62) there is no pragmatic narrowing of the negation to one of the conjuncts, whereas in the presuppositional cases there is a very common process of narrowing to exclude the presupposition (P-preserving negation); while the existential implication is standardly backgrounded relative to the other entailments, the two conjuncts in (62a) are equally foregrounded, so that neither is more likely to be the focus of the negation than the other. (62b) is interesting in that it seems to fall somewhere between (62a) and P-denials, with regard to markedness/garden-pathing. Abstracting away from particular directives given by particular stress patterns, the most natural, though not inevitable, interpretation is the one on which the final constituent, ‘at midnight’, is the focus of the negation, an analysis which has to be revised in the light of the follow-up clause. My point is that, in all three cases (the two in (62) and the P-denial examples), a clause following up the negative sentence makes explicit which of the entailments of the corresponding positive is the false one, and this is consistent with a wholly descriptive interpretation.

I move on now to some groups of data which are intended to increase doubt about the alleged contradictoriness of the P-denials and, finally, to show it to be simply wrong. The general strategy is to take ‘standard’ cases of metalinguistic negation (such as the examples in (52)), show that they have some property, and then check the P-denials for the same property, revealing that they do not have it. The property in question obviously has to be one that we should expect a descriptive contradiction to have. Consider the following examples (adapted from Seuren 1988, 195, and Horn
Here the phrase ‘it’s not true that’ has replaced ‘not’, the idea being that the explicit occurrence of the word ‘true’ should make a metalinguistic (non-truth-functional) interpretation considerably more difficult to get at and keep the reader/hearer in the realm of directly truth-conditional (literal/descriptive) representation. Assuming agreement with regard to the judgements marked by ‘!', it does seem that there is a real problem in interpreting (63a)-(63d): there is a conflict between the explicitly expressed interest in what the truth of the matter is and the subsequent pair of clauses which, if treated truth-conditionally, as is apparently required, are contradictory. This is not the case for (63e) which is fine: the explicitly encoded concern with how things are with the world is apparently followed by a perfectly consistent description of how things are. Presumably the same results would pertain for paraphrases using ‘it is false that P’ and some readers might find this paraphrase more effective in prompting the intuitions I am trying to elicit here. There may, however, be some people who are not impressed by this, who would say that (63a-d) can be interpreted quite readily, as something like ‘It’s not okay/right/appropriate to say ...’. Such people, I would claim, are understanding ‘true/false’ as loosely used, as not restricted to literal truth and falsehood (correspondence or non-correspondence to the way things are in the world) but as communicating something like ‘okay to say/not okay to say’. However, such a loose interpretation is not necessary for (63e), which is interpretable as involving absolutely literal use of ‘true/false’. There does seem to be a genuine distinction here between the truly contradictory metalinguistic cases and the P-denials: having checked the intuitions of several groups of students, I have found that many people who find the metalinguistic negation examples in (52) quite acceptable do not find these ‘not true/false’ cases in
acceptable, and that those (few) who find the ‘not true/false’ cases acceptable agree that they are not as immediately okay as the plain ‘not’ cases.

A further indication against the contradiction account comes from a point made by Kempson (1986a, 85) concerning the possibility of an evidential interpretation of the second clause:

(64) a. He didn’t see the sign: he was looking the wrong way.
b. We didn’t see some mongeese; we saw some mongooses.
c. She didn’t eat some of the cakes; she ate all of them.
d. I’m not his daughter; he’s my father.
e. The king of France isn’t bald: France doesn’t have a king.
f. She hasn’t stopped drinking: she has never been a drinker.

Descriptively used negations, like descriptively used positives, are often followed by a clause which provides evidence for the belief expressed in uttering the first clause (recall the discussion of juxtaposed cases in the previous chapter). (64a) is a clear case of this: that he was looking the wrong way provides evidence for my belief/assertion that he didn’t see the sign. However, when we move to (64b)-(64d), some of the cases standardly cited as readily giving rise to a metalinguistic interpretation, we find the second clause does not have this function. The fact that we saw some mongooses is not evidence that we didn’t see some mongeese; even more clearly, the fact that she ate all of the cakes is not evidence for the belief expressed by the preceding negation but is in fact strong evidence for its opposite, that she HAS eaten some of the cakes, and the same goes for (64d). The evidential relation is one that is rooted in the way events and states of affairs connect up in the world, in temporal, causal and other relations to each other. It is not surprising that this is not how the metalinguistic negations and their follow-up clauses are understood because they are, precisely, not making statements about the way things are in the extra-linguistic world.

What about the P-denials in (64e)-(64f)? Like (64a), an evidential relation is readily taken to hold between the second clause and the first. The fact that France doesn’t have a king is excellent evidence in support of the contention that the king of France isn’t bald. In line with this, these two cases, like (64a) and unlike the
unequivocally metalinguistic cases, can be conjoined by a causal connective such as 'because' or 'since' (descriptively used).

A final piece of evidence (not noted by anyone else to my knowledge) against the logical contradiction idea is that the very property that led to the standard metalinguistic cases being called 'paradoxical negations' does not seem to extend to the 'presupposition'-denial cases. The more general property lying behind this is that for any two descriptive statements, P and Q, which are contradictory, whether involving negation or not, each entails the negation of the other:

\[
\begin{align*}
(65) \quad & a. \quad \text{She murdered him; he's still alive. (P; Q)} \\
& b. \quad \text{If she murdered him he is not still alive.} \\
& \quad \quad \text{(If P then not Q)} \\
& b'. \quad \text{If he is still alive she didn't murder him.} \\
& \quad \quad \text{(If Q then not P)} \\
& c. \quad \text{She loves him; she does not love him. (P; Q)} \\
& d. \quad \text{If she loves him she does not not love him.} \\
& \quad \quad \text{(If P then not Q)} \\
& d'. \quad \text{If she does not love him she does not love him.} \\
& \quad \quad \text{(If Q then not P)}
\end{align*}
\]

As Horn (1989, 431-2), following Cormack (1980), points out, the standard metalinguistic negations seem to be paradoxical because their positive counterparts are entailed by their correction clause. That is, given the schematic representation of these examples as "Not R; Q", the following seems to be the case "Since/If Q, then not (not R)", which, by double negation, gives us "Since/If Q, then R":

\[
\begin{align*}
(66) \quad & a. \quad \text{I'm not happy; I'm ecstatic.} \\
& a'. \quad \text{Since/If I'm ecstatic, I'm (certainly) happy.} \\
& b. \quad \text{I'm not his child; he's my father.} \\
& b'. \quad \text{If he is my father then I am his child.} \\
& c. \quad \text{The king of France isn't bald; there isn't a king of France.} \\
& c'. \quad \text{Since there isn't a king of France, the king of France is bald.}
\end{align*}
\]
d. Kim doesn’t regret inviting Bob to her party; Bob gate-crashed/she didn’t invite him.
d’. !If Kim didn’t invite Bob to her party then she regrets inviting him.

(66a-b) exhibit the same property as the examples in (65), a consequence of being descriptive contradictions. (66c-d), on the other hand, do not; in fact, they seem to have the contrary property in that this very manipulation gives rise to a contradiction, as is the case for any other instance of denying an entailment:

(67) a. !If Mary likes cats then she doesn’t like any animals.
b. The king of France isn’t bald; he has long black hair.
b’. !If the king of France has long black hair then the king of France is bald.
c. Kim doesn’t regret inviting Bob to her party; she is glad he came.
c’. !If Kim is glad that Bob came to her party she regrets inviting him.

The evidence, then, overwhelmingly, is that the juxtaposition of a negative ‘presuppositional’ sentence with a sentence which negates its (or one of its) presupposition(s) does not constitute a literal contradiction. This is a serious problem for B-R’s semantically-based ‘presupposition’ position. Not only is it false that ‘a properly general account of metalinguistic negation implies a presuppositional semantics’ (Burton-Roberts 1989b, 235) but, worse than that, if he is right in claiming that it is only on a presuppositional semantics that (49a)-(51a) are predicted to be contradictory and, as it now seems, this is a false prediction, his semantics is in trouble.

B-R’s account is a package: all MNs are truth-conditional contradictions; P-denials are cases of MN so they too are truth-conditional contradictions; it is their contradictoriness that triggers the move to the MN interpretation. If he is persuaded by the arguments just given that the ‘presupposition’-denial cases are not contradictory, he will have to abandon the view that the ‘presupposition’-denials are necessarily metalinguistic. However, B-R’s intuition that these cases are understood as metalinguistic/echoic is widely shared. A reasonable conclusion, made available by relaxing the contradiction requirement on MN, would be that while they are standardly metalinguistic in use they are not metalinguistic as a matter of logical necessity. Just
what this means in practice may not be obvious yet, but the account I spell out in the next section will illustrate it. It is this that in fact underlies Horn’s alleged dilemma: P-denials ARE usually understood metalinguistically, but this is pragmatically motivated rather than being forced by a presuppositional semantics.

Let us look now at some of the further evidence that B-R marshals to support his claim that the cancellation of the presupposition is achieved by metalinguistic negation and metalinguistic negation alone. This is of some interest here since if the ‘metalinguistic but not necessarily metalinguistic’ line is correct this evidence should only support a strong tendency and not a necessity.

Horn gives three ‘diagnostics’ for the presence of a metalinguistic negation: (a) the inability of metalinguistic negation to incorporate prefixally; (b) its failure to trigger negative polarity items (NPIs); (c) its incompatibility with concessive ‘but’ as opposed to contrastive ‘but’. I leave aside this third diagnostic here, as does B-R, since it is not obvious to me that it does hold across the spectrum of cases of MN. The first two diagnostics are exemplified in the following:

(68)  a. Mary is not happy; she’s ecstatic.
     b. ! Mary is unhappy; she’s ecstatic.
     c. He’s isn’t tall or handsome; he’s tall and handsome.
     d. ! He’s neither tall nor handsome; he’s tall and handsome.

(69)  A: He is sometimes difficult.
     B: ! He isn’t ever difficult; he is always difficult.
     C: He isn’t sometimes difficult; he is always difficult.

The examples marked by ‘!’ can only be understood descriptively and, as a result, they are registered as contradictory and found unacceptable. I have argued that this blocking of metalinguistic interpretation follows from the account of such cases as echoic (Carston 1994b/6a).

B-R points out that these two diagnostics apply to the P-denial cases, thereby giving further support for his view that they are necessarily metalinguistic (on a noncontradictory understanding). Let’s look at each of these in turn. B-R (1989b, 236)
uses (70a)-(70b) to show that the first diagnostic for MN is met by the P-denial cases; Horn (1989, 392) also gives those examples, together with (70c)-(70d):

(70)  

a. The king of France is not happy - there is no king of France.  
b. ! The king of France is unhappy - there is no king of France.  
c. The queen of England is not happy - she’s ecstatic.  
d. ! The queen of England is unhappy - she’s ecstatic.

The claim is that the morphologically incorporated negation in (70b) and (70d) does not allow a metalinguistic reading; the only interpretation is a descriptive one, which is contradictory and so not acceptable. But there is an important difference between the two examples. First, note that 'unhappy' is a case of term negation, that is, the examples with 'unhappy' are affirmative predications of a negative term whereas the descriptive uses of 'not happy' are predicate denials, that is denials of the applicability of the term 'happy' to the subject term. Now, in (70b) we could substitute for 'unhappy' any predicate term under the sun (or leave it blank) and still get the same result, that is, a contradiction:

(71)  

a. ! The king of France is sad/healthy/bald/impolite/undressed/etc; there is no king of France.  
b. ! The king of France is ..........; there isn’t any king of France.

This is not so in the case of (70d), where only those predicate terms which are semantically antonymous with 'ecstatic' will give rise to a contradiction (some of the others might result in an odd utterance - one whose relevance is difficult to discern - but not a contradiction).

The point is that the utterances which deny the existence of the king of France, (70b) and (71), do not meet a basic requirement of any affirmative predication (whether of a positive or a negative term) which is that its subject should denote something (this is an entailment of these positive sentences). Thus while it is undoubtedly true that negative prefixes cannot be used metalinguistically (cannot take metarepresentational material in their scope) and that example (70b) is contradictory, these two points are
independent of each other in this example. In short, these facts do not establish that P-denial cases are inevitably metalinguistic.

Let's move to the second diagnostic, the inability of metalinguistic negation to trigger NPIs. Here is one further example to clarify what is meant by this:

(72) I don’t never concede anything to anyone.

Here the NPIs ‘anything’ and ‘anyone’ do fall in the scope of the metalinguistic negation but this is a perfectly acceptable utterance once it is appropriately contextualised, as, say a rejoinder to an utterance of ‘What I hate about you is that you never concede anything to anyone’. Here the NPIs are triggered by the negative ‘never’ and the whole lot is used echoically in (72). They are not triggered by the metalinguistic negation itself.

Even so, ‘failure to trigger’ is rather too loose a characterisation, though it is the standard one. As Chapman (1993) (citing examples from Kempson (1986a) and Seuren (1990)) has pointed out, negative polarity items (NPIs) may appear in metalinguistic negations so long as they lie outside the metarepresentational (echoed) material. This is shown by (73), where the positive polarity item (PPI) ‘pretty’ is an element of the utterance being echoed (‘that car’s pretty old’), and the NPI ‘at all’ lies outside it.

(73) That car isn’t pretty old at all.

The diagnostic can be made a little more precise now: a negation with echoed/metarepresented material in its scope cannot trigger NPIs within that echo. Understood this way, it is virtually a tautology.

Let's see what use B-R (1989b, 236) puts this diagnostic to. Naturally, he wants to show that the P-denial cases cannot trigger NPIs, since if they cannot do this the negative presuppositional sentences must be being used metalinguistically. In looking at his examples, given in (74)-(78) there are two questions to consider. First, is it true that (74)-(77) are unacceptable, as B-R claims? Second, if we do find them odd, is this because they MUST, due to the unavailability of a noncontradictory semantics, be interpreted metalinguistically.
The king of France couldn't care less - there is no king of France.

The king of France doesn't give a damn/hoot - there is no king of France.

The king of France isn’t lifting a finger; there is no king of France.

The king of France hasn’t lost any hair yet; there is no king of France.

The king of France hasn’t lost some hair already; there is no king of France.

(Burton-Roberts 1989b, 236)

The idea, recall, is that these NPIs force a descriptive reading, since they cannot occur in the positive sentences to which a metalinguistic use would be an appropriate rejoinder, for example:

(79) a. ! The king of France could care less.

b. ! The king of France has lost any hair yet.

We are pushed back here to the issue of whether or not these are descriptive contradictions. I’ve given a lot of evidence that they are not, and I think that a comparison of the alleged unacceptability of (74)-(77) with the following cases merely reinforces this:

(80) a. * I don’t ever see John; I see him every day.

b. * I didn’t eat any of the cakes; I ate all of them.

c. * She hasn’t arrived yet; she’s been here all day.

While the nonexistence of a king of France seems an odd reason for denying some property of him, since it renders the denial pointless (irrelevant), this is not of the same order of unacceptability as the examples in (80), which really are descriptive contradictions.

Noh (1994) suggests some possible contextualisations which further improve the acceptability of such cases:
a. After the war, the kings of Europe became very nervous about the future. The kings of Spain and England entered into secret negotiations to try to secure their positions. ... However, the king of France didn’t give a damn - there was no king of France.

b. Due to the war the kings of England and Spain have already lost some hair but the king of France hasn’t lost any hair - there is no king of France.

Given that the NPIs here must have been triggered by a descriptively used negation (and there is only one candidate negation operator), if these examples are acceptable, and I believe they are, these must be cases of P-cancelling descriptive negation. In short, P-denials do not have to be interpreted metalinguistically, though this is certainly the most accessible interpretation across the vast range of contexts.

I end this section by briefly considering another problem that B-R is led into by his prediction that P-denials are truth-conditional contradictions and must be interpreted metalinguistically (it is discussed at slightly greater length by Horn (1990)). B-R notes the following possibility:

(82) The king of France isn’t bald, because there is no king of France!

and claims that this involves a ‘special metalinguistic use of because operating on "the same level", as it were, as that [metalinguistic] use of negation’ (B-R 1989b, 237). He believes that the same special use of ‘because’ arises in the second of the following examples:

(83) a. John has got his hat on because he is going out.

b. John is going out because he has his hat on.

(83a) is an instance of the standard semantic analysis of ‘because’: ‘P because Q’ maps onto ‘Q is a sufficient cause or reason for P’ and ‘Why P? For the simple reason that Q’. Mappings of this sort give a bizarre result for (83b); for instance, ‘Why is John going out? (For the simple reason that) he has his hat on’. In this example, the
'because Q' clause is most naturally understood as providing an explanation of the speaker's reason for saying that John is going out; this is what, according to B-R, makes it metalinguistic. The appropriate mapping here would be to 'Why do you believe/say that P? For the reason that (I believe that) Q'.

If B-R is right about P-denials, applying the first sort of transformation to them should give a bizarre result, while the second sort should be acceptable. Let's see:

(84)  a. Why is the king of France not bald? For the simple reason that there is no king of France.
    b. Why do you believe/say that the king of France is not bald? For the reason that (I know) there is no king of France.

They both seem quite okay. This is just what we should expect if, as I believe I've shown, there is no semantic necessity (no contradiction) forcing these to be construed metalinguistically, though they are as a matter of normal communicative use of natural language most frequently understood metalinguistically. The 'because' in (82) may be understood as having scope over either a descriptively or metalinguistically used representation; B-R's assumption that it can only be used metalinguistically is a byproduct of his erroneous view that the P-denials are descriptive contradictions and that their only acceptable interpretation is metalinguistic/echoic.

There is a further issue of great interest here, which I merely mention. First, as pointed out by Horn (1990, 499), other cases of metalinguistic negation seem less amenable to 'because' conjunction than the P-denials:

(85)  a. ! The glass isn't half-empty because it's half-full.
    b. ! I didn't shoot two mongooses because I shot two mongeese.
    c. ! Grandma isn't feeling lousy, Johnny, because she's badly indisposed.

Related to this observation, the term 'metalinguistic', as used here by B-R, and as used by Horn (1989, 379-82), in his discussion of so-called metalinguistic uses of other operators, including disjunction, conjunction, the conditional and questions, seems to be a cover term for a range of phenomena which have rather distinct properties. It is not
obvious that the use of 'because' in (82) and (83b), giving a reason for a belief or a speech act of the speaker, is 'metalinguistic' in the same sense as it is in the negations we've been looking at, where the crucial ingredient is the echoic or metarepresentational nature of material in the scope of the operator. This whole area needs a lot more examination.\textsuperscript{16}

The conclusions of this section are: (a) P-denials are not truth-conditional contradictions. This is a major problem for B-R's presuppositional semantics. However, given that, contrary to B-R's interdependence view, contradictoriness is not a necessary feature of MN, this point turns out to have no direct bearing on the issue of whether P-denials are or are not understood metalinguistically; (b) They ARE most naturally contextualised as rejoinders to a prior or anticipated utterance of the positive counterpart of the negation (hence understood metalinguistically/echoically), and so tend not to trigger negative polarity items, though this is not an absolute.

What about the strong intuition that there is some tension, if not semantic contradiction, between the first clause and the second of the P-denial cases, and that they do, frequently at least, require double processing? The analysis I give in the next section accommodates these points.

5.5 A two-level pragmatic account of 'presupposition'-denials.

In this section I take the essence of the 'Gricean' analyses, given in section 5.3.1, extend it in a simple way and recast it in relevance-theoretic terms.

B-R makes several criticisms of the anti-presuppositionalist (Gricean) pragmatic approach. First, he points out its failure to account for the marked, non-preferred status of the 'presupposition'-cancelling interpretation. This is a valid criticism, but there is a simple solution to it, which I shall come to very soon. B-R continues his critique in the following vein: 'What, on a non-presuppositionalist semantics, would trigger, and provide the rationale for, a pragmatic reanalysis of the negation as metalinguistic? Nothing whatsoever. ... Such non-presuppositional theories thereby entirely fail to predict that, let alone explain why, the examples in Set I [presupposition denials (RC)] do, as a matter of empirical fact, fall together with those in Set II [the standard cases of MN, as in (52) (RC)], evincing all the special features characteristic of metalinguistic uses of
negation.’ (B-R 1989a, 120).

Quite generally, the ‘rationale for a pragmatic reanalysis’ is provided by the failure of an analysis to meet a pragmatic criterion. Within relevance theory this means a failure to deliver a satisfactory range of cognitive effects. Deriving a contradiction, which gives rise to no cognitive effects and so cannot be established as relevant, is just one clear way in which such a failure may arise. This may in fact be what goes on in the case of such P-denials as those in (49a)-(51a), repeated here, at least in those instances which do involve reanalysis:

(49) a. The king of France isn’t bald: there is no king of France.
(50) a. I don’t regret inviting him to my party - he’s a gate-crasher.
(51) a. I haven’t stopped smoking - I’ve never smoked in my life.

There is nothing, as far as I can see, to rule out an explanation along these lines, despite assuming the wide-scope, ‘presupposition’-cancelling, semantics of negation. It will simply involve adding a further step of pragmatic processing to the position given in (B).

Schematically, the picture I propose of the interpretation of the negative sentences in the P-denials, is as follows:

(86) semantically:  not [ The F is G ]

via pragmatic processing (a):  [The F is not-G]

via pragmatic processing (b):  not [ "The F is G"]

Let’s again take the standard example involving ‘the king of France’, given in (49a), thinking of it now in communicative rather than semantic terms, as an utterance produced and processed over time. You don’t get a pass through the utterance without pragmatic processing; to conceive of this as possible one would have to imagine cutting the language module free from its interface with the central cognitive system and collecting up its deliverances as they drop out. Although the semantics is the wide-scope negation, which has no entailments, (that is, it cancels so-called ‘presuppositions’), in most contexts, the hearer, who is looking for an optimally relevant interpretation, will take the focus of the negation to be the property predicated of the king of France.
Processing effort considerations immediately lead a hearer to take baldness as the focus of negation, since otherwise that concept is apparently irrelevant (requiring some effort to process and yet yielding no effect). So we arrive at the preferred narrow scope, 'presupposition'-preserving, interpretation, just one of many instances of the process of pragmatic strengthening at the level of the proposition expressed. And we would be bound to leave it at that, were it not that some milliseconds later, when we have processed the next (juxtaposed) utterance, we find ourselves with a contradiction: there is a king of France and there isn't a king of France. The overall interpretation of the two clauses is not consistent with the expectation of optimal relevance and a reanalysis is sought. In most instances, this will be a move to an echoic (metalinguistic) analysis, as in B-R's account, though, as shown in (86), on this account it would be at a second level of pragmatic processing. But the reanalysis need not, in principle, involve metarepresentation; it might be a 'return', as it were, to the descriptive wide-scope, 'presupposition'-cancelling interpretation. Which of the two possibilities is the case in any given instance will depend on the particularities of contexts.

I do not intend here to give the impression that the three levels shown in (86) are always inevitably involved or that they are of equal status. The semantic level differs from the two pragmatic levels in that no final interpretation will ever involve it alone. It is the input to the pragmatic inferential processes, an input which comes from the linguistic system, not as a whole logical form, but bit by bit (perhaps word by word). There are only two levels of actual interpretation and they are identical with B-R's levels, but, and this is the crucial point, these are both levels which are the outcome of pragmatic processes.

In fact, the picture given in (86) is probably not the only one possible for these utterances. I think there are four possible processing routes for P-denials, for all of which the semantic input is the same wide-scope, uncommitted negation:

1. first pass: pragmatic narrowing (P-preserving)
   second pass: metalinguistic reanalysis (P-cancelling)

This is the processing track just discussed, and it is the most likely for the three examples under discussion; it captures exactly the same intuitions as B-R's analysis,
including the intuition of P-preservation under negation, but without assuming a presuppositional semantics.

2. first and only pass: metalinguistic interpretation recognised straight off (P-cancelling)

This is the case of a context in which the metalinguistic interpretation is the most accessible one to the hearer (the least effort-requiring). The non-presuppositional reversed metalinguistic cases in (53b) and (54b) exemplify this general possibility (e.g. ‘Maggie is patriotic AND quixotic; she isn't patriotic OR quixotic’) and so do the reversed P-denials, to be discussed shortly. There are, no doubt, other sorts of contexts where this occurs, contexts where it is just obvious that the speaker is in the business of echoing someone else’s particular utterance or habitual way of expressing himself.

The other two possibilities are less likely, but possible in principle:

3. first pass: pragmatic narrowing (P-preserving)
   second pass: pragmatic widening (P-cancelling)

What this amounts to is undoing or repairing a pragmatic strengthening or enrichment. The following seem to be cases where this goes on:

(87) a. I have had breakfast. I had it once as a boy many years ago when I had worked all night and was especially hungry.

b. Edina: Have you eaten?  

(from ‘Absolutely Fabulous’ BBC2, 9/2/94)

The on-line temporal enrichment of the first sentence in (a), and of the proposition apparently expressed by Patsy's 'no' in (b), is a narrowing from the semantically encoded, unspecified, temporal span of time preceding the time of utterance, to a much
shorter span contained within the day of utterance. A pragmatic reanalysis takes place as a result of the second clause in each case which is at odds with that temporal enrichment; the original pragmatic narrowing is subsequently pragmatically broadened.

Here is a P-denial case where this seems a likely sequence of pragmatic processes:

(88) A: You always hedge everything. Isn’t there anything you feel straightforward simple certainty about?
B: Well, yes, there are a few things I feel sure about. For instance, the king of France isn’t bald and he isn’t hairy and he isn’t tall and he isn’t short; there isn’t any king of France.

Finally, the least likely option:

4. first and only pass: descriptive interpretation (P-cancelling)

This shouldn’t be seen as purely the output of semantics, though it is identical to it; pragmatic inference is involved in deciding that that is the intended interpretation. Say we are wig-makers to royalty, well aware of which European countries have monarchs and which don’t, and we are making a list of the hirsute monarchs and the bald monarchs, and one of us remarks: ‘well, the king of France is neither bald nor hairy’, implicating that that’s one less to have to worry about.

I return now to the first scenario, which is the central one here, and which is the direct rival to B-R’s account of P-denials. I think my picture, given in (86), has quite a lot going for it:

[a] It captures the marked feel that most people comment on for the ‘presupposition’-cancelling use; this markedness (the extra effects) arises from the double processing here just as it did on B-R’s approach.
[b] It is consistent with the P-denials, (49a)-(51a), not being intrinsically (that is, semantically) contradictory, which the evidence in the previous section strongly indicates is the case. In this respect the analysis has a definite edge on B-R’s account which
requires, against the facts, that they are semantically contradictory.

[c] The naive unexamined intuition that there is something contradictory here is accounted for by the standard non-presuppositionalist account of the preferred 'presupposition'-preserving understanding. The beauty of this is that it is a PRAGMATIC account and so it is consistent with the non-contradictory semantics of the two clauses, while meeting B-R’s demand for a 'rationale for the pragmatic reanalysis'.

I think there may be a further nice spin-off here. All this talk of contradiction providing the rationale for a pragmatic reanalysis should lead us to consider whether the recognition of a logical contradiction in utterance interpretation is inevitably treated as evidence of a garden-path, requiring reanalysis. Consider the following utterances:

(89) a. A: Do you like Mary?
   B: Yes and no.
   B': I do and I don't.

b. He loves her and he hates her.

c. Mary isn't Mary any more.

I take the propositions expressed by each of the declaratives here to be contradictions: the B responses in (89a) are of the form ‘P and not P’; (89b) is a conjunction whose conjuncts differ only in the relation predicated to hold between the subject and the object, and, arguably, each of those relations logically implies the negation of the other; (89c) is a case of 'x is not x'. Yet, it seems intuitively fairly clear that these are not cases involving a garden-path and subsequent pragmatic reanalysis. This is not to say that they don’t require pragmatic processing. They certainly do; the relevance-driven processing may result in the elaboration of the encoded content: ‘I like some things about her and I don’t like other things about her’ and/or in the derivation of implicatures: for (89c), say, that Mary has changed, that she has lost her vitality, that I do not feel towards her as I once did, etc.

So what distinguishes these cases of contradiction from the contradictions arrived at on the 'presupposition'-preserving interpretation of P-denials? On B-R’s account, nothing distinguishes them, since they all involve a semantic contradiction, which issues
from the very matter encoded in the language system. However, given the wide-scope (i.e. 'presupposition'-cancelling) negation account just proposed, there is an important difference: while the examples in (89) are contradictions by virtue of their encoded content, the contradictions in the 'presuppositional' examples are arrived at pragmatically, hence they are cancellable. This allows for the possibility that the hearer/processor has simply made a mistake in his interpretation and that he may need to undo, as it were, his initial pragmatic analysis. This just isn't an option for (89); if a speaker has produced a semantically encoded contradiction there is no 'undoing' to be done; she intended to express something contradictory (unless, perhaps, one could find a case for a slip of the tongue, which looks fairly unlikely here), and one must look for the intended informational content at another level. The difference between the two sorts of contradiction cases can thus be captured on the wide-scope P-cancelling negation account but not on B-R’s ‘presuppositional’ approach.17

There is a final piece of evidence which makes starkly apparent how very much more satisfactory the two-level pragmatic approach is than the semantic presuppositional account. Recall the cases in section 5.4.3, where the negative sentence and the correction clause were reversed. This made no difference to the metalinguistic nature of the utterance nor to its status as a semantic contradiction; what it did do was make an important difference to the interpretive process and so to whether or not a hearer was likely to be garden-pahted. Let’s see how the two accounts (B-R’s and my augmented Gricean account) handle a clause reversal of the P-denial cases:

(90)  a. There is no king of France: so, the king of France is not bald.
     b. The king of France is not bald: there is no king of France.

(91)  When did you give up smoking?
     a. I’ve never smoked in my life (so) I haven’t given up smoking.
     b. I haven’t given up smoking; I’ve never smoked in my life.

According to B-R’s account, they would all be understood in the same way, that is, as ‘metalinguistic’, and the interpretive stages involved in arriving at that understanding would be the same: on a first pass, the negative clauses are taken to be presupposition-
preserving, then, understood in conjunction with the other clause, a contradiction is reached and, finally, the negative clauses are reanalysed as involving echoic use. Spelling out how his account of the interpretive stages for (91a) must go looks something like this:

(92) I've never smoked in my life. I haven't given up smoking.

*stage 1:* (semantics) not-P P and not-Q

(where P = I have smoked in my life, and Q = I am a non-smoker now)

Logical contradiction: not-P, P

*stage 2:* pragmatic reanalysis (giving metalinguistic P-cancelling negation):

not ["I haven't given up smoking"]

not ["P and Q"]

But this cannot be right. Placing the 'correction'/explanation clause first effectively prepares the way for the wide-scope (or, perhaps, the echoic) interpretation of the negative presuppositional sentence. The point is essentially the same as that argued above for the examples in (53b) and (54b): intuitively, there is no garden-pathing here, no logical contradiction and so no pragmatic reanalysis. The (a) versions of (90) and (91) do not have the marked feel that is typical of the (b) versions, in which the 'correction' or explanation clause follows the negated clause. The account on which an all-inclusive semantics for negation is coupled with a psychologically realistic on-line processing view of pragmatics can capture the intuitive interpretive differences between the (a) and (b) examples, as it is sensitive to the ordering of the clauses. Given the context created by the first explanatory clause in each of (90a) and (91a), the subsequent negative utterance may well achieve relevance on its semantically given P-cancelling (non-echoic) understanding and will not need to be narrowed to exclude the 'presupposition' from its scope. Or if, as is quite likely, these are intended as echoic of a previous utterance (say, the question in (91)), and this interpretation is sufficiently accessible to the hearer, they will be so interpreted on a first pass, with no initial trying out of a descriptive interpretation and subsequent rejection of it.
The account sketched in (86) involves a small addition to the standard Gricean wide-scope semantics with pragmatic derivation of the presupposition, a small addition which incorporates what is right about B-R’s account, that is, what captures the markedness intuition, without making the various false predictions that undermine his account.

I suppose the new improved analysis might be viewed by some with Occamite suspicion, since it involves three interpretive tiers, the semantic and the two pragmatically arrived at understandings, whereas both of the original competitors had only two. There are two points to make in response to any such worry: first, my claim is that it takes three levels to do justice to the interpretive facts; economy principles can be brought into play only when the analyses being assessed all cover the same set of data, which, as I’ve shown, is not the case here. This talk of counting levels should really be dropped and replaced by counting interpretations, or pragmatic analyses, in which case there are two here as in both the previous accounts; it’s just that the first of them does not coincide with what is semantically encoded. Second, the richer account I’m proposing in fact calls for no increase in semantic apparatus (in this regard it comes cheaper than B-R’s presuppositional semantics) or in pragmatic principles. What it does postulate is more interpretive work being done with those pragmatic principles than either of the original accounts allowed for. As I have argued elsewhere (Carston forthcoming b), what lies behind B-R’s work is a conception of pragmatics as a fairly thin icing on a substantial semantic cake. This is evident from his assumption that natural, unmarked interpretations should be reflected in the semantics, while less preferred ones may arise pragmatically (Burton-Roberts 1989b, 40). I argue, in the paper just referred to, that it follows from the view of pragmatics emerging from the cognitively-based, relevance-theoretic framework, that exactly the reverse is the case: pragmatic inference is natural, and encoded meaning may be, not only minimal, but unnatural from the point of view of communication and interpretation.

Since I’ve looked at quite a welter of issues in this chapter, it might be worth ending it by highlighting the main point, that I hope stands out against the detail, and that bears directly on the main themes of this thesis, that is, linguistic underdeterminacy and the explicit/implicit distinction:
The negation operator in natural language can be given a minimal, wide-scope, truth-functional semantics and all the other interpretations: narrow scope, constituent negation, presupposition-preservation, the negation of echoed or metalinguistic material, can be accounted for pragmatically in terms of enrichments of one sort or another at the level of the proposition expressed by the utterance.
Notes

1. Here the iota operator is treated as forming a quantifier;
   Grice (1981, 188) suggests a different interpretation of this symbol, as a term-forming operator (see section 5.3.2). The advantages of this 'restricted quantifier' notation are discussed by Neale (1990).

2. Neale (1990, 67) says that what Russell was concerned with was the propositions expressed by utterances rather than abstract sentence types, though this distinction was not made explicit at that time. It seems to be an account according to which a sentence is taken to express a minimally truth-evaluable proposition (see discussion in chapter 3, 3.6.1); this comprises the truth conditions of the sentence, sentence semantics being construed in wholly truth-conditional terms, without any concern for the gap between encoded sentence meaning and truth conditions.

3. For instance, in her work on polysemy, Sweetser (1986, 1990) suggests that certain metaphorical extensions of senses are universal: extensions from the physical domain to the epistemic and speech act domains. She looks at the senses of modals and various connectives from this point of view. Papafragou (forthcoming) takes a critical look at the notion of polysemy, arguing for a staunchly monosemous view with related 'senses' derived pragmatically.

4. Atlas (1989, 31-53) explores the Zwicky & Sadock tests in some detail, in particular the alleged difficulties raised by interpretations involving privative opposition. Interesting complications arise, as Atlas points out, due to their concept of acceptability of a reading or understanding being a matter of appropriateness rather semantic possibility, and by their conflation of sentential meaning with truth conditions.

5. Note the entailment relation here between the alleged conversational implicature and the 'what is said'. Recall some of the criteria and tests (availability, functional independence, embedding in the scope of a logical operator), discussed in chapter 3, for distinguishing between implicature and pragmatic contributions to what is said; their application here would indicate that this 'implicature' is, in fact, constitutive of 'what is said'. Grice's own account, discussed in the next section, does not look like this; the implicature he derives is the existential proposition: there is a unique king of France. Putting this implicature together with what is said (wide scope negation) gives the narrow scope interpretation.

6. The situation seems to be different in the existential quantifier case:
   Someone isn't hungry.
The natural and immediate interpretation here is that there is someone such that that person is not hungry, i.e. predicate negation. If we wish to maintain the external negation as the semantics, we get the following Gricean analysis:

\[
\text{what is said: } - ((\text{Ex: person } x) \ [\text{hungry } x])
\]

\[
\text{what is implicated: } (\text{Ex: person } x) - [\text{hungry } x]
\]

This again preserves the 'existential presupposition' that there is someone in existence about whom one is talking. The question arises whether the semantically given wide scope negation ever surfaces as the understanding (as what is communicated)? It's not clear that it does, except in the echoic sort of case where the negation is a corrective rejoinder to someone else's affirmative statement 'Someone is hungry' (see discussion of echoic (or metalinguistic) negation in section 5.4). Horn (1989, sections 4.3 and 7.3) offers an explanation for the missing wide scope negation understanding using his "division of pragmatic labor principle".

7. He doesn't claim to be precise about its formulation. One possibility he gives is: "Frame whatever you say in the form most suitable for any reply that would be regarded as appropriate". Like all the manner maxims, to the extent that its predictions are correct, it follows from the processing effort clause of the definition of relevance.

8. Atlas (1989, 69) refers to the scope-neutral semantics for negation as the Atlas-Kempson thesis, acknowledging the parallel work of Ruth Kempson (1975, 1979). However, as far as I can see, her position, which has evolved over the years, has never been identical to his. In her 1975 book she was clearly a Gricean, as described in section 5.3.1; with the development of Relevance Theory she moved to the view that the internal negation was the result of pragmatic enrichment at the level of the proposition expressed (see Kempson 1986 and 1988). On this move, she does come close to the Atlas view in that both of them, together with the relevance-theorists in general, assume that pragmatic strengthening is not confined to the derivation of implicatures but may contribute to the proposition expressed. I think she has remained constant in assuming a wide-scope semantics for negation, which distinguishes her position from Atlas's and aligns her with Grice.

9. Atlas (1989, 62, 132) stresses that sense-generality is to be kept distinct from vagueness of predicates. Vague terms like 'heap', and perhaps 'bald', are not sharply demarcated while sense-general linguistic elements, such as negation, may be.

10. I do not mean by this to take the "disjunction" view of sense-generality, which Atlas (1984a, 1989) has argued convincingly against; that is, I do not take 'neighbour' to mean 'male nearby dweller or female nearby dweller'. My talk here is of general knowledge assumptions that may be brought to bear on interpretation.
11. The 1993/97 account, which involves a general cognitive principle interacting with the semantics, seems to be coming closer to a pragmatic account of presupposition. But B-R does not consider it pragmatic, because it is free from speaker intentions, contextual considerations and the operation of pragmatic principles or maxims. In both the earlier (1989) account and this one, he talks of the P-preservation assumption as a default; talk of default rules or inferences carries an implication that in certain circumstances they can be blocked, but this basic cognitive principle seems to be unstoppable. Given a domain of denial (provided by the semantics), anything within it which is not denied/falsified (assuming this paradoxical sounding state of affairs is possible), is assumed to be affirmed. In short, this is as near to being semantically encoded as something which is assumed to be not semantically encoded can get.

12. His treatment does not necessitate any of the massive complications brought about by a three-valued logic of presupposition but rather preserves the classical definitions of the logical connectives. Negative existential sentences, such as ‘The F does not exist’, which are paradoxical on standard presuppositional accounts, cause no problem on his revised account. However, for criticisms see Atlas (1991), Seuren (1990) and Turner (1992).

13. In Carston (1994b/96a) I considered the example in (a) and suggested a pragmatically enriched propositional form along the lines of (b), with standard truth-functional ‘not’ and quoted material within its scope:

a. Her dissertation is not eSOteric; it’s esoTERic.
b. Not [the correct pronunciation of the word x in "her dissertation is x" is "eSOteric"]; the correct pronunciation of the word x in "her dissertation is x" is "esoTERic"

I noted that Seuren (1990, 444) has proposed a very similar sort of representation, but as an underlying semantic representation, an element of the language system itself, which undergoes complex movement and deletion rules to give the surface form in (a). See short discussion in the conclusion of chapter 3.

The really big issue here concerns the nature of metarepresentation, in particular, the metarepresentational use of natural language. Questions include: Is it fundamentally a semantic or a pragmatic phenomenon, or something else altogether, a reflex in public language of a fundamental cognitive capacity perhaps? Is it a feature of the language faculty and, if so, does that entail that every sentence has various semantic representations with, as it were, quotation marks around certain constituents? If it is not a part of the grammar, then how does it arise in interpretation?

14. In my view, it is possible for one and the same negative sentence (with or without a follow-up clause) to be understood as descriptive in one context and as metalinguistic in another (see Carston 1994b/96a). This depends on whether or not the material within the scope of the negation is being used descriptively or echoically. Horn (1989, chapter 7) gives a range of examples which indicate that for him too these are
not mutually exclusive options. For B-R, on the other hand, these options are crucially mutually exclusive; he needs this to be so in order to make his account of P-denials stick (see section 5.4.4). I point out the differences between Horn’s and B-R’s conceptions of metalinguistic negation in some detail in Carston (forthcoming b).

15. The semi-formal representation here with the ‘not’ placed outside the positive sentence reflects the one-place propositional connective of the Fregean logical system. Horn prefers the Aristotelian predicate denial formulation and has rather good arguments for it, so an alternative representation of this level might be [The F is-not G] as a way of capturing the idea that ‘not’ is a mode of predication. Nothing hangs here on the difference in the formulations since both encompass so-called presupposition cancellation.

16. The issue is especially striking in the context of accounts of conditionals where the term *metalinguistic* has been used of cases as disparate as the following:

i. If you’re thirsty, there’s some beer in the fridge.
ii. If I may say so, you look better in the red dress.
iii. If the Cite is the heart of Paris, the Latin Quarter is its soul. (from Horn 1989, 380)
iv. I’ll have a tom[a:tou], if that’s how you pronounce it.
v. John managed to solve the problem, if it was at all difficult. (from Dancygier 1992)
vi. If you eat tom[eilDouz] you must be American.
vii. If that glass is half empty you are a pessimist. (from Noh 1996)

Interesting discussion of these sorts of examples occurs in Sweetser (1990), Dancygier (1992), and Noh (1996), where it seems generally agreed that speech act conditionals and metalinguistic conditionals are distinct sorts of cases.

17. I must acknowledge, of course, that those echoic negations which focus on an element of linguistic form frequently are semantic contradictions (e.g. ‘I didn’t see two monGEESE; I saw two monGOOSEs’) and yet they are reanalysed as metalinguistic. However, that they must be reanalysed in this way is made highly manifest by the fact that the only difference between the material in the scope of the negation and that in the correction clause is a formal property of one of the constituents and this is usually highlighted by contrastive stress.
But we are not zombies and our utterances do, on occasion at least, have determinate meanings with determinate aspectual shapes, just as our intentional states have determinate intentional contents with determinate aspectual shapes. (Searle 1992, 164)

Or again if someone were to say "He's just an evangelist," he might mean, perhaps, "He's a sanctimonious, hypocritical, racist, reactionary, money-grubber." (Grice 1989a, 361)

In previous chapters, the focus has been on pragmatic inference which completes or enriches a constituent of the logical form of the utterance and contributes to the proposition expressed. In this chapter I will concentrate on the putatively opposite, or complementary, process of loosening aspects of encoded conceptual content. As mentioned briefly in chapter 3, this has been given a quite different treatment within relevance theory, its effects being registered at the level of implicature alone. On this view, loose and metaphorical uses do not contribute to the proposition expressed, which, consequently, is not among the assumptions communicated by the speaker. I suggest a different account in this chapter, an account on which the complementarity of the processes is reflected in their role in the proposition expressed. I will end by emphasising a point made earlier, with regard to subsentential utterances (section 3.3.3), that the ‘meaning’ conveyed by our utterances is indeterminate, not only at the level of implicature, a point already well established, but also at the level of explication. It does not follow that on these occasions we have (temporarily) entered a state of zombihood (see Searle above); on the contrary, indeterminacy is a typical feature of some of the more heightened instances of communication, when we are striving to communicate
complex thoughts and feelings, or when we introduce an element of playfulness into the exchange.

6.1 Ad hoc concepts via enrichment

The following examples of enrichments have been discussed in earlier chapters:

(1)  
   a. Everyone got drunk.
   b. I’ve got nothing to wear to the party.
   c. He handed her the scalpel and she made the incision.
   d. The police hit the suspect and she had to go to hospital.
   e. He begged her not to jump.

In the first two examples, a domain for the quantifier to range over has to be contextually inferred, thereby narrowing down the interpretation. In the two conjunction examples, the encoded assumption, that there is some connection or other between the events, is further specified by the inference of a temporal relation in (1c) and a cause-consequence relation in (1d), these relations being supplied perhaps by highly accessible general knowledge schemas concerning relevant ways in which events connect up. Note that in (1c) the second conjunct is further narrowed by the obvious assumption that the incision was made with the scalpel mentioned in the first conjunct. Similarly in (1e), a further constituent may be supplied so that, in an appropriate context, this could be taken to communicate that he begged her not to jump off the ledge of a high building.

I will be focusing on a slightly different type of enrichment in this chapter and won’t return to these examples.

The examples of primary interest here are of the following sort:

(2)  
   a. He wears rabbit.
   b. I want to meet some bachelors.
   c. Mary cut the cake.
   d. She has a brain.
   e. The cinema is some distance from the restaurant.
   f. Something’s happened.
What distinguishes these from the previous set is that, rather than adding a conceptual constituent, the enrichment targets a particular lexical item and strengthens the concept it encodes. For instance, in (2a) the noun 'rabbit', which encodes something like rabbit stuff, is narrowed to rabbit fur/skin. One possible narrowing of the bachelor concept in (2b) would take place in a context in which the speaker had made it clear that she wants to settle down and have children; then the denotation of the relevant bachelor concept would be a subset of the set of unmarried men. A crucial component of the narrowed concept would be eligible for marriage. In the case of (2c), it is not any old severing of the fibres of the cake that would be communicated in most contexts but rather a particular mode of cutting; comparison with different objects of cutting makes this apparent, for instance grass, hair, cloth, flesh, etc. The remaining examples have in common that their linguistically encoded content is a truism: all human beings have a brain, there is inevitably a measurable space between two locations, etc. Some pragmatic narrowing down is required, of the sort of brain she has in (2d), of the distance involved in (2e) and of the nature of the event in (2f).

In short, there is a subset relation between the extension of the concept actually communicated in these examples and the extension of the lexical concept from which it has been derived, shown schematically in (3), where L is the extension of the lexical concept and C' is the extension of the narrowed ad hoc concept, the relevant concept in each case.

One of the features of relevance theory which distinguishes it quite sharply from standard Gricean theory is the view that these strengthenings, of both the types exemplified in (1) and (2), may contribute to the explicit level of communication,
specifically to the propositional form of the utterance. On the Gricean approach they have the status of implicatures, communicated assumptions which are independent from, external to, the core proposition communicated by the utterance (‘what is said’, for Grice). Relevance theorists favour the former view because, in many instances at least, these appear to contribute to the truth-conditional content of the utterance, to what makes it true or false. In chapter 3, I presented various arguments and tests which support this view; assuming it is correct, the proposition expressed (and communicated) by (2b) is as in (4), where bachelor' represents the new narrowed bachelor concept.

(4) \( S_2 \text{ wants at } t_1 \text{ to meet some bachelors} \)

It is the interaction of this propositional form with a set of contextual assumptions that will give rise to contextual effects and some of those contextual assumptions will be derived from the encyclopedic entry of the narrowed concept, bachelor', (for instance, that the people in question should be heterosexual, youngish, interested in marriage, etc). Finally, it should be emphasised that this narrowing is a local process; it doesn’t necessarily follow that the proposition derived will always be logically stronger than the proposition before that strengthening took place, as is obvious in the case of narrowings within the scope of negation and certain quantifiers.

6.2 Ad hoc concepts via loosening

The other, putatively opposite, process of loosening or broadening, is exemplified by the following, where the loosely used concept is the one encoded by the highlighted lexical item:

(5) a. France is \textit{hexagonal}.
   b. I love \textit{bald} men.
   c. This steak is \textit{raw}.
   d. Have you eaten my chocolate \textit{heart}?
   e. Here’s my new \textit{flatmate}. [referring to a newly acquired cat]
This relaxing of a linguistically encoded meaning has been pretty much ignored outside the relevance-theoretic framework, though a general unease with any process of pragmatic loosening has been expressed. When discussing words which seem to have several related meanings, one stronger than the other, Grice (1978/89b, 48) says:

If one makes the further assumption that it is more generally feasible to strengthen one's meaning by achieving a superimposed implicature, than to make a relaxed use of an expression (and I don't know how this assumption would be justified), then Modified Occam's Razor would bring in its train the principle that one should suppose a word to have a less restrictive rather than a more restrictive meaning, where choice is possible.  
[my emphasis (RC)]

Atlas (1992), who works within a Gricean view of pragmatics, refers to this passage and says:

The "strengthening" assumption can be justified by discovering that there is an intelligible inference that brings about the strengthening of a speaker's meaning - intelligible in the sense that such inferences can be formulated and rationalized - but no intelligible inference that brings about the relaxation of a speaker's meaning. Loose uses of words don't seem particularly rule-governed.

But, then, what about the examples in (5)? It seems pretty clear that we do not want the concepts encoded by the lexical items 'heart' and 'flatmate' to include in their extension confectionery in the one case, nonhumans in the other. The same holds for 'hexagonal', 'bald' and 'raw', though this might need more argument to convince everyone (not, however, Grice or Atlas, who keep their semantics as minimalist as possible). Loose use is a fact and has to be accounted for by an adequate pragmatic theory. With a few notable exceptions, neo-Griceans have tended to steer clear of it. However, Grice's 'evangelist' example, quoted at the beginning of this chapter, has many of the features of the sort of loosening of lexical concepts that I'm interested in here; it seems to involve a dropping of the encoded (conventional) preacher concept and the picking out of a set of relevant encyclopedic properties: hypocritical, reactionary, etc. The example appears in his 'Retrospective Epilogue', where he discusses the two central categories of meaning, the formal and the dictive; this example is given as a case
of the non-formal and dictive. I don’t know whether this indicates a late shift in Grice’s conception of ‘what is said’ or shows that, all along, he was prepared to countenance a much greater gap between linguistic meaning and the proposition expressed than is usually attributed to him.

In outline, the standard relevance theory account of loose talk, including metaphorical talk, goes as follows. In some instances a speaker chooses to produce an utterance which is a less-than-literal (that is, loose) interpretation of the thought she intends to communicate. This will arise when she judges that communication of her thought is facilitated by such a non-literal utterance in that it makes that thought more accessible to the hearer than a literal one would. The process of interpreting loose uses is as follows: the hearer decodes the lexically encoded concept, thereby gaining access to certain logical and encyclopedic properties; he treats the utterance as a rough guide to what the speaker intends to communicate, and, in effect, sorts through the available properties, rejecting those that are not relevant in the particular context and accepting those that are, as reflections of the speaker’s view. For instance, in the case of ‘raw’ in (5c), the definitional property of not cooked would be rejected while the encyclopedic property of, say, difficult to eat, when applied to meat, would be maintained. The idea is that the lexical concept raw is in a relation of non-identical resemblance with the concept that figures in the speaker’s thought regarding the state of the steak; that is, they share some logical and contextual implications. So also for a metaphorical statement such as ‘Bill is a bulldozer’, where the lexical concept bulldozer is used to represent the non-lexicalised concept that figures in the speaker’s thought about Bill; it represents it by non-identical resemblance.

As is well known, the relevance theory account of metaphor is very different from the Gricean account - differences that I won’t go into here - and considerably more explanatory. However, there is one respect in which it stays close to the Gricean account, at least in the published work up to 1997, and that is that utterances involving metaphorical uses of words and, in fact, loose uses quite generally, do not communicate the proposition they express. The propositional form is not an explicature of the utterance, but just a vehicle for the communication of a range of implicatures. The same is so for Grice. When he wants to maintain that ‘what is said’ has, as part of its definition, that it must be meant by the speaker (in his technical sense of speaker
meaning), he moves to a different term altogether in discussing metaphorical utterances. He writes of 'what a speaker makes as if to say', precisely because the proposition literally expressed in a metaphorical case is not part of speaker meaning; only the implicatures of the utterance are meant (communicated, in relevance theory terms).

This view of things is reflected in the upper part of the diagram which summarises the Sperber/Wilson view on the descriptive and interpretive dimensions of language use:

(6) The propositional form of an utterance

```
   is an interpretation of

   a thought of the speaker

   which can be

   [(Sperber & Wilson 1986a/95, 232)]
```

In this diagram, the concept of "interpretation" (or interpretive resemblance) is intended to accommodate not only literal interpretations, but also the cases where a concept in the thought the speaker intends to communicate departs in certain ways from a concept featuring in the proposition expressed by the utterance, that is, cases of loose use, including metaphor.

This then marks a clear asymmetry between the two pragmatic processes of enrichment and loosening. Cases of enrichment contribute to the propositional form of
the utterance; the result of strengthening a lexical concept gets built in as a new ad hoc concept; enrichment is taken to be one of those pragmatic processes, along with reference assignment and disambiguation, that are involved in arriving at the proposition expressed. Loosening on the other hand has no such role; the lexical concept, which provides the point of departure for the loose use, stays in place in the propositional form of the utterance which simply resembles the one the speaker has in mind. My question is simple: why is there this asymmetry?

This question first arose for me when I heard a talk by Dan Sperber in 1989 (to appear in revised form in Sperber & Wilson (forthcoming)). There, he discussed the narrowing and broadening of lexically encoded concepts as if they were symmetrical processes, the one adding material, the other subtracting it. In that talk he did not address the issue of why they do not both appear in the proposition expressed. If they are just two opposite processes of concept building, as they seem to be, strengthening vs. weakening, narrowing vs. broadening, i.e. a move away from strict literalness in both cases, albeit in opposite directions (above and below literalness), wouldn’t we expect that either the results of both processes should figure in the proposition expressed by the utterance or that the results of neither should? This issue has been in the air for a few years now, discussed informally at relevance theory seminars and with students at UCL working on metaphor. In the next section, based on Carston (1996b), I start to look at what the implications of moving to a symmetrical account would be.2

6.3 Symmetrifying enrichment and loosening

There are two ways, in principle, of symmetrifying: bring narrowing into line with the existing account of loosening or bring loosening into line with the propositional boosting account of enrichment. I'll look at these in that order.

To bring narrowing into line with the established relevance-theoretic account of loosening would entail not building a denser concept in the enrichment case, but using the lexical concept as a jumping off point to contextual effects, as it is for loose and metaphorical uses. That is, at the level of the proposition expressed the lexical concept would remain and the enrichment of that concept or its effects would emerge as implicatures. This would, of course, involve a move back in the direction of the Gricean
concept of 'what is said'. It would extend the import of the diagram given in (6), since more cases would fall within the concept of non-literal interpretive resemblance: enrichment cases could be seen as a particular type of interpretive resemblance where the logical implications of the propositional form of the utterance would be a proper subset of those of the thought of the speaker.

This may be workable for lexical concepts with encyclopedic entries, such as bachelor, with its various bachelor prototypes, bundles of features comprising chunks or units within the overall encyclopedic entry. For example, in (2b) the lexical concept bachelor might give access to a bunch of prototypical properties of bachelors: youngish, heterosexual, free to marry, childless, etc, (along with the logical property unmarried), from which various implicatures regarding the sort of person the speaker wants to meet would follow. A relevance-driven sorting process, similar to that assumed in the loose use cases, would ensure that other possible bachelor prototypes, e.g. that of the fussy, old, misogynous type of bachelor, would be bypassed, as would the pope and various others who are technically bachelors but do not have the relevant properties.

However, there are a number of cases of enrichment for which this just won’t work. While a range of implicatures can be easily derived from a lexical item used loosely, this is not so for at least some instances of enrichment. What a loose use entails is that, in effect, the original (lexical) concept makes available more information than you need, so you can simply disregard whatever does not contribute to relevance (cognitive effects), on the particular occasion. But, of course, the opposite is the case in many instances of narrowing/enrichment; here what the lexical concept makes available is often rather less than one needs to derive the intended effects. Examples (2e) and (2f) are such cases: nothing follows from these literal and trivial truths; the concepts of some and something simply do not give access to a rich set of specific assumptions from which the intended concept is built. These enrichments are effected in some other way, relying on contextual information from a wider range of sources, perhaps information from the perceptual environment.

Trying to treat these enrichment cases, where the lexical concept lacks anything much by way of an encyclopedic entry, as cases of interpretive resemblance would give a very odd result within relevance theory: the relevance of the utterance, its effects, would seem to derive from an interaction of contextual assumptions alone, with the
proposition expressed playing no role. This is exemplified in (7), where it can be seen that the effects follow from the implicature (an implicated premise), which represents the strengthening of 'some distance', together with other accessible assumptions concerning such a situation:

(7) Proposition expressed: There is a distance between the cinema and the restaurant.

Implicature: The distance between the cinema and the restaurant is longer than you think.

Effects: We shouldn’t plan to walk from the restaurant to the cinema; we should call a taxi to get to the cinema, etc.

This is the sort of case that my functional independence heuristic (discussed in section 3.6.2) was designed to adjudicate; the proposition expressed here has no inferential function independent from that of the alleged implicature. The pragmatic inference should, therefore, be understood as contributing to the proposition expressed, rather than as an implicature. This heuristic was conceived as a mere preliminary to the relevance-theoretic account, which precludes the picture in (7) from arising: cognitive effects follow from an inferential interaction of the proposition expressed and contextual assumptions. I conclude that this tack, a partial retreat back to Grice, as it might be seen, is not a possible way of symmetrifying the treatment of narrowed and loosened ad hoc concepts within relevance theory.

So let’s consider the opposite possibility: bringing loosening into line with narrowing. This involves building into the proposition expressed an ad hoc concept, which is a weakening of the encoded lexical concept. In parallel with the representation in (4) of the propositional form of an enrichment case, we’d have the following propositional form for (5c):

(8) [This steak], is raw*.

(where raw* indicates a loosening of the lexical concept raw)

From this, as on the original account, would follow a bunch of implicatures,
communicated with varying degrees of strength: the steak is insufficiently cooked, the steak is inedible, the speaker is very unhappy with the state of the steak, the speaker wants this steak replaced by another which has received more cooking, etc.

So let us suppose this is the version of the symmetry thesis we would opt for, if we went for one at all. I shall now list, and briefly consider, some possible objections to making this move; that is, to incorporating into the proposition expressed those ad hoc concepts which are loosenings, along with those that are strengthenings, of lexical concepts:

[1] Someone might object that one upshot of this view of things is that some word meanings (lexical concepts) are virtually never used literally; for instance, 'bald' (meaning totally hairless), 'silent' (which would strictly speaking apply only to a soundproof chamber), 'hexagonal' (a property of a perfect abstract form not actually found in nature), etc. The objection would depend on the assumption that it is very implausible that words are not used literally at least some of the time. But this assumption is not very compelling; it seems quite clear that we simply do have concepts of geometrical perfection and that we use these as a point of departure in entertaining other concepts, that are approximations to them. That this might extend to quite a range of the concepts encoded in natural language should not be seen as troublesome but as a downright useful feature of language, given our undoubted capacity to recognise resemblances. Suppose one were in the business of designing a public representation system for human communicative purposes, given that the general cognitive capacities of the species were already in place: the ability to attribute complex mental states (such as higher order beliefs and intentions) to conspecifics, the ability to draw inferences from newly impinging stimuli by placing them in a context of existing assumptions, and the ability to recognise conceptual and other resemblances from a range of points of view. I think a designer might well opt for a public representation system with quite minimal and even generally uninstatiated encodings (in the sense that little, if anything, in the actual world falls under the concept), given that these more fundamental abilities can be relied on to make the appropriate adjustments, with relative ease, in a number of directions. Perhaps then, more often than not, our communication is nonliteral in just this way.
Here's a second, this time rather theory-internal, objection. If both strengthenings and broadenings are taken to contribute to the propositional form of the utterance, then won't the propositional form of the utterance always be identical to the propositional form of the thought of the speaker, so that the distinction caught in the diagram in (6) falls away? The question really concerns the concept of "interpretive resemblance", which is arguably one of the most constructive innovations of relevance theory. But there would be no diminishing of its importance as a result of the move being considered; on the contrary. Apart from its fundamental role in the account of irony and other cases involving the attribution/echo of a thought, the relation of interpretive resemblance would continue to be the key relation, both between lexical concepts and communicated concepts, and between communicated concepts and concepts in the thought of the speaker. The concepts in the logical form or semantic representation of an utterance would be in a relation of interpretive resemblance with those in the propositional forms of both the thought of the speaker and the utterance expressing that thought. The diagram in (6) is maintained, and might be augmented by another layer as shown in (9); relations of interpretive resemblance hold between all conceptual levels. (See Recanati (1993, 48) for relevant discussion of "interpreting up" and "interpreting down").

(9) Logical form of the utterance  
(structured set of lexical concepts)  
  |  
  interpretively resembles  
  |  
Propositional form of the utterance  
(structured string of concepts, many of which are enrichments or loosenings of the lexical concepts)

The third potential objection is related to the second: wouldn't we be slipping a maxim of literalness or truthfulness back into the picture? It might sound as if even in
the case of metaphorical utterances we would be saying that the propositional form of
the utterance is a literal interpretation of the thought the speaker intends to communicate.
If so, statements such as the following, which have been quite central to the relevance
theory picture, would seem to no longer carry much weight:

... the hearer is not invariably entitled to expect a literal interpretation of the
speaker's thought, nor is such an interpretation always necessary for successful
communication to take place. A less-than-literal interpretation of the speaker's
thought may be good enough; may indeed be better on some occasions than a
strictly literal one

(Sperber & Wilson 1985/6, 158)

But this is very different from the concept of literalness or truthfulness at issue in the
Gricean maxim, which concerned the relation between the linguistically encoded (or
conventional) meaning and that which the speaker meant or communicated. On the
proposed symmetrical treatment of loose use cases, it would indeed follow that the
speaker always endorses the proposition her utterance expresses, but the point is that this
proposition is now going to depart even more radically than before from the literal
linguistic content in the logical form of the utterance, so that the first maxim of Quality
"Do not say what you believe to be false" (my emphasis) is hopelessly inapplicable.

Of course, if we move to the Supermaxim of Quality: "Try to make your
cortribution one that is true" (my emphasis) where we take 'contribution' to include
both the proposition expressed and the implicatures, then it would appear that cases of
loose use and metaphor conform with this. I won't argue it here but in fact this simply
follows from the presumption of optimal relevance (specifically from what constitutes
a contextual effect) and no separate maxim or principle is needed (see Ifantidou 1994
and Wilson 1995).

It should be noted that the propositional form of the utterance will now always
be communicated, hence an explicature; the only level in the whole process of utterance
interpretation that is not communicated is the logical form. This seems like a thoroughly
positive outcome to me; there was always a kind of redundancy in the standard account
of loose use and metaphor in that there were two representational levels (logical form
and propositional form) that were mere tools or vehicles for getting at what was in fact
communicated. It should be noted that this move may require an adjustment in
understanding the definition of an 'explicature': a communicated assumption which is a **development** of a logical form of the utterance (see chapter 3, section 3.3.1). Now, processes of **developing** a logical form include the dropping of elements of encoded linguistic content.

[4] What of the concept of THE truth-conditional content of the utterance? First, it is not clear that we really want such a notion in our pragmatics at all, especially if, as relevance theorists argue, the proper domain of a truth-conditional semantic theory is thoughts/assumptions (or, at least, their propositional forms). However, suppose we did think there was good reason to maintain that concept, then wouldn’t we be a bit alarmed that now an utterance of 'Bill is a bulldozer' could come out as true, provided Bill had certain properties that appear in the encyclopedic entry of the lexical concept *bulldozer* and which are central to the new non-lexical concept *bulldozer*? Surely, the one thing we do have in this area is relatively robust intuitions that ‘Bill is a bulldozer’ is false and ‘Bill is not a bulldozer’ is true (and these intuitions are to be explained by the presence of the literal encoded concept in the propositional form of the utterance). We would be having to turn these clear intuitions right around.

Well, just how robust are these intuitions and what is their source? We can, after all, agree or disagree with someone who utters ‘Bill is a bulldozer’, as in (11), or even say ‘that’s true’ or ‘that’s not true’:

(11) A: Bill’s a bulldozer (or: a bit of a bulldozer).
B: He certainly is; let’s not have him on the committee.
C: He’s not really a bulldozer; in fact he’s quite insecure.

It could be that ‘true’ is being used loosely in such a response, that what we have is loose use all the way (first the predication of bulldozerhood and then the confirmation or denial of it). But I don’t see any reason to suppose that; surely what is being denied by C at the explicit level is that the ad hoc concept *bulldozer*, formed from the loosely used lexical concept, applies to Bill. Examples of conditionals with loose or metaphorical uses of concepts in their antecedent point in the same direction:
(12) a. If Bill is a bulldozer he’ll be ideal on the committee.
b. If Mick is a loose cannon we better keep him out of the negotiations.

It seems pretty clear that what is being communicated by (12a) is that if Bill is of a particular aggressive disposition, unmoved by the views of others, etc, he’ll be ideal on the committee. If the arguments based on these various examples are right, the source of the original intuition that ‘Bill’s a bulldozer’ is false might simply be the conceptual content of the logical form of the utterance rather than its propositional form (that is, our knowledge of word meaning).

Note that examples (11) and (12) are applications of the embedding tests for distinguishing pragmatic contributions to the proposition expressed from implicatures, discussed in chapter 3. The results of embedding these cases in the scope of a negation or conditional operator support the view that they contribute to the truth-conditional content of the utterance.

It does not look as if there is anything in these various considerations to decisively deter us from symmetrifying the picture by building both sorts of ad hoc concepts into the proposition expressed. However, let’s take a look at the process (or processES) of loosening a little more closely. The diagram given above in (3), to illustrate the relation between a lexical concept and an enrichment of it, shows that the set of entities falling in the denotation of the lexical concept L contains as a proper subset the set of entities in the denotation of the strengthened ad hoc concept C'. One might think that if we are dealing in symmetrical processes then the corresponding diagram for loosening will look as in (13), where C* is the result of loosening the lexical concept. In fact, it more often comes out looking like (14), where the picture is one of a kind of concept shift or transfer rather than a simple broadening, where the denotations of the lexical concept and the concept which results from the ‘loosening’ process merely intersect:
In fact, when we come to look at particular cases it looks as if there may be three subcases of loosening, only one of which seems to be the true counterpart or complement of enrichment:

(15)  a.

The room is rectangular,
The room was silent,
John's a real bachelor
Taking *rectangular* in (15a), for example: this is a loose use since the room in question might have all sorts of little irregularities that render it not strictly rectangular (i.e. not having four right angles). The extension of the looser concept would, however, include some cases of strict rectangles while excluding others; it might, for instance, exclude those with two of their sides a mile long and the other two only a few inches long. Now consider (15b); the idea here is that there is actually no extensional overlap of the two concepts. Metaphors which involve sortal or categorial incorrectness as in the examples in (15b) are candidates here. Among the properties of the lexical concept that are discarded are, crucially, logical or definitional ones. For instance, in the 'plastic duck' cases the property of belonging to a biological species is dropped. The picture in (15c) represents the case where the extension of the new loosened concept does in fact encompass the entire denotation of the original lexical concept, indicated here by the emptiness of the non-intersecting part of the lexical concept; this could and should be redrawn as the picture in (13). This is broadening in a strict sense, the symmetrical
counterpart to the narrowing cases. For instance, the extension of the *bald* concept would include all the entities which fall within the extension of the lexical concept *bald*, i.e. all the hairless entities (assuming this is the right semantics for *bald*), and a further group which depart to some degree or other from complete hairlessness but which are relevantly low on hair.

Setting aside the (15b) cases for a moment, let us consider the relation between (15a) and (15c). The sort of loose use exemplified in (15a) could be thought of as one that involves both broadening (as in (15c)) and narrowing; for instance, the concept *bachelor* might include married men who behave in a certain stereotypic bachelor-like way (individuals in the non-intersecting part of C*) and it might exclude some men who are in fact UNmarried but do not have the particular stereotypical bachelor properties (individuals in the non-intersecting part of L). Note that the concept *silent* occurs in examples given for both types of case; depending on the particularities of the context, the new ad hoc concept might be either a strict broadening, hence include in its extension all that the original lexical concept includes, or might involve, in addition, some degree of narrowing (excluding perhaps unnatural, manmade instances of utterly noiseless spaces such as soundproof chambers). Doubtless, these two possibilities also arise in the loose use of other lexical concepts.

The fact that both processes might be required in forming a communicated ad hoc concept makes it look all the more likely that they both contribute to the proposition expressed. It would be very hard to find a principled reason for supposing that the result of narrowing the concept of *rectangular* in the example in (15a) figures at this level, while its simultaneous widening is registered only at the level of implicature. It follows that those cases of broadening which are the true counterpart to narrowing, that is, those in (15c), also contribute a new concept to the proposition expressed. This approach has a further advantage, in the analysis of cases of approximations like (16a). On the standard relevance-theoretic account, they could be treated as either an enrichment, along the lines of (16b), which contributes to the proposition expressed, or as a loose use, which does not. On the symmetrical treatment of loose use, their contribution inevitably features in the proposition expressed.
There were 100 people there.

There were approximately 100 people there.

Briefly, let us reconsider the examples in (15b). On reflection, it is far from clear that this category of concept construction really arises. What it would require is not just the dropping of the logical or definitional properties of the lexical concept from which the ad hoc concept is derived but the inclusion of the negation of these properties among its own defining features. For instance, this view requires that a defining feature of duck* would be 'not a living creature' and a defining feature of bulldozer* would be 'not a manmade machine', etc. This is both unnecessary and counterintuitive; the relevant loosened concept of duck* might as well include in its extension some biological ducks and some artefactual ducks, the common properties concerning physical appearance being all that the new concept has retained from the lexical concept duck. Of course, in the case of 'plastic duck' the modifier whittles down the set to exclude living creatures. If this is the right way to view these examples then they are just further instances of the type of concept construction in (15a); that is, they involve broadening (for instance, to include certain artificial ducks) and narrowing (for instance, to exclude instances of the biological species of ducks which do not have a particular stereotypical appearance). As with the other cases given in (15a), on the symmetry view the new concepts so formed would contribute to the proposition expressed.

6.4 Categorial falsehoods and trivial truths

It is often pointed out that positive metaphorical utterances such as (17) are category mistakes (sortally incorrect), clearly flouting Grice's first maxim of truthfulness. Their negative counterparts, as in (18), are naturally trivial obvious truths, a point made long ago by Wilson & Sperber (1981) in their catalogue of the short-comings of Grice's account of metaphor and other tropes, the point being that there is no violation of any maxim of truthfulness.

(17) a. Bill is a bulldozer.
b. Losing Jane is losing the sun.
(18) a. Bill isn’t a bulldozer.
b. Losing Jane isn’t losing the sun.

Johannes Flieger has recently discussed some further examples of obvious falsehoods that he takes to be metaphorical; he calls them metaphorical negations, the idea being that a phrase consisting of a negated term is used metaphorically as a whole:

(19) a. Ari isn’t a lion; he’s a pussycat.
[where Ari is, in fact, a lion]
b. Englebert isn’t a surgeon; he’s a butcher.
[where Englebert is a surgeon by profession]
c. Huckleberry isn’t a butcher; he’s a surgeon.
[where Huckleberry is a butcher by profession]
d. Engelbert isn’t a human being; he’s a wild beast.
e. Huckleberry isn’t a human being; he’s a buddha.

(these examples are all taken from Flieger 1996)

In each case the referent does in fact have the property (taken literally) that the speaker is denying he has and does not have the property (taken literally) that the speaker predicates of him in the next clause, and this is mutually manifest to speaker and hearer. These are very interesting examples in the context of a discussion of pragmatic processes of enrichment and loosening, because while Flieger sees these as cases of metaphor (hence of loosening, in relevance-theoretic terms) they can just as well be described as cases of negated enrichments. Take (19d) for instance: while Engelbert is in fact a member of the human species, what the speaker is denying is that he belongs to a narrower category which consists of (perhaps) thoughtful, compassionate, civilised human beings. It is unsurprising that such examples can be seen as either cases of metaphorical (loosely used) negatives or cases of negated strengthenings; it follows from the concept of negation, the complementarity of the two processes of enrichment and loosening, and their local nature.

From a processing point of view I think the enrichment account looks more promising than the loosening account; it would require less effort to, as it were, dive into
the encyclopedic entry for human being, pull out a positive stereotype and negate that than to form the concept non-human-being and then loosen that to include some actual human beings. In fact the latter would not give quite the right result since the vast category non-human-being would have to be drastically narrowed (to exclude tables, trees, trumpets, theories, etc, all of which are, after all, not human beings) in addition to being widened to include such humans as Engelbert. The local enrichment account meshes well with the widespread recognition that negations are more complex to process than their corresponding positives (negation being the marked member of the positive/negative opposition) and that the processing of a negative in some sense presupposes the availability of the corresponding positive (see Horn 1989, chapter 3).

What these examples bring home to me is that we must surely go for an account which offers parity of treatment of enrichment and loosening as regards the ad hoc concepts they result in and their role in representations built by the hearer. A representation of the base explicature of (proposition expressed by) utterances of (19d) and (19e) would be something like the following:

(20) a. E. is not a human being'; he's a wild beast*
b. H. is not a human being"; he's a buddha*

where the double prime in (20b) is meant to indicate that the ad hoc concept in (20b), derived by a process of enriching the linguistically encoded concept human being, is distinct from the ad hoc concept in (20a), also derived by a process of enriching that linguistic encoding.

We could go on from here and consider cases of obvious truths, whether positive or negative, where clearly the speaker is not intent on predicating of the referents a property that they are known by all concerned to have or denying that they have a property which it is well known they do not have:

(21) a. Caroline is our princess.
b. Uncle Bob is a sergeant-major.
c. Tom is a human being (not a machine).

(examples from Flieger 1996)
I repeat the examples in (18) for convenience since they are cases of negations which are obvious truths:

(18)  
\begin{enumerate}
\item Bill isn’t a bulldozer; (he’s a juggernaut).\footnote{5}
\item Losing Jane isn’t losing the sun.
\end{enumerate}

The idea with (21a) is that, while the Caroline in question is in fact a princess, the intention of the speaker does not concern her status in a royal family but rather such properties as her haughty, spoilt ways. The same goes, mutatis mutandis, for (21b). Are these cases of metaphorical loosening or of enrichment? Flieger sees them as all cases of metaphor, all having a ‘figurative’ feel. A bid for parity of treatment with the account above of (17) and (19) would suggest that while the examples in (18) are indeed negated metaphors (negations of ad hoc concepts constructed through loosening), the examples in (21) should be enrichments, so that the propositions expressed in each case are, respectively, that Caroline belongs to a particular proper subset of the set of princesses, that Uncle Bob is a certain type of sergeant-major (perhaps the authoritarian, humourless, etc, stereotype), and that Tom has the frailties of human flesh. It seems to me that here it could go either way; the ad hoc princess concept formed from the lexical concept might or might not include the logical (definitional) property of the lexical concept (female member of royal house) and the same holds, mutatis mutandis, for the ad hoc sergeant major concept. Whether these are technically loosenings or enrichments hinges on whether or not logical (definitional) properties are dropped. The case for a symmetrical account of enrichment and loosening cases is further supported by these considerations. What matters here, at least from a communicative point of view, is that the relevant concept is constructed out of the logical and encyclopedic information which is made accessible by the encoded lexical concept; whether the construction process is strictly speaking a loosening or an enrichment does not seem consequential and certainly should not lead to two utterly different ways of treating the resultant concept.\footnote{6}

6.5 Economy of effort and enrichment/loosening symmetry

The considerations of the last two sections make quite a strong case, I think, for the
appearance of ad hoc concepts in the proposition expressed, whether the process that the original lexical concept has undergone is one of strengthening/narrowing or weakening/widening, or a combination of both. But the question that comes to mind now is what is achieved by lodging the loosened ad hoc concept in the propositional form? Is this just symmetry for symmetry’s sake? It is nice to have a unified account, but, after all, the standard relevance-theoretic treatment of loose use and metaphor, in which all the communicated assumptions were implicatures, worked very well in a range of cases.

At this point I’d like to turn to some recent work by Anna Papafragou (see in particular Papafragou 1995). Her main concern has been to give an account of metonymic expressions, as in (22a), which are standardly used referentially, but she also looks briefly at metaphorical expressions used referentially (as opposed to the predicational cases I’ve concentrated on so far), such as the one in (22b):

(22) a. The burgundy hat left in a hurry.
    b. The wilting violet has finally left.

Here the description ‘the wilting violet’ is being used to refer to a particular woman, let’s call her Jasmine Jones (JJ), known to both the speaker and the hearer. As Papafragou says, our account of the interpretation of this utterance has to address the fact that part of what is communicated at the explicit level, is that the particular woman, JJ, has left, this being just an instance of reference assignment, which is one of the subtasks involved in arriving at the proposition expressed (on anyone’s conception of the proposition expressed). She proposes for this sort of case, as for metonymic cases, that the hearer MUST construct an ad hoc concept from the encoded wilting violet concept in order to derive the referent Jasmine Jones; that is, reference assignment proceeds via this concept (of a certain sort of shy, retiring person, let us suppose) in whose extension JJ could be reasonably supposed to fall. Although Papafragou does not say so, I assume that the final propositional form of the utterance is something like (23), where the individuating (de re) concept of JJ and the loosened descriptive concept wilting violet both appear:

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The ad hoc concept, like any concept in a referentially used definite description, gives easy access through its encyclopedic entry to contextual assumptions: JJ is shy, reticent, uncommunicative, delicate, sensitive, makes everyone feel uncomfortable, can’t take robust treatment, etc. These interact with the proposition expressed, shown in (23), to give an array of effects: the speaker is relieved that JJ has gone, they can all relax now, they can feel free to tell bad jokes, etc.

Interestingly, Papafragou does not extend this treatment, in which the propositional form registers the ad hoc concept, to cases of metaphorical predication, and her reason for this is that it is not necessary to do so. The classical relevance theory account of these cases works just fine: the propositional form with the literal encoded concept in it gives the hearer easy access to all the intended implications (implicatures), the derivation of which, after all, is what is required in order to arrive at the intended interpretation. Predication is a means of ascribing a range of properties to a referent and these can simply be read off the lexical concept without any intermediate step of setting up an ad hoc concept. The underlying principle here seems to be: make only those moves, set up only those representations, which are necessary in order to arrive at the intended interpretation. If you can get there without setting up new conceptual addresses/labels (which are generally going to be of an evanescent nature anyway) then don’t set them up. This seems entirely in keeping with the principle of relevance, according to which we expend as little processing effort as possible in deriving a satisfactory yield of effects.

Furthermore, as Deirdre Wilson has pointed out, there are cases of sustained metaphor where it seems to be not only not necessary but probably impossible to build ad hoc concepts into the proposition expressed:

(24) a. Love is the lighthouse and the rescued mariners.

(example from Oshar Davico, via Vladimir Zegarac)

b. Life’s but a walking shadow, a poor player that struts and frets his hour upon the stage, and then is heard no more; ...

(Shakespeare: MacBeth V, v, 24-26)
Building in ad hoc concepts at the explicit level looks equally problematic for examples which, while less poetic, involve whole sentences being used metaphorically:

(25)  

(a) The cracks are beginning to show.
(b) The lion is roaring again.
(c) The patient has yet to leave his sick-bed and take a few tottering steps in the sunshine.

The treatments of metonymy and metaphor are different in certain crucial ways; after all, there is not a relation of resemblance between the conceptual content of ‘ham sandwich’ and ‘person who ordered the ham sandwich’ or ‘burgundy hat’ and ‘woman wearing the burgundy hat’. I won’t look here at the interesting account of the particularities of metonymy that Papafragou gives, but focus instead on the respects in which the two phenomena behave the same. Consider the following pairs of examples, the (a) cases involving metonymy and the (b) cases metaphor. The two pairs differ in that the figuratively used expressions are referential in (26) and predicative in (27):

(26)  

(a) The pretty face just went out.
(b) The pretty doll just went out.

(27)  

(a) Maria is a divine voice.
(b) Maria is a nightingale.

(Examples from Papafragou 1995, p.149)

In both the metonymic and the metaphoric referring expressions in (26), an ad hoc concept has to be constructed if the referent is to be located. Both involve kinds of interpretive use of concepts through which the speaker gives a new name to an individual enabling both reference assignment and, in many instances, particular cognitive effects. This is akin to nicknaming and other spontaneous dubbings, as in ‘Nosey has just left’ and ‘Prince Charming is laying it on thick’.

In both the metonymic and metaphoric predications in (27), it is not necessary to construct a new concept: the properties whose predication of Maria the speaker
endorses can be accessed directly from stored information concerning divine voices and
ingthingales (the choice constrained, of course, by relevance considerations). An array
of implicatures is thereby constructed and a fully propositional form at the explicit level
need never be entertained. The classical relevance theory account of loose use and
metaphor seems, after all, quite satisfactory for these examples. However, another
asymmetry, that between referring and predicating, has to be taken into account. When
it is, it seems that the classical story works well for the predicational cases while
referring by means of a figurative use requires a process of constructing an ad hoc
concept which enters into the proposition expressed.

Lastly, continuing to pursue symmetry in the accounts of the processes of
enrichment and loosening, this "ad hoc concepts only when necessary" position has to
be extended to the enrichment cases. Recall that in the discussion in section 6.3, it was
pointed out that some enrichment cases COULD work the same way as the classic
loosening account, e.g. the bachelor case with its rich encyclopedic entry which includes
certain assumptions which cluster together to delimit a stereotype. So an utterance of
'John's a bachelor', in the context of a discussion of Mary's desire to get married, could
implicate that John is heterosexual, youngish, eligible for marriage, etc, without the
setting up of a new address/label for the narrowed ad hoc concept bachelor*. Other
cases of enrichment could NOT work this way; these are the linguistically encoded
concepts that do not have much encyclopedic information attached, such as 'some
distance' in (2e).

So there is a third symmetry position which seems worth considering: (a)
SOME cases of enrichment and SOME cases of loosening have to be built into the
propositional form of the utterance; a hearer/reader won't arrive at the intended
interpretation if they are not; (b) other cases do not need to appear in the propositional
form of the utterance, in that the intended interpretation can be derived without them (by
an encyclopedic sorting process), and therefore they should not be. This way of viewing
the matter gives processing effort primacy and meshes well with the view expressed in
standard relevance theory that 'a non-literal interpretation of the speaker's thought may
be better on some occasions than a strictly literal one', 'better' in the sense that, for
those cases where it is possible (the (b) cases), the hearer derives the intended
interpretation with less processing effort than it would take to first derive the
propositional form of the speaker’s thought and then derive the intended effects from that.\textsuperscript{10}

Returning to the question asked at the beginning of this section, the idea that any departure from the lexically encoded concept requires the building in of the new communicated concept at the level of the proposition expressed might well be a case of symmetry for symmetry’s case and so be poorly motivated. The third symmetry position, on the other hand, is grounded in fundamental facts about cognitive processing: we want effects, so we are prepared to expend effort to get them, but we want them as cheaply as we can get them, so we do just that work, build only those representations, that we must in order to achieve them.\textsuperscript{11}

\subsection*{6.6 Indeterminacy of explicature}

On the view presented here, the proposition expressed by a speaker is an explicitly communicated proposition, which may have among its constituents non-lexicalised concepts, which have been pragmatically constructed out of the concepts encoded in the logical form (or semantic representation) of the utterance. It is an explicature, in relevance theory terms; it is a base level explicature as it does not involve any embedding into assumption schemas such as ‘the speaker believes that ...’, ‘the speaker says that ...’ which give higher-level explicatures. As discussed in chapter 3, this is a very different entity from the one that certain philosophically oriented pragmatists refer to as ‘the proposition strictly and literally expressed’, the minimal proposition that can be constructed from the semantic representation of the utterance, something which departs as little as possible from encoded content and yet which has a determinate truth-condition.

Is there any role for a proposition literally and strictly expressed (a ‘what is said’) in the account of utterance interpretation that I have been setting out here? If there is, I am unable to see what it is. Language users’ intuitions seem to discriminate quite readily between explication and implicature and not between what is (strictly and literally) said and explicature (see Recanati 1989b/91; Gibbs & Moise 1997). There is no evidence that they naturally (pre-theoretically) pick out a level of minimal propositionality, though with the requisite (philosophical) training they can learn to do
so. However, these intuition tests have all used examples in which the explicatures concerned contain conceptual enrichments only; so far such tests have not been run on utterances involving loose use. My guess is that the results here would be less clearcut, but not because there is an extra level of minimal propositionality. We have fairly strong intuitions about what the words of our language refer to, so competent speakers of the language will generally agree, for example, that 'hexagonal' refers to the property of being 'six-sided', 'raw' is a property of things that have never been cooked, 'lion' refers to a certain biological species, etc. Asked whether it is true or false that France is hexagonal or whether John, who everyone agrees has behaved bravely and nobly, is a lion, some people (I predict) would say 'true' and some would say 'false'. I don't think this would be because they have different views on the shape of France or on John's character, but rather their responses would be grounded in intuitions coming from distinct sources; the 'true'-sayers would be considering the proposition they take the speaker to be expressing and endorsing (i.e. an explication), while the 'false'-sayers would be tapping their knowledge of linguistic meaning, the literal encoded conceptual content of the utterance. The split in responses would be caused by the inescapable fact that with loose use some element of the core linguistic meaning is lost, while with enrichment linguistic meaning is simply augmented so that when the enriched concept is true of a referent so is the unenriched lexical concept. I have yet to carry out the necessary tests.

Intuitions aside, it is difficult to see what a level of minimal propositionality would be for, given linguistic meaning (logical form), on the one hand, and the basic explication, on the other hand. More generally, a theory of utterance interpretation has to acknowledge two quite distinct sorts of things: (a) linguistic content, which is not communicated; it is not the sort of thing that can be communicated, it is a vehicle for communicating (some might say, a function from utterance-context pairs to propositions), and (b) what is communicated, which is a set of assumptions with propositional forms.

The set of communicated assumptions can be partitioned into explicatures and implicatures, but this is not a distinction which is of great importance for a hearer, at least if it is viewed as a representational distinction which is supposed to have some impact on the way he views the set of communicated assumptions. It is really no more
than a reflection of the undoubted fact that there are two ways of deriving communicated assumptions: (a) developing the linguistically encoded logical form (semantic representation), and (b) inferring whole new assumptions. What does play an important role in the final interpretation of the utterance is the strength with which individual assumptions in the set have been communicated; a hearer has to register the relative degree of backing the speaker gives to any derived assumption if he is to arrive at the intended interpretation.

Implicatures may be communicated relatively strongly or relatively weakly (see Sperber & Wilson 1986a/95, chapter 4); a strongly communicated implicature is one whose particular propositional form is a member of the set $I$, the assumptions which fall within the speaker's communicative intention; a weakly communicated implicature is one whose particular propositional form does not fall in the set $I$ but which is one of a range of possible propositional forms falling under a more abstract and general propositional schema that falls within the set $I$. As Grice originally pointed out, the implicatures of an utterance are often indeterminate. A speaker encourages exploration in a certain conceptual region but the hearer bears the main responsibility for the particular propositional forms within this region that he constructs. The metaphorical types of loose use typically give rise to a range of weakish implicatures; the more creative or unusual the metaphor, the wider the range of possibilities and the weaker the speaker's endorsement of any specific implicated propositional form.

The strong/weak continuum has not generally been so readily applied to explicatures$^{12}$ (though see chapter 3, section 3.3.3), but if either of the symmetry positions considered above turns out to be correct, in which ad hoc concepts resulting from loosening of linguistic content contribute to the proposition expressed (the basic explicature), the property of indeterminacy will be seen as very much a feature of explicatures as well. Just exactly what concept is the hearer of (17a) 'Bill is a bulldozer' expected to construct out of the lexical concept bulldozer? The construction process is constrained by the information stored in the individual hearer's encyclopedic entry for bulldozer and by his bid for an interpretation consistent with optimal relevance. But this leaves a degree of leeway so that the ad hoc concept actually constructed is to that degree the hearer's responsibility. The ad hoc concept intended in more creative cases is more indeterminate, leaves more to the hearer and so the concept which he does
build receives less endorsement from the speaker, is less strongly communicated. This is essentially parallel to the indeterminacy of implicatures. Explicatures are communicated with varying degrees of strength; a conceptual range is endorsed by the speaker without any specific concept in that range being given full endorsement. Different hearers construct different possible ad hoc concepts within this range, just as different hearers construct different implicatures within the propositional range endorsed by the speaker.

On the radical third symmetry position where the ad hoc concept is incorporated into the proposition expressed only if it is necessary for the derivation of effects there will be cases where there simply is no complete proposition expressed by the speaker or constructed by the hearer. For instance, from the logical form of 'Bill is a bulldozer' or indeed of 'Bill is a bachelor' (that is, an enrichment case) a propositional schema like the following may be formed, with reference assigned, and the encoded lexical concept of the predicate functioning as a constraint on the sorts of concepts that may occupy the open slot:

(28)   Billx is [ ]

On the basis of this a set of implicatures, endorsed to varying degrees by the speaker's use of the lexical item 'bulldozer' or 'bachelor', are derived by the hearer.

6.7 Conclusion: linguistic communication, saying and semantics

A number of representational levels, all of which can be thought of as 'explicit' in some sense, have played a role in the discussion throughout this thesis: the logical form (semantic representation) of the linguistic form used, the proposition(s) expressed (pragmatic developments of logical form), explicature(s) (communicated developments of logical form). If the arguments in this chapter are right, there is no level of the proposition(s) expressed as distinct from explicature; there is no level of uncommunicated representation except for logical form, the output of linguistic decoding. With this move, the cognitively-based account of communication/interpretation has cut itself loose from philosophically-based semantic
Theorising and its concept of ‘what is said’. This is a positive development.

The profoundly different nature of the two sorts of pursuits is evident when we consider cases such as the following (where those in (31)-(32) are attested examples):

(29)  a. She always flaunts the rules.
    b. The penguins have eaten all our cabbages.
        (spoken in an English garden)

(30)  a. Smith’s murderer is insane.
        (where ‘Smith’s murderer’ is used to refer to Perkins, in the case where there is in fact no murderer of Smith)
    b. The woman over there drinking martini looks a bit sad.
        (where the woman being referred to is, in fact, drinking mineral water)

(31)  A: Have you taken the aspirin?
    B: No, I haven’t taken it, but I’ve taken it.
        [= I haven’t swallowed it but I’ve pocketed it]

(32)  Kato (of O.J. Simpson, at his trial):
       He was upset but he wasn’t upset.
       [= He was [upset]’ but he wasn’t [upset]’]
contradictory propositions. Explaining these little miracles of mind-reading is what the theory of linguistic communication is all about. 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 two cases necessarily false, is said, although this has no bearing on the interpretive process.

In the theory of verbal communication/interpretation, the distinction between explicature and implicature has an incontrovertible role to play. However, it is not obvious that an explicature is necessarily more strongly communicated than an implicature, or that a speaker is to be judged more reprehensible for a false explicature than for a false implicature. The distinction is really nothing more than a derivational distinction - explicatures are built out of logical forms, implicatures are the result of pragmatic inference alone - and, of course, it does not carry over to nonverbal (or, more generally, non-code-based) cases of ostensive communication, where there are, by definition, no explicatures. As the discussion in the previous section indicates, indeterminacy is a feature of both explicatures and implicatures. Furthermore, in some instances, the real import, the relevance, of an utterance lies with an implicature rather than an explicature. In the following examples, the main relevance (the primary source of cognitive effects) is a strongly implicated premise:

(33) A: Shall I come to your graduation ceremony?
    B: I'm afraid only close friends are invited.
    Implicated premise: A is not one of B’s closest friends.

(34) A: When’s the meeting today?
    B: Oh, it’s only for the research active members of staff.
    Implicated premise: A is not (or not considered to be) research active.

The distinctions between (i) being high or low in cognitive effects, and (ii) being strongly or weakly communicated, apply to all assumptions communicated by any utterance. These distinctions crosscut the explicature/implicature distinction and, I contend, are the properties that really count in the cognitive life of the hearer.
Notes

1. The exceptions are Bach (1994a, 1994b) and Recanati (1995), who both discuss a range of cases of non-literalness, within broadly Gricean frameworks. A comparison of their accounts with one another and with the relevance theory account remains to be done.

2. In a very recent paper, Sperber & Wilson (1997) have presented a picture of the assumptions communicated by an utterance (explicatures and implicatures), on which both enrichments and the results of loose use must appear in the proposition explicitly expressed; this is the second of the symmetry views I am just about to discuss.

3. Cohen (1979, 1986) takes a position on metaphor and conceptual innovation, which might appear to be rather similar to this one, since it involves the cancellation of features of lexical meaning. This is part of his general approach to utterance meaning, which involves a rich, multi-featural lexical semantics together with the contextual elimination of certain features; recall his account of the lexical meaning of ‘and’, discussed in chapter 4. I believe the similarities with the approach to loose use that I am discussing here are superficial, that the decompositional lexical semantics he favours is untenable and that the cancellation process lacks appropriate pragmatic motivation. However, detailed consideration is beyond my scope here.

4. Reboul (1989) supports Sperber & Wilson in their advocacy of this precise semantics for the lexical concept bald and discusses the apparent paradox that arises as a result for phrases like ‘very bald’ and ‘... balder than ...’ which would appear to have an anomalous linguistic meaning given the imposition of scalar modification on an absolute concept. I think the account in terms of ad hoc concepts, resulting from a quite standard practice of using ‘bald’ loosely, can explain these satisfactorily but I leave that for another time. Franken (1997) is an interesting discussion of Reboul’s work and of relevance-theoretic ideas on loose use more generally.

5. This example has an echoic feel to it and would be most natural in the context of a previous utterance of ‘Bill is a bulldozer’; it looks like an example of what has been traditionally termed metalinguistic negation (Horn 1985, 1989) and more recently analyzed in terms of the relevance-theoretic concept of echoic use (see previous chapter). As far as I know, examples of negated metaphors have not yet been discussed in this context.

6. Flieger outlines an account of metaphor understanding which involves a pragmatically driven process of choosing a particular property complex from a set of property complexes which form a semilattice structure which itself is a representation of the set of properties made available by the original lexical concept. He proposes to
run a model-theoretic semantics over the resulting representation, thereby capturing intuitions of metaphorical truth (and falsehood).

7. The essence of Papafragou (1995)'s account of metonymy is that metonymic expressions involve the (implicit) echoic use of concepts and these are instances of naming (rather than direct referring). However, in Papafragou (1996), a revised and cut version of the previous paper, she recognises that echoic use is too narrow to cover all metonymies and instead employs the concept of interpretive (or loose) use of a concept, though the interpretive relation in the case of metonymy is not one of resemblance, as in the case of metaphor, but one of association (or accessibility, in relevance-theoretic terms), between elements of encyclopedic knowledge.

8. I follow here the relevance-theoretic position on definite descriptions developed by Rouchota (1992, 1994b). She argues that both the referent of a referentially used definite description and the conceptual content of the description feature in the proposition expressed by the utterance and so affect the truth conditions of the utterance.

9. This has been long recognised by philosophers of language; see, for example, Strawson (1974).

10. Incorporating an ad hoc concept into the proposition expressed in such cases would be an 'after the event' sort of move. The ad hoc concept might be formed 'later' in this way, after the derivation of implicatures, when the hearer wants to store what was communicated in a manageable form. This does indeed seem likely in some instances, but it would not be a case of constructing an ad hoc concept in pursuit of an interpretation consistent with the second (communicative) principle of relevance. Rather, it would be a process which follows only from the more general first principle of relevance, according to which all our cognitive activity, including memory organisation, is geared towards maximising relevance.

11. As mentioned in endnote 2, Sperber & Wilson (1997) have moved to a unified account on which both enrichment and loosening affect the proposition expressed. They are now of the view that the second symmetry position discussed in this chapter is the correct one. The crucial consideration (mentioned already in chapter 3) is: "Any interpretation, whether literal or not, results from mutual adjustment of the explicit and implicit content of the utterance. This adjustment process stabilises when the hypothesized implicit content is warranted by the hypothesized explicit content together with the context, and the overall interpretation is warranted by (the particular instantiation of) the communicative principle of relevance." Sperber & Wilson (1997, 120) They would, presumably, reject the third view, on the ground that in the absence of the appropriate ad hoc concept in the base level explication, implicatures would not receive the necessary inferential warrant. This may well be right; I have long been of this view myself. However, I think the third account (also symmetrical and unified, in
so far as enrichments and loosenings are given parallel treatment) remains worth investigating. The processing economy considerations are appealing; if the basic cognitive assumptions of relevance theory are right, we are likely to develop heuristics that offer a quick, easy route to cognitive effects. And, as mentioned in the main text, sustained metaphors do not readily succumb to a treatment on which they contribute ad hoc concepts to the proposition explicitly expressed/communicated. This all needs a lot more thought.

12. In fact, Gurkan Dogan (1992), in discussing poetic communication, pointed out a range of referential indeterminacies, which were clearly intended by the speaker/writer; on the basis of these, he made a case for the application of the concept of weak communication to explicatures.
APPENDIX 1

Relevance Theory Terms

accessibility (of an assumption): the ease or difficulty with which an assumption can be retrieved (from memory) or constructed (on the basis of clues in the stimulus currently being processed); accessibility is a matter of degree and is in a constant state of flux depending on, among other things, what is occupying attention at any given moment.

cognitive effects: contextual effects in a cognitive system (e.g. an individual). (See also ‘contextual effects’ and ‘positive cognitive effects’.)

cognitive environment (of an individual): the set of assumptions that are manifest to an individual at a given time. (See also ‘mutual cognitive environment’.)

communicative intention: a higher order intention to make it mutually manifest to audience and communicator that the communicator has a particular informative intention. (See also ‘manifestness’ and ‘informative intention’.)

computation: a transformation of a set of symbols into another set of symbols in accordance with some mapping, rule or procedure.

conceptual address: a mental label or node connecting and providing access to information of various sorts pertaining to a single concept (for example, CAT, LOVE, or AND): logical or computational rules and procedures, encyclopaedic information about the denotation of the concept and linguistic information about the natural language counterpart of the concept. Some concepts may have only one or two of these types of information.
**conceptual semantics:** that category of linguistic semantics whose domain is those linguistic forms whose encoded meaning contributes concepts (or conceptual addresses) to the logical form (propositional schema) of an utterance. (See also 'procedural semantics'.)

**context:** that subset of mentally represented assumptions which interacts with newly impinging information (whether received via perception or communication) to give rise to 'contextual effects'. In ostensive communication, this set is not pre-given but is selected by the hearer on the basis of the utterance and his bid for an interpretation consistent with the second principle of relevance.

**contextual effects:** the kind of result which a newly received stimulus must bring about, by interacting with some of the assumptions (the context) already in the cognitive system, in order for it to be relevant to the system; there are three types of contextual (or cognitive) effect it may have: supporting and so strengthening existing assumptions, contradicting and eliminating assumptions, combining inferentially with them to produce new conclusions. (See also 'contextual implication'.)

**contextual implication:** a conclusion inferred on the basis of a set of premises consisting of both contextual assumptions and new assumptions derived from the incoming stimulus (for instance, the 'proposition expressed' by an utterance) and not derivable from either of these alone.

**criterion of consistency with the (communicative) principle of relevance:** an utterance, on a given interpretation, is consistent with the principle of relevance if and only if the speaker might rationally have expected it to be optimally relevant to the hearer on that interpretation. (See also 'presumption of optimal relevance' and 'second (communicative) principle of relevance'.)

**descriptively used representation:** a representation (whether mental or public) which represents a state of affairs (that is, something non-representational). It is truth-based representation; that is, the representation describes a state of affairs that makes it true.
(Compare with 'representation by resemblance' and 'interpretive representation'.)

**echoic use (of a representation):** the use of a representation (mental or public) to attribute another representation (mental or public) to someone else (or oneself at some other time) and express an attitude to it. The representation may be linguistic/formal (e.g. phonological, syntactic) or semantic/conceptual and the relation between the two representations is one of resemblance.

**explicature:** an ostensively communicated assumption which is inferentially developed from one of the incomplete conceptual representations (logical forms) encoded by the utterance. (Compare with 'implicature'.)

**higher level explicature:** a particular kind of explicature (see above) which involves embedding the propositional form of the utterance or one of its constituent propositional forms under a higher level description such as a speech act description, a propositional attitude description or some other comment on the embedded proposition.

**implicature (conversational):** an assumption ostensively communicated by an utterance which is not an explicature; that is, a communicated assumption which is derived solely via processes of pragmatic inference. An alternative characterisation: a contextual assumption or contextual implication intended (communicated) by the speaker, hence an implicature is either an implicated premise or an implicated conclusion. (Compare with 'explicature'.)

**indeterminacy** (of implicature or explicature): a property of those communicated assumptions whose propositional content as recovered by the hearer does not specifically fall within the speaker's informative intention though her utterance encouraged the hearer to derive some assumptions, of which these are possible cases, among a restricted descriptive range.

**informative intention:** an intention to make manifest or more manifest to an audience a set of assumptions. (See also 'manifestness' and 'communicative intention'.)
interpretively used representation: a representation (whether mental or public) which represents another representation (whether mental or public) and resembles it in content (logical, semantic, conceptual). (See also 'representation by resemblance' and 'loose use' and compare 'descriptively used representation'.)

irony: a use of language by which a speaker tacitly communicates a mocking or, at least, dissociative attitude to a thought or view which she tacitly attributes to someone other than herself at the time of utterance. (See also 'echoic use'.)

loose use: a use of a representation (whether mental or linguistic) to represent another representation (whether mental or linguistic) with which it is in a relation of non-literal resemblance (i.e. does not have some of its logical or defining properties but does have a range of its salient encyclopedic properties); for instance, 'France is hexagonal'. (See also 'interpretively used representation' and 'metaphor'.)

manifestness (of an assumption to an individual): the degree to which an individual is capable of mentally representing an assumption and holding it as true or probably true at a given moment.

metaphor: a kind of 'loose use' in which, typically, the logical properties of the representation (mental or public) are inapplicable but which gives rise to a range of weak implicatures and other cognitive effects. (See also 'representation by resemblance' and 'weak communication'.)

metarepresentation: the use of a representation to represent (through a relation of resemblance) another representation (including, possibly, itself).

mutual cognitive environment: a cognitive environment which is shared by a group of individuals and in which it is manifest to those individuals that they share it with each other; every manifest assumption in a mutual cognitive environment is 'mutually manifest'. (See also 'manifestness' and 'cognitive environment').
non-demonstrative inference: an inference to the best explanation, which is not strictly valid (as opposed to a deductive inference which is valid); also known as hypothesis formation and confirmation. For instance, an interpretive hypothesis is made (it might be delivered by decoding or by a least effort strategy for accessing assumptions) and subsequently confirmed or disconfirmed (for instance, by whether or not it leads to a satisfactory range of cognitive effects).

ostensive phenomenon: a stimulus or behaviour that makes manifest an intention to make an assumption or assumptions manifest; that is, a behaviour backed by a 'communicative intention' (see above).

ostensive-inferential communication: communication which involves a stimulus which makes it mutually manifest to communicator and audience that the communicator intends, by means of this stimulus, to make manifest or more manifest to the audience a set of assumptions. It should be distinguished from 'accidental information transmission' and various 'covert' means of communication, where what is missing is the element of overtness characteristic of ostensive communication. (See also 'manifestness' and 'communicative intention').

positive cognitive effect: a cognitive effect that contributes positively to the fulfilment of cognitive functions or goals.

presumption of optimal relevance:
1. 1986 definition:
   (a) The set of assumptions \( I \) which the communicator intends to make manifest to the addressee is relevant enough to make it worth the addressee’s while to process the ostensive stimulus.
   (b) The ostensive stimulus is the most relevant one the communicator could have used to communicate \( I \).

2. 1995 definition:
   (a) The ostensive stimulus is relevant enough (has enough positive cognitive effects) for it to be worth the addressee’s effort to process it.
(b) The ostensive stimulus is the most relevant one compatible with the communicator's abilities and preferences.

**principles of relevance:**

1. **First (cognitive) principle of relevance:** human cognition is geared towards the maximisation of relevance (that is, the achievement of as many contextual (cognitive) effects as possible for as little processing effort as possible).

2. **Second (communicative) principle of relevance:** every act of ostensive communication (e.g. an utterance) communicates a presumption of its own optimal relevance.

**procedural semantics:** that category of linguistic semantics whose domain is those linguistic forms whose encoded meaning does not contribute a concept but rather provides a constraint or instruction on the way some aspect of pragmatic inference should proceed. Subtypes are (a) constraints on pragmatic inferences involved in deriving the proposition expressed by the utterance, for example, pronouns and tense; (b) constraints on the derivation of implicatures (intended contextual assumptions and contextual implications), for example, discourse connectives such as 'moreover, 'after all', 'but', 'so'. (See also 'conceptual semantics'.)

**processing effort:** this is the effort which a cognitive system must expend in order to arrive at a satisfactory interpretation of incoming information (involving factors such as the accessing of an appropriate set of contextual assumptions and the inferential work involved in integrating the new information with existing assumptions).

**proposition expressed (by an utterance or speaker):** that propositional form which is developed by pragmatic inferences building on the incomplete logical form decoded from the linguistic form employed in the utterance (hence it is an amalgam of decoded conceptual content and of pragmatically inferred concepts). The pragmatic inferences achieve disambiguation, the recovery of intended referents, and conceptual completion and enrichment, in accordance with the second principle of relevance. The proposition expressed may either be ostensively communicated itself (hence an 2explicature’) or be
merely a vehicle to enable the recovery of assumptions which are ostensively communicated (as in cases of ‘loose use’).

**relevance in a context (classificatory definition):**
an assumption is relevant in a context if and only if it has some contextual effect (cognitive effect) in that context.

**relevance in a context (comparative definition):**

*extent condition 1:* an assumption is relevant in a context to the extent that its contextual (cognitive) effects in this context are large.

*extent condition 2:* an assumption is relevant in a context to the extent that the effort required to process it in this context is small.

**relevance to an individual (classificatory definition):**
an assumption is relevant to an individual at a given time if and only if it has some positive cognitive effect in one or more of the contexts accessible to him at that time. (See also ‘positive cognitive effect’.)

**relevance to an individual (comparative definition):**

*extent condition 1:* an assumption is relevant to an individual to the extent that the positive cognitive effects achieved when it is optimally processed are large.

*extent condition 2:* an assumption is relevant to an individual to the extent that the effort required to achieve these positive cognitive effects is small.

**relevance of a phenomenon (classificatory definition):**
a phenomenon is relevant to an individual at a given time if and only if one or more of the assumptions it makes manifest is relevant to him.

**relevance of a phenomenon (comparative definition):**

*extent condition 1:* a phenomenon is relevant to an individual to the extent that the positive cognitive effects achieved when it is optimally processed are large.

*extent condition 2:* a phenomenon is relevant to an individual to the extent that the effort
required to achieve these positive cognitive effects is small.

**representation:** anything used in such a way that it can be construed as being *about* something (as having *meaning*) as opposed to just being itself; aboutness may be truth-based or resemblance-based (see also ‘descriptively used representation’ and ‘interpretively used representation’).

**representation by resemblance:** the representation of one thing by another, based not on a relation of truth/falsity between the representation and the represented, but on a relation of similarity or resemblance between them; for instance, maps, pictures, gestural mimicry and utterances when they are used to represent other linguistic or propositional representations which they resemble either in formal features or in propositional content.

**strong (vs. weak) communication:** an assumption (‘explicature’ or ‘implicature’) is strongly communicated when the ‘informative intention’ to make manifest that particular assumption is made highly mutually manifest; the degree of strength with which an assumption is communicated varies on a continuum through to cases of very weak communication where there is a degree of ‘indeterminacy’ regarding which specific assumptions within some conceptual range fall under the speaker’s informative intention.

**weak implicatures:** implicated assumptions which are weakly communicated; in cases of evocative metaphor, for instance, rather than a few assumptions being made highly manifest a wide range of assumptions is made weakly manifest and the interpreter must take a great measure of responsibility for the specific assumptions he represents as part of his interpretation.
APPENDIX 2

Gricean Conversational Principles

The Cooperative Principle: Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.

Note:
Grice presented this as a ‘first approximation to a general principle’.

Conversational maxims and submaxims (grouped according to Kantian categories) whose results will accord with the Cooperative Principle:

The category of Quantity:
1. Make your contribution as informative as is required (for the current purposes of the exchange).
2. Do not make your contribution more informative than is required.

The category of Quality:
Supermaxim: Try to make your contribution one that is true.
Submaxims:
1. Do not say what you believe to be false.
2. Do not say that for which you lack adequate evidence.

The category of Relation:
Be relevant.

The category of Manner:
Supermaxim: Be perspicuous.
Submaxims:
1. Avoid obscurity of expression.
2. Avoid ambiguity.
3. Be brief (avoid unnecessary prolixity).
4. Be orderly.
5. Facilitate in your form of expression the appropriate reply.

(this last one is from Grice 1981, 189)

Note:
The phrasing of the maxims seems to indicate that some of them concern only ‘what is said’: see the wording of the submaxims of quality/truthfulness; the manner maxims CAN only apply to what is said. Others seem to apply to the whole of what is meant: the quantity maxims refer to the speaker’s ‘contribution’; the relevance maxim seems entirely general. Opinions vary regarding both how strictly/loosely Grice’s wording should be taken and its implications: see Neale (1992, 526), Ifantidou (1994, 101-102), Wilson (1995).
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