

PRESUPPOSITIONS AND NON-TRUTH-CONDITIONAL SEMANTICS

by

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ABSTRACT

This thesis is concerned with the justification of non-truth-conditional approaches to semantics in general, and presuppositional approaches to semantics in particular. Part I is devoted to the distinction between truth-conditions and logical presuppositions, and argues that the notion of a logical presupposition is unnecessary for the description of a wide class of cases. Part II is devoted to the distinction between assertion and pragmatic presupposition, and argues that this distinction as at present conceived is unworkable. Part III is devoted to aspects of semantic description which appear to lie beyond the range of the truth-conditional approach, and also beyond that of the two presuppositional approaches already mentioned. Constraints on an adequate approach to this area of semantic description are briefly discussed.

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Table of Contents

	<u>Page</u>
Abstract.....	1
Acknowledgments.....	2
Introduction.....	6
 PART ONE: PRESUPPOSITION AND ENTAILMENT	
Chapter I: Truth-Conditional Semantics.....	11
The Truth-Conditional Approach to Semantics.....	11
Objections to Truth-Conditional Semantics.....	17
a) Theoretical objections.....	17
b) Non-declaratives.....	18
c) Presuppositions.....	23
d) The use theory of meaning.....	26
Chapter II: Presupposition and Entailment: Non-Existential Cases.....	31
Presuppositional Semantics.....	31
Examples of Presuppositional Analyses.....	38
Formal Points.....	43
Objections to the Strong Presuppositional Analysis.....	45
a) Asymmetry arguments.....	45
b) Deducibility of a negative sentence from the negation of its 'presupposition'.....	50
c) A special problem with clefts.....	53
A Modified Presuppositional Analysis.....	55
a) Negatives.....	55
b) Disjunctions, conditionals and embedded sentences.	61
Some Objections to the Modified Theory.....	63

	<u>Page</u>
Chapter III: Presupposition and Entailment: Existential Cases...	71
Three Approaches to Simplex Existentials.....	71
Objections to the Presuppositional Approach.....	73
The Behaviour of Existentials in Complex Sentences.....	80
a) Asymmetry arguments.....	80
b) Derived nominals and absolute presuppositions.....	84
Three Approaches to Quantified Sentences.....	91
Conclusion to Part I.....	97
 PART TWO: PRESUPPOSITION AND ASSERTION	
Chapter IV: Presupposition, Assertion and Lexical Items.....	103
The Relation between Logical and Pragmatic Presuppositions...	103
Pragmatic Presuppositional Analysis.....	105
Objections to the Pragmatic Approach.....	116
a) Arguments from complex sentences.....	116
b) Generalisation to non-declaratives and simplex sentences.....	125
Some Modified Proposals.....	132
Chapter V: Preferred Interpretations.....	143
Semantic Approaches to Preferred Interpretation.....	143
A Gricean Approach to Preferred Interpretation.....	149
Objections to the Gricean Approach: An Alternative Account...	164
Conclusion to Part II.....	172
 PART THREE: NON-TRUTH-CONDITIONAL SEMANTICS	
Chapter VI: Some Problems for the Entailment Analysis.....	175
a) <u>Deprive</u> and <u>Spare</u>	175

	<u>Page</u>
b) <u>Yet</u>	180
c) <u>But</u>	182
d) Counterfactuals.....	185
e) Pseudo-clefts.....	190
f) <u>Let Alone</u>	191
g) <u>Unusual</u> and <u>Abnormal</u>	193
h) <u>Plots</u> and <u>Plans</u>	194
i) <u>Trust</u> and <u>Credulity</u>	195
j) <u>Gloating</u> and <u>Rejoicing</u>	195
k) <u>Recklessness</u> and <u>Daring</u>	196
A Truth-Conditional Approach to a)-k).....	196
Chapter VII: Some Possible Approaches.....	201
The Logical Presuppositional Approach.....	204
Psychological or Pragmatic Presuppositions.....	208
Non-Truth-Conditional Implication.....	216
Conclusion to Part III.....	234
Bibliography.....	237
Biographical Note.....	240

Introduction

Presupposition is an extremely fashionable term. Part of its appeal lies in its adaptability. Although there is fairly general agreement among those who use the term about when a given sentence or statement carries a presupposition, there are widely differing views about what exactly constitutes a presupposition and what are the consequences of presupposition-failure. Because of this, it has been possible to hold presupposition-failure to account for such widely ranging defects in sentences or statements as inappropriateness, ungrammaticality, unintelligibility, failure to perform a speech-act and lack of a truth-value. I quote here a representative sample of comments, taken from the linguistic literature, on the nature of presupposition:

"I take the term 'presupposition' as meaning what must be true in order for the sentence to be true or false." [G. Lakoff (1972) p. 655, note 2]

"By 'presupposition' we mean ... the expression of the conditions which must be satisfied (be true) for the sentence as a whole to be a statement, question, command, and so forth." [Langendoen and Savin (1971) p. 55]

"By the presuppositional aspects of a speech-communication situation, I mean those conditions which must be satisfied in order for a particular illocutionary act to be effectively performed in saying particular sentences." [Fillmore (1971) p. 276]

"In [Presuppositions and Relative Grammaticality] I showed that for many sentences it makes no sense to ask whether they are grammatical in any absolute sense, but only to ask whether they are grammatical relative to certain presuppositions." [G. Lakoff (1971) p. 63]

"In general I want to consider that the presuppositions of a sentence are those conditions that the world must meet in order for the sentence to make literal sense." [Keenan (1971) p. 45]

"... the idea of a presupposition is the correct generalisation of the notion of selectional restriction, and the latter is to be subsumed under the former in the theory of grammar." [Kuroda (1969) p. 142]

"'All unicorns have accounts at the Chase Manhattan Bank' [is] infelicitous because of the violation of the presupposition that there are unicorns." [McCawley (1972) p. 529]

"In its wider sense, a 'presupposition' is whatever has to be assumed in order for an utterance to be meaningful." [Muraki (1972) p. 300]

In their editorial introduction to Studies in Linguistic Semantics, from which many of these quotations are taken, Fillmore and Langendoen remark on the variety of definitions of presupposition put forward by the contributors, and add "Clearly some sort of conceptual straightening up is in order." [Fillmore and Langendoen (1971) p. vi.] It is only to a limited extent the aim of this thesis to undertake such a straightening up. I refer at various points to some of the conceptions of presupposition illustrated above, drawing out some of the consequences of particular definitions, and at times advocating one approach as superior to another for a particular purpose. However, my main aim in writing this thesis has not been to provide a better conceptual framework within which to pursue presuppositional analysis, but rather to argue that presuppositional analysis has no place in semantics, on any terms.

If it is assumed that the central core of semantic description consists in pairing each sentence of the language with a subset of its individually necessary and jointly sufficient truth-conditions, then

in spite of the diversity of their approaches, advocates of presuppositional analysis may be seen as acting out of a conviction that this central core cannot constitute the whole of semantic description: in other words, that truth-conditional analysis is ultimately inadequate to capture the full range of semantic facts. The various approaches to presuppositional analysis thus represent various solutions to the problem of non-truth-conditional semantic description. A subsidiary aim of this thesis is to show that although presuppositional analysis does not provide the best approach to such description, nonetheless there is a class of facts which are properly speaking semantic and which do fall beyond the scope of truth-conditional description. I provide examples of such facts and propose constraints which an adequate description must meet.

The thesis is divided into three parts. Part I is devoted to truth-conditional semantics: here I distinguish logical presuppositions from entailments, and argue that many aspects of meaning which have been treated as presuppositional can be better handled by entailment analysis. Part II is devoted to the presupposition-assertion dichotomy: here I argue that many facts which have been treated as semantic are correctly handled within pragmatics, and further that the notion of a presupposition-feature as opposed to an assertion-feature plays no useful role in semantic description. Part III is devoted to non-truth-conditional semantics: here I exemplify a range of facts which can be handled neither by truth-conditional analysis nor by presuppositional analysis, and suggest how

they may be handled.

My conclusion is that presuppositional analysis is best seen as an approach to a theory of preferred interpretations, and that such a theory is not semantic in nature. Incidentally, presuppositional analysis has brought to light certain phenomena which are genuinely semantic, but which it is not equipped to handle. Ultimately, however, the wide range of facts which have been classed together as presuppositional have little relation either to semantic analysis properly conceived, or to each other.

PART I

PRESUPPOSITION AND ENTAILMENT

Chapter I

Truth-Conditional Semantics

"Semantics with no treatment of truth-conditions is not semantics."
[Lewis (1972) p. 169]

The Truth-Conditional Approach to Semantics

It is fairly uncontroversial to say that an adequate semantic description must enable us to state, for each of the infinite number of sentences in a language, whether it is analytically true, whether it is contradictory or anomalous, with which sentences it enters into full or partial paraphrase relations, and with which sentences it enters into entailment relations. Not totally uncontroversial, however, since it may be objected that statements, not sentences, are the sort of things that can be true or false, and hence can be analytically true, or contradictory, or enter into entailment relations. For example, (1) and (2) are sentences of English:

(1) My guru is teaching me to tap-dance

(2) I am learning to tap-dance.

If it is sentences which enter into entailment relations, then it is the job of a semantic description to decide whether sentence (1) entails sentence (2). But that question can clearly not be answered until we know at least whether (1) and (2) are said at the same time and by the same person: in other words, until we know what statements (1) and (2) are being used to make. Similarly (4) is a negation of (3), and we might ask a semantic description to decide whether these sentences are

contradictory:

(3) My pet buffalo trod on George

(4) My pet buffalo didn't tread on George.

But again this question cannot be answered in the absence of information about the speaker and time of utterance of (3) and (4): without knowing what statements (3) and (4) are used to make. [For a discussion of this and related topics, see Lemmon (1966).]

On the other hand, it is natural when viewing semantics as a component of a grammar whose object is to describe a language, i.e. a set of sentences, to see sentences rather than statements as the objects of semantic description, and insofar as considerations of truth enter into semantic description, to talk of the truth, contradictoriness, anomaly, and so on, of sentences rather than of statements. I intend in what follows to refer consistently to sentences, rather than statements as being true, analytic or contradictory, and to define the notion of entailment in terms of sentences rather than statements. However, when I talk of a sentence as being true, I shall mean that that sentence when used to make a given statement is true; and when I talk of one sentence entailing another, I shall mean that that sentence when used to make a particular statement entails another sentence used to make another statement which preserves or adjusts in relevant ways the reference, time of utterance, speaker, etc. of the first. In this way my talk of sentences should be translatable without difficulty into talk about statements, and since I mean nothing essential to hinge on my use of the

word sentence rather than statement, I hope that this particular controversy can be neutralised at the outset.

I start with some remarks on the nature of entailment and its role in semantics. I define entailment as follows: a sentence S entails another sentence P iff if S is true P must also be true, and if P is false S must also be false. This is not the only possible definition of entailment: I might have used a weaker definition according to which S entails P iff if S is true, P must also be true, but where no claim is made about the consequences for S if P is false. I use the stronger definition since some crucial arguments in what follows hinge on the consequences for S if P is false, and on the fact that certain sentence pairs satisfy the strong rather than the weak definition of entailment. Hence, unless explicitly stated otherwise, by entailment I shall mean the strong sense of entailment defined above.

In terms of this definition we can further define two types of truth-condition. If and only if S entails P, then S is a sufficient truth-condition for P, and P is a necessary truth-condition for S. If and only if S both entails and is entailed by P, then P is a necessary and sufficient truth-condition for S, and is a candidate for being a full paraphrase of S. By this definition it follows that truth-conditions are themselves sentences rather than statements, and as such tied to particular languages. However, since to every sentence as it enters into these definitions will correspond a given range of statements, and since statements, unlike sentences, are language-neutral, again this is

an unimportant claim, and nothing theoretical is meant to follow from it.

Two recent philosophical articles have made explicit proposals about the relation between truth-conditions and meaning (entailments and meaning):

"If we will simply take the notion of 'true' as clear enough for the purpose - not for all purposes but for this one - then we can say that, for arbitrary sentence s, to know the meaning of s is to know under what conditions the sentence s would count as true."
[Wiggins (1971) p. 17]

"I have argued that a characterization of a truth-predicate ... provides a clear and testable criterion of an adequate semantics for a natural language. No doubt there are other reasonable demands that may be put on a theory of meaning. But a theory that does no more than define truth for a language comes far closer to constituting a complete theory of meaning than superficial analysis might suggest." [Davidson (1967) p. 465]

The main claim made in these articles is that the easiest route to the study of meaning is via the study of truth-conditions: that once a way is found of systematically pairing the sentences of a language with (a subset of) their individually necessary and jointly sufficient truth-conditions, most of the work of semantic description will have been done. When I talk of truth-conditional semantics, I shall be referring to a semantics conceived along the lines laid down in these articles.

As an illustration of the kind of approach I have in mind, consider a truth-conditional analysis of (5):

(5) Archibald is a man.

(5) entails (6), (7) and (8):

(6) Archibald is a person

(7) Archibald is male

(8) Archibald is adult.

The conjoining of (6), (7) and (8) yields (9):

(9) Archibald is an adult male person.

(9) in fact states a necessary and sufficient condition for the truth of (5), and it also comes close to being a full paraphrase of (5), and hence to explicating the meaning of (5) and fulfilling one of the goals of semantic description.

Although the substitution of person for man in (5) preserves truth, similar substitutions do not always have this property. (10) does not entail (11), (12) does not entail (13), and (14) does not entail (15):

(10) Half the men in England hate the other half

(11) Half the people in England hate the other half

(12) Archibald is my favourite man

(13) Archibald is my favourite person

(14) My neighbour is not a man

(15) My neighbour is not a person.

From this we learn something about the semantics of modification, quantification and negation: namely that they preserve truth under substitution of full synonyms of a given item, but not necessarily under substitution of partial synonyms. [The reader may check that substitution of adult male person for man in (10), (12) and (14) indeed preserves truth.]

There are even sentences which are ambiguous precisely in that on one reading they have an entailment which on another reading they lack.

(16), for example, has a specific reading which may be paraphrased as (17), and on this reading entails (18):

(16) A man sees only Amelia's good points

(17) A certain man sees only Amelia's good points

(18) A (certain) person sees only Amelia's good points.

(16) also has a generic reading, which may be paraphrased as (19), and on this reading the substitution of person for man need not preserve truth: (16) does not entail (20)

(19) Any man sees only Amelia's good points

(20) A [= any] person sees only Amelia's good points.

These examples illustrate how the study of entailments or truth-conditions may act as an aid in semantic description. Clearly an adequate semantic description must capture facts of this type: and a semantic description which captures all such facts (preserves and predicts all entailment relations) will be moderately complete.

I say 'moderately complete' advisedly. There are a number of objections to the very strong view that the sole task of semantics is to associate sentences with their necessary and sufficient truth-conditions. Before going on in the remainder of this thesis to consider two of these objections in some detail, I should like in the remainder of this chapter to give a brief preliminary survey of the types of objection that can be made to this conception of semantics as purely truth-conditional.

Objections to Truth-Conditional Semantics

a) Theoretical objections.

There are two main types of theoretical objection to the truth-conditional programme. The first is that it is deceptively simple. It sidesteps the notorious difficulties involved in defining the term meaning, but only by involving itself in the equally notorious difficulties of defining the term necessarily in the expression necessarily true. It will have been noticed that my definitions of entailment and truth-condition both relied on a prior notion of necessary truth-relations. But, the objection runs, until this prior notion is itself explicated, a semantics based on truth-conditions has no solid foundation at all. This is a serious and justified objection. The solution to it is to define the semantically relevant sense of necessarily true. I shall make no attempt to do this here.

The second type of theoretical objection is that the notions of entailment and truth-condition are much too wide for semantic purposes. For example, it is a truth of logic that (21) entails (22):

(21) Metal expands on heating, and I am now heating the metal

(22) The metal will expand.

But although (21) entails (22), it is not intuitively obvious that as a matter of semantic knowledge I can infer (22) from (21), or that (22) is part of the meaning of (21). Similarly, if we take two necessary truths, such as (23) and (24), it will follow from my definitions that

they entail each other:

(23) All sick pandas are sick

(24) All bachelors are men.

But again, though an entailment relation holds between (23) and (24), it is intuitively clear that (23) is semantically independent of (24), and that the semantics should record this fact. For one who believes in the truth-conditional approach to semantics, the solution to this problem is to narrow down the types of truth-condition and entailment which are seen as semantically relevant. Wiggins, for example, in the article cited above, relies on the notion of a designated truth-condition for each sentence. The designated truth-conditions for (23) and (24) will differ, and their semantic differences will thus be taken into account. In fact, a solution along these lines will follow automatically from the requirement that a semantic description be compositional, constructing the truth-conditions for a given sentence in terms of the items appearing in that sentence together with the syntactic description of the sentence. Hence a truth-conditional semanticist may concede that the notions of entailment and truth-condition are too wide for semantic purposes, and then proceed to narrow them down to the point where they coincide with semantic intuitions. At this point the objection will no longer hold.

b) Non-declaratives.

I shall be concerned in this thesis with objections of a rather more practical type: objections raised on the grounds that as a matter

of fact there are semantic phenomena which lie beyond the scope of truth-conditional description. An example which immediately comes to mind is that of non-declarative sentences. Imperatives and interrogatives, for instance, are perfectly meaningful, but are incapable of being either true or false. The existence of such sentences might seem to undermine the possibility of a purely truth-conditional semantics at the outset. While Davidson and Wiggins both recognise that this problem exists, they do not advance any solutions.

Ruth Kempson [personal communication] has suggested that a solution might be to treat interrogatives, imperatives and other non-declaratives as indeed having truth-conditions, and as capable of being true or false in just the same way as are declaratives. This solution would follow naturally from the performative analysis of questions and imperatives advocated in Katz and Postal (1964) and Ross (1970). On such an analysis, (25) and (26) would have a common semantic description, as would (27) and (28). Then the fact that (26) and (28) may be seen as true or false statements suggests that (25) and (27) should also be regarded as having truth-conditions:

- (25) Look at that fascinating blade of grass
- (26) I request you to look at that fascinating blade of grass
- (27) Do you want seaweed for breakfast again?
- (28) I request you to tell me whether you want seaweed for breakfast again.

But in this case truth-conditional semantics can handle interrogatives and imperatives as well as it can handle declaratives, and these sentences

present no special problem.

To this it may be objected - what is often claimed by advocates of the performative analysis - that sentences like (26) and (28) are themselves incapable of bearing a truth-value, and that this is precisely what distinguishes the different senses of propose in (29) and (30):

(29) I (hereby) propose that we use our ejector seats

(30) I (often) propose that we reread Folktales from MIT.

But if (26) and (28) themselves lack truth-conditions, the performative analysis of interrogatives and imperatives will do nothing to make possible a truth-conditional analysis of (25) and (27), which, like performatives themselves, will still lie beyond the scope of truth-conditional semantics.

This is not, I think, the correct objection to raise to the performative solution. There are quite strong reasons for thinking that performatives themselves have truth-conditions and truth-values. [See, for example, Wiggins (1971) p. 21, footnote b, and pp. 49-50 ; and Lewis (1972) p. 208-210.] This fact in itself might be used as an argument that the performative analysis of imperatives and interrogatives is incorrect - which is, I think, the right objection to raise. No great effort of imagination is required to envisage (31) and (32) as capable of bearing a truth-value at some level of assessment:

(31) I beg you to stop dancing on my toes

(32) I wish you $\left\{ \begin{array}{l} \text{to} \\ \text{would} \end{array} \right\}$ tell me whether it is hot outside.

On the other hand, (33) and (34), which on the performative analysis may

be paraphrases of (31) and (32), would never normally be considered capable of being true or false, on any level of assessment:

(33) Stop dancing on my toes

(34) Is it hot outside?

This consideration should itself lead one to reject the performative analysis of interrogatives and imperatives. [I am indebted to Chomsky for suggesting this argument to me.]

A further objection to the performative analysis is that it confuses meaning with illocutionary force. It may do this in either of two ways. Suppose first that the performative analysis of imperatives and interrogatives is so formulated as to make available for the sentences it analyses the full range of illocutionary forces which they might acquire in context. (35), for example, might be paraphrasable as embedded under any of the following illocutionary verbs: request, order, advise, suggest, implore, exhort, etc.

(35) Go home.

Then (35) will be predicted as multiply ambiguous, having a different reading for each possible speech-act it may be used to perform. But we can conceive of someone being perfectly sure that he knows the meaning of (35), and sure in addition that (35) is not ambiguous, while being in doubt as to the exact force it was intended to carry. Hence meaning and illocutionary force should be given separate treatments.

If, on the other hand, a restriction is placed on the range of illocutionary verbs which may be used to embed interrogatives and

imperatives, the problem of multiple ambiguity will disappear, but false predictions will quite often be made about the particular speech-act performed by use of a certain sentence. If interrogatives, for example, are construed as requests for information, then (36) will be incorrectly predicted as contradictory:

(36) Isn't it rather hot in here - and that's not a request for information.

Again the conclusion is that meaning and illocutionary force should be given separate treatment.

It seems, then, that there are a number of reasons why interrogatives and imperatives cannot be given truth-conditional treatment, and that an adequate semantics for these sentences must be non-truth-conditional, at least in part. However, as is well known, there is a systematic relation between the meanings of declaratives and the meanings of their related interrogatives and imperatives. Lexical items retain their meanings, and functional relationships are preserved. At some level, then, we might regard declaratives and their related non-declaratives as having a common semantic description, and we might extend the notions of entailment and truth-condition to apply to non-declaratives as well as declaratives at this level. One final series of moves would then be needed to convert truth-conditional descriptions into non-truth-conditional ones in the case of non-declarative sentences. This is sometimes done by using felicity-conditions rather than truth-conditions in the description of non-declaratives, or by listing compliance-conditions for imperatives and possible-answer conditions for interrogatives. I have no views on how non-

declaratives should be described, apart from the purely negative one that they cannot be described in terms of truth-conditions alone.

c) Presuppositions.

So far I have argued that while an examination of the truth-conditions of sentences can be of considerable help in constructing semantic descriptions, an adequate semantics calls for a narrowing down and a fuller explication of the notion of truth-condition which is semantically relevant, and also some non-truth-conditional resources for the description of non-declarative sentences. Given a semantic component which satisfied these two conditions, would we then have a full semantic description of the language? I think that almost all of the advocates of presuppositional analysis would say that we would not. I should now like to mention various types of consideration which might lead one to a similar conclusion.

A paradigm case of truth-conditional semantic description is given by the standard truth-table for and in two-valued logic:

P	<u>and</u>	Q
T	T	T
T	F	F
F	F	T
F	F	F

This truth-table says that the truth-value of an and-conjunction may be computed in the following way: if the truth-conditions on both its

conjuncts are satisfied, the whole conjunction is true; otherwise the whole conjunction is false. It is possible to dispute the claim that this truth-table exhausts the meaning of and, but without departing from the spirit of truth-conditional semantics. One might claim, for example, that and is ambiguous, and that on one of its readings an and-conjunction has the further truth-condition that there must be a temporal connection between the two conjuncts, such that the action described by the first conjunct precedes the action described by the second. This would merely involve abandoning the claim that and-conjunctions were truth-functional, not that they were truth-conditional. Another ground for rejecting the truth-table definition, one that has been suggested, for example, by R. Lakoff (1971), would be that the meaning of and-conjunctions cannot be exhausted merely by listing their truth-conditions: in other words that, as with interrogatives and imperatives, truth-conditions tell part of the story, but they do not tell the whole story.

I think that there are two main types of reason which might lead someone to adopt this last position. The first is connected with the claim, implicit in the above truth-table, that all declarative sentences have a truth-value, and that this value is either true or false. Many people feel that many declarative sentences cannot have either truth-value if certain preconditions are not met. It might be held that (37) and (38), for example, are not even candidates for being true or false unless (39) is true:

- (37) My grandmother has given up mainlining
- (38) My grandmother has not given up mainlining
- (39) My grandmother has mainlined.

One might take a similar view about and-conjunctions, claiming, for example, that in the absence of a common subject-matter for the two conjuncts the whole conjunction is neither true nor false, but simply lacks a truth-value. If this view is correct, and if knowing such facts is a matter of semantic competence, it follows that an adequate semantic description must register not only truth-conditions, but also truth-value conditions or truth-or-falsity conditions. The term presupposition has long been in existence as a name for truth-or-falsity conditions: I shall use the term logical presupposition to refer to such conditions. Logical presuppositions, as I shall show in the next chapter, are genuinely distinct from truth-conditions or entailments as I have defined them. However, I shall also argue that there is no place for them in the semantic description of natural language: that the claim that certain declarative sentences lack a truth-value if certain preconditions are not met is simply false.

The second reason which might lead one to adopt the view that truth-conditional semantics can never yield full semantic descriptions is connected with the claim that as a matter of semantic competence a fluent native speaker knows many more things about the sentences of his language than just the conditions under which they are true or false. He knows, for example, what speech-acts a given sentence may be used to perform, and

the conditions under which it could successfully perform these speech-acts. He knows when it may be appropriately used, and when not. He knows the conditions under which it would make literal sense, and when it would have a non-literal interpretation, or indeed not be intelligible at all. As can be seen from the quotations in the introduction to this thesis, all these facets of a speaker-hearer's knowledge have been canvassed as providing data for semantic description. The associated conditions have also generally been called presuppositions. I shall refer to them as pragmatic or psychological presuppositions, anticipating the argument in Part II of this thesis that in general they have very little to do with semantic competence, and much more to do with performance or use.

d) The use theory of meaning.

Regarding the pragmatic or psychological approach to presuppositions, a few general remarks might be in order. I have in mind a particular variant of the psychological approach which argues that in general the full semantic description of sentences and words must involve reference, not just to the conditions under which they are true, but also to the conditions under which it is appropriate to use them, these conditions including such things as the state of mind or beliefs of speakers and hearers in context. This approach essentially assumes a use theory of meaning in one of its many forms. In connection with the use theory, it is interesting to see Fillmore, in 1971, endorsing it as an aid to semantic description:

"From the writings of the ordinary language philosophers, linguists can learn to talk, not so much about the meanings of linguistic forms - where 'meanings' are regarded as abstract entities of some mysterious sort - but about the rules of usage that we must assume a speaker of a language to 'know' in order to account for his ability to use linguistic forms appropriately. Although it is true that the use theorists in philosophy have not given linguists a tool which we can merely take over and turn instantly to our own use, I believe that we can profitably draw from some of the philosophers' discussions of language use when we propose or examine semantic theories within linguistics. In particular, we can turn our own enquiry toward the conditions under which a speaker of a language implicitly knows it to be appropriate to use given linguistic forms." [Fillmore (1971) p. 275]

Fillmore goes on to explain that the use theories he is advocating refer to rules both for the appropriate use of words in sentences, and for the appropriate use of words and sentences in speech-acts. Now while it is clear that if such rules exist they tell us something valuable about pragmatics or performance, it is not at all clear that they tell us anything which should be taken into account at the level of semantic description, as Fillmore and others have argued.

Grice [1968, Chapter I] discusses and dismisses a number of philosophical analyses based on the notion of appropriate use. For example, the construction look Adj involved in such sentences as "The sky looks blue to me" is normally, and appropriately, used only when the stronger statement that the sky is blue cannot be made: when there is some doubt about whether it actually is blue. To build such a condition into the meaning of look Adj will thus involve predicting as semantically deviant the use of such constructions when the object

described patently possesses the property being attributed to it. But, as Grice points out, what could be a clearer case of something looking blue to me than the sky on a sunny day? In many situations the weaker form of the statement might be misleading, but it seems to be very obviously true. Moreover, there is nothing anomalous about saying "The sky is blue, and it looks blue", or "The sky looks blue, and it is blue", both of which conjunctions would be ruled out by a semantic analysis in which the conditions under which it was appropriate to use one conjunct would be totally disjoint from those under which it was appropriate to use the other.

The view that knowing the meanings of words involves knowing what speech-acts they are characteristically used to perform also seems largely false. In the first place, it seems entirely irrelevant to specifying the meanings of such ordinary words as table or ventilate. The view that such tricky words as true and good could be satisfactorily described, not by giving their truth-conditions but by stating which speech-acts they are characteristically used to perform - in the case of good, commending, and in the case of true, conceding and confirming - has been discussed and discredited in Searle (1962). If good, for example, has its literal meaning in (40), where no speech-act of commendation is performed:

(40) If this is a good artichoke, let's buy it for supper then the meaning of good is not satisfactorily explained by merely giving the information that it is characteristically or appropriately used to commend.

More generally, there is a theoretical objection to the use theory of meaning which parallels the objection often raised to truth-conditional theories, that they rest on a prior and unexplicated notion of necessary truth-relations. In the case of the use theory, the objection is that it rests on an unexplicated notion of rules for appropriate use. When one enquires into the definition of appropriateness which is relevant for semantics, one is forced, I think, to one of two conclusions. Either there is no distinction between knowing when a given sentence could be appropriately used and knowing when it would in fact be true: in this case the use theory is not distinct from a truth-conditional theory. Or the notion of appropriateness includes, but goes beyond, the notion of truth-conditions. In this case the problem is to define the non-truth-conditional aspects of appropriateness. These seem to me to be clearly non-homogeneous - including reference to social conventions, discourse-conventions, psychological considerations and contextual factors of many different types. Moreover, they seem to me in most, if not all, cases, to be clearly non-linguistic, and certainly not matters of speaker-hearer's competence. For these reasons I would want to exclude them on principle from semantic description.

In the chapters which follow I examine in more detail two of the objections to truth-conditional semantics mentioned here. I look first at the view that a full semantic description involves reference not only to truth-conditions but also to logical presuppositions, and then at various psychological or pragmatic arguments to the effect that truth-conditions, however refined and narrowed, can never yield full semantic

descriptions. Towards the end I survey some facts which seem to provide a new type of argument against a purely truth-conditional semantics, and give some suggestions about handling these facts. My ultimate aim is to shed some light on problems of semantic description in general, and of truth-conditional semantic description in particular.

Chapter II

Presupposition and Entailment: Non-Existential Cases

Presuppositional Semantics

At least since Strawson's Introduction to Logical Theory (1952) it has been accepted practice to maintain that an adequate semantic theory must recognise not only truth-conditions in the sense defined above, but also truth-value conditions or logical presuppositions. In this chapter and the next I discuss some justifications for this conclusion, and consider some ways in which it can be spelled out in detail. I argue that facts which on the presuppositional approach fall squarely within the scope of semantics are better seen as falling into two classes: first those which are properly semantic, but which can be handled within a standard truth-conditional theory, and second those which are not semantic at all, and which are correctly dealt with at the level of pragmatics or performance. I conclude that there is no need for logical presuppositions in semantics - a conclusion which is reassuring given the considerable internal problems which such a theory has to contend with, and which I shall also attempt to illustrate.

I define logical presupposition as follows: a sentence S presupposes another sentence P iff if S is true P must be true, and if not-S is true P must be true, and if P is false or lacks a truth-value both S and not-S must lack a truth-value. The same objections may be made to using

such a definition for semantic purposes as were cited in Chapter I regarding a parallel definition of entailment; the responses to these objections parallel those in Chapter I. In particular, because of my claim there that remarks about sentences are translatable into remarks about statements, I shall feel free to use the material mode when talking about presuppositions: to talk of a given sentence presupposing that P, rather than presupposing 'P'.

The view that certain sentences lack a truth-value follows directly from the view that interrogatives and imperatives cannot be subjected to truth-conditional treatment. The introduction of truth-gaps does not therefore increase the complexity of semantic theory itself. Moreover, van Fraassen has argued in a number of recent papers [cf. van Fraassen (1968), (1970)] that the assumption that certain declaratives may lack a truth-value leads to an elegant solution to the problems raised by paradoxical sentences. [See Katz (1972) Chapter 4.2 for further discussion.] A presuppositional semantic theory of the type I shall consider, then, may be seen as merely making use of notions which are already independently necessary.

However, while the resulting theory may not be more complex, presuppositional analyses proposed for individual sentences are often more complex than purely truth-conditional analyses of the same sentences. This is because presuppositions and entailments are claimed to have different distributions in complex sentences. Accordingly, two

separate mechanisms must be set up for the prediction of the two distinct distributions. I shall argue quite simply that the distributions of alleged presuppositions and standard entailments are identical, and hence that a single category of entailments is adequate for semantic purposes. However, it should be borne in mind that the claim made for the presuppositional approach is that its added complexity is offset by a compensating increase in the range and type of facts which it is equipped to handle, when compared with a purely truth-conditional approach. I want to argue that at the semantic level a truth-conditional theory can deal very simply with many of these facts, and that many of those which it cannot handle can be dealt with at no extra cost by an independently necessary theory of pragmatics or conversation.

Let me first illustrate the two different approaches in action, by considering how each of them deals with sentences (1)-(3):

- (1) Priscilla stopped reading Model Theory for Two-Year-Olds
- (2) Priscilla didn't stop reading Model Theory for Two-Year-Olds
- (3) Priscilla had been reading Model Theory for Two-Year-Olds.

According to the presuppositional approach, (1) and (2) both presuppose (3). Hence if either (1) or (2) is true, (3) must also be true, and if (3) is false, both (1) and (2) must lack a truth-value. According to the entailment analysis which I am proposing, (1) entails (3). Hence if (1) is true (3) must also be true, but if (3) is false (1) will also be false and (2), the negation of (1), will be true. The difference between

the two approaches is thus best brought out by examining what each says in the case where (3) is false: the entailment analysis says that (1) will then be false and (2) true, while the presuppositional analysis says that both (1) and (2) will lack a truth-value.

This difference between the two approaches in dealing with simple positive-negative pairs is normally, though not necessarily, maintained in their handling of more complex examples, both of a declarative and of a non-declarative nature. The least sophisticated presuppositional approach - and the one which is easiest to attack - would regard the presuppositions of a simple declarative as holding for all sentences in which it is embedded, conjoined or disjoined, and of related interrogatives and imperatives. [See for example Langendoen and Savin (1971).] On this treatment (4)-(7) would all presuppose (8):

- (4) Has Celia stopped knitting?
- (5) Either Celia stopped knitting or her brother left home
- (6) If Celia stopped knitting, I'll give you my old grey bonnet
- (7) Celia stopped knitting and the roof fell in.
- (8) At one time Celia knitted.

The distribution predicted by the entailment analysis is radically different from that predicted by the presuppositional analysis. Only (7) will entail (8): (4)-(6), unlike (7), are compatible with (8)'s being false. These predictions will follow automatically from general principles about the behaviour of entailments in complex sentences. For

example, what is entailed by a simple declarative sentence is not always entailed by a sentence in which that simple declarative occurs embedded or disjoined. However, conjoined sentences entail what their separate conjuncts entail. These principles are not controversial. What is at stake is not the existence of entailments, nor their behaviour in complex sentences, but rather whether (8) enters into entailment relations or presupposition relations with (4)-(7).

Although the question of whether there is anything in natural language which corresponds to presuppositions as defined above has caused widespread philosophical disagreement, I have seen little suggestion in the linguistic literature that the existence of logical presuppositions is at all controversial. [See, however, Kempson (1972), (1973) and Thomason (1973) for discussion.] In the light of this, it is interesting to note that Strawson in 1964 was already suggesting that the phenomenon of logical presupposition in natural language had by no means been established, and was indeed not capable of empirical proof. [Dummett (1958) has remarks to the same effect, and Russell (1957) made the same point in his reply to Strawson.] According to Strawson, disagreement over whether a given sentence S entails or logically presupposes another sentence P reflects differences of interest among analysts rather than disagreement about actual fact. If P is false, for example, both sides would agree that S could not be true. Whether one goes on to say that S is therefore false, or merely lacks a truth-value, depends on one's interests in doing semantic analysis. If one's main interest is simply in distinguishing the true from the non-true, one would be inclined to regard P as an entailment like any

other. However, if one is also interested in classifying the ways in which a sentence can fail to be true, the notion of presupposition as distinct from entailment can play a useful part. He says of these opposing views:

"... each is reasonable. Instead of trying to demonstrate that one is right and the other quite wrong, it is more instructive to see how both are reasonable, how both represent different ways of being impressed by the facts." [Strawson (1964) p. 91]

He adds:

"I want to dispel the illusion that the issue of controversy can be settled, one way or the other, by a brisk little formal argument." [ibid. p. 92]

and goes on to give examples of such formal arguments for and against each side, together with suggested lines of rebuttal for each. The conclusion seems to be that, since there are arguments on either side, we are free to adopt either an entailment or a presuppositional approach in doing semantics, quite according to fancy.

I want to argue that there are facts which quite clearly motivate the entailment analysis I outlined above, and I have my own brisk little formal argument against the presuppositional position. Before turning to this, I should perhaps make one or two comments on the above quotation. First, the entailment analysis which Strawson regards as 'reasonable' is not the one I put forward above. The analysis which he discusses is one according to which both the positive and the negative of the sentence in question entail what on a presuppositional analysis

would be called the presupposition, and on which if the entailment is false it follows that both the related positive and the related negative are also false. In other words, a negative is not seen as the contradictory but as the contrary of its related positive. This position is a modification of the Russellian analysis of definite descriptions and existence-entailments, which was the subject under discussion in Strawson's article. It is not at all clear that Strawson would want to say that either of the views which he thought were reasonable regarding existential presuppositions would be at all applicable to non-existential presuppositions. Second, since the analysis I am proposing is not one of those which Strawson considers, it is immune from attack by any of the formal arguments he discusses. Now to avoid the consequences of Strawson's arguments, proponents of the two views he discusses are forced to make rather arbitrary and ad hoc stipulations, and neither view comes out of the disagreement entirely satisfactorily. As far as I know, there are no similar arguments against my position.

In this thesis I consider three classes of logical presuppositions. First, non-existential presuppositions associated with individual syntactic constructions or lexical items. Second, existential presuppositions associated with definite NPs in certain positions in a sentence. Third, existential presuppositions associated with quantified sentences. As follows from the definition of logical presupposition, presuppositions of all three types are held to remain constant under negation; and they are generally held to carry over to various types of compound and non-declarative sentences. On the entailment analysis, the putative

presuppositions will be seen as entailed by positive, but not by negative simple sentences. Moreover, what is entailed by a positive simple sentence will not always be entailed by related non-declaratives, or by sentences in which that simple sentence occurs embedded or disjoined. I spend the remainder of this chapter on a discussion of non-existential presuppositions and some problems they present for presuppositional analysis. I present some arguments for treating the putative presuppositions as entailments, and consider some counterarguments and reformulations of the presuppositional approach in the light of these objections. In the next chapter I present some further arguments specifically relating to existential presuppositions, many of which carry over to non-existential presuppositions too.

Examples of Presuppositional Analyses

a) Kiparsky and Kiparsky (1971) argue that factive verbs [know, regret, realise, etc.] presuppose their complements. According to them, associated with both positive and negative sentences (9) and (10):

(9) John knows that Nixon is bald

(10) John doesn't know that Nixon is bald

will be (11):

(11) Nixon is bald,

where (11) is not part of what the speaker asserts, but part of what he presupposes. For Kiparsky and Kiparsky, presuppositions exist in the mind of a speaker, the presence of a factive verb in a spoken sentence signalling that the speaker has the relevant presupposition in mind. They do not maintain explicitly that (11) is also a logical presupposition of (9) and (10). However, Keenan (1971) and G. Lakoff (1972) explicitly

state that factive verbs logically presuppose their complements. [See Fillmore and Langendoen, p. 4b and Harman and Davidson, p. 569-570]

b) G. Lakoff [(1972) p. 572], having just stated that by 'presupposition' he means logical presupposition in my sense, claims that (12) and (13) presuppose (14):

(12) Sam has stopped beating his wife

(13) Sam has not stopped beating his wife

(14) Sam has beaten his wife.

Keenan [(1971) p. 47] mentions a class, which he calls Certain Aspectuals and which would include stop, which also carries logical presuppositions.

He gives the following examples:

(15) Fred $\left\{ \begin{array}{l} \text{quit (didn't quit)} \\ \text{continued (didn't continue)} \\ \text{resumed (didn't resume)} \end{array} \right\}$ speaking

which would presuppose (16):

(16) Fred was speaking.

If we assume that the underlying complements of the sentences in (15) contain the information in (16), then these aspectuals, like the factives above, may be analysed as presupposing their complements.

c) Chomsky [(1971) note a, p. 205] claims that (17) presupposes (18) "in the sense that the truth of the latter is a prerequisite for the utterance to have a truth-value":

(17) It was JOHN who was here

(18) Someone was here.

Keenan [(1971) p. 47] generalises this claim to various other types of

cleft sentence, giving the following pairs, of which the first member would logically presuppose the second:

- (19) It was (wasn't) in August that John quit
- (20) John quit
- (21) It was (wasn't) to escape the draft that John went to Canada
- (22) John went to Canada
- (23) It was (wasn't) because he was tired that John left
- (24) John left.

d) Finally, a range of modifiers like again, another, even, only, too, and either, and a range of clause-types like counterfactual antecedent and consequent, restrictive and non-restrictive relative, have been subjected to analysis in terms of logical presuppositions.

I do not want to maintain that anything which has ever been analysed as a logical presupposition is in fact better treated as an entailment, but I think a strong case can be made out for analysing 'presuppositions' of the factive class, the aspectual class and the cleft class [classes a), b) and c)] as entailments. Before putting the case, however, I should like to make one thing clear. I am as convinced as is the most devout presuppositionalist that anyone who asserts (25), (27) or (29) in isolation, or without qualification, in general suggests quite strongly that (26), (28) and (30) are also true:

- (25) Mary doesn't regret that her grandmother was trampled by an antelope
- (26) Mary's grandmother was trampled by an antelope
- (27) If I stop playing chess with Fischer, I'll start playing with Spassky
- (28) I (will) have been playing chess with Fischer

- (29) Either it wasn't Blossom who put Gluefast in my contact lenses or she is lying to me
- (30) Someone put Gluefast in my contact lenses.

What I do deny is that this suggestion can be successfully treated as either a logical presupposition or an entailment. In other words, I deny that the statement that x has not stopped doing something is logically equivalent to the statement that he is still doing it; rather it is logically equivalent to the statement that either he is still doing it or he has never done it; and so on for other examples. On my treatment, the first member of each of these pairs is compatible with the overt denial of the second member, and I shall provide many examples of such denials. Hence, the suggestions carried are cancellable or defeasible. The entailment analysis directly predicts such possibilities of denial: the problem for this approach is rather to account for the fact that quite often, in the absence of such denial, (25), (27) and (29) are naturally interpreted as suggesting (26), (28) and (30). I provide an explanation for these suggestions in Part II. The presuppositional approach, on the other hand, easily accounts for the suggestions, by treating them as presuppositions. What is more problematic on the presuppositional approach is the fact that if these presuppositions exist, they can nonetheless be cancelled or suspended when they occur on negative, conditional and disjunctive clauses. A presuppositional account which does not provide for such cancellation or suspension is very easily refuted. However, I shall also consider various mechanisms which have been proposed by presuppositionalists to account for cancellation.

The situation in positive sentences is rather different. On the entailment analysis, (31), (33) and (35) entail (32), (34) and (36), and on the presuppositional analysis the latter sentences are presupposed, rather than entailed, by the former:

- (31) Mary regrets that her grandmother was trampled by an antelope
- (32) Mary's grandmother was trampled by an antelope
- (33) I will stop playing chess with Fischer
- (34) I (will) have been playing chess with Fischer
- (35) It was Blossom who put Gluefast in my contact lenses
- (36) Someone put Gluefast in my contact lenses.

Here there is no problem for either approach in accounting for the fact that the first member of each of these pairs suggests that the second is also true. However, the presuppositional approach has further to explain why the 'presuppositions' on these positive sentences cannot be cancelled or suspended, as can the 'presuppositions' on their related negatives and complex sentences. It should thus be borne in mind when assessing the arguments that follow, that I do not believe that a purely truth-conditional account tells the whole story about negative or complex sentences. However, as far as it goes, it is compatible with the facts, and the story will be taken up in later chapters. On the other hand, it should also be borne in mind that although the presuppositional analysis is considerably more complicated in the cases I shall discuss, it also claims to explain a much wider range of facts and intuitions. One of my aims in writing this thesis has in fact been to destroy many immediate intuitions which I suspect are illusory. The reader is left the task of deciding, at the end of Part II, whether his intuitions are still intact,

and whether the entailment account when allied with a pragmatic theory captures them as well as, or better than, an account in terms of presuppositions.

Formal Points

In presenting a case for the entailment analysis, I need first to establish some formal points. [I am indebted to Sylvain Bromberger and Richmond Thomason for help in formulating them.]

1. Only sentences that are necessarily either true or lacking a truth-value can be both presupposed and entailed by a given sentence. In other words, no sentence which is capable of being false can be both presupposed and entailed by a given sentence. The proof of this is as follows. Suppose that a sentence S both entails and logically presupposes another sentence P, and suppose that there are circumstances under which P would be false. Under those circumstances S would be false (by the definition of entailment) and not false (by the definition of logical presupposition). But this is impossible. Hence there can be no circumstances under which P would be false. Hence P must necessarily be either true or lacking a truth-value.

2. Only sentences which are necessarily either true or lacking a truth-value can both logically presuppose and be entailed by a given sentence. The proof of this is as follows. Suppose that a sentence S both logically presupposes and is entailed by another sentence P, and suppose that there are circumstances under which S would be false. Under these circumstances,

P would also be false (by the definition of entailment), and if P is false S will be not false (by the definition of presupposition). Hence under these circumstances S would be both false and not false. But this is impossible. It follows that there can be no circumstances under which S would be false. Hence S must be necessarily either true or lacking a truth-value.

3. Only sentences which are necessarily either false or lacking a truth-value can both entail a given sentence and presuppose its negation. The proof of this is as follows. Suppose a sentence S both entails a given sentence P and presupposes not-P, and suppose that there are circumstances under which S would be true. Under these circumstances, P would also be true (by the definition of entailment) and not-P would also be true (by the definition of presupposition). But this is impossible. Hence there can be no circumstances under which S would be true. Hence S is necessarily either false or lacking a truth-value.

4. If a given sentence presupposes a sentence P but is entailed by not-P, then P is necessarily either true or lacking a truth-value. The proof of this is as follows. Suppose that a given sentence S presupposes a sentence P but is entailed by not-P, and suppose that there are circumstances under which P would be false. Under these circumstances, not-P would be true, and so, (by the definition of entailment) would S. Since S is true, P is also true (by the definition of presupposition). Hence P is both true and false. But this is impossible. It follows that there are no circumstances under which P would be false. Hence, P is necessarily either true or lacking a truth-value.

In the light of these points, my immediate strategy will be as follows. I shall attempt to show that various alleged presuppositions exhibit all the logical and distributional properties of entailments of the simple positive sentences with which they are associated. If these alleged presuppositions are themselves capable of being false, it will follow from the points established above that they cannot simultaneously be presupposed by these sentences, contrary to the predictions of presuppositional analysis. There will also be cases where an alleged presupposition of a given sentence S in fact behaves distributionally and logically as if it entailed S. Again, if S is capable of being false, it will follow from the points above that P cannot be a presupposition of S. Similar arguments will be constructed around the remaining points. I shall begin by arguing against the strongest version of the presuppositional hypothesis. On this hypothesis, if a positive simple sentence carries a presupposition, this presupposition carries over into the related negative, and into sentences in which the presupposing sentence or its related negative occur embedded, disjoined or conjoined. This is the hypothesis which predicts the greatest difference in behaviour between presuppositions and entailments, and hence if it is wrong and the entailment analysis is right, it should be the easiest to refute. As the discussion progresses, various more sophisticated treatments will be considered.

Objections to the Strong Presuppositional Analysis

a) Asymmetry arguments.

First, consider some familiar types of negative sentences:

- (37) Malory doesn't know that mongeese subdivide, because mongeese don't subdivide.
- (38) It wasn't Mirabelle who swallowed your hand-grenade, because I have it right here in my hand.
- (39) You won't resent my doing this hole in one, since my golf-ball just landed in the Great White Bunker.
- (40) I can hardly resume playing chess with Spassky, since I have never made a chess-move in my life.

←.I assume that these sentences are perfectly capable of being true. This fact is puzzling for the strong presuppositional analysis, since in each case there is a negative presupposition-carrying clause and a further clause which tacitly or overtly denies that this presupposition is true. (37), for example, would presuppose that mongeese subdivide, but further states that mongeese do not subdivide. It should follow that (37)-(40) are anomalous. Yet there are many cases where similar sentences would be regarded as true, and where, moreover, the truth of their negative clause would be seen as guaranteed by the truth of their clause containing because or since, rather than being, as on the presuppositional analysis, inconsistent with it.

Notice that no such relation exists between positive presupposition-carrying sentences and denial of their presuppositions: (41) and (42) are distinctly odd:

- (41) ? Since I didn't call him a warthog, Bill bitterly resents my calling him a warthog.
- (42) ? Malory knows that the chicken crossed the road, because the chicken didn't cross the road.

There is clearly an asymmetry between positive and negative sentences as regards their compatibility with, or possibility of conjunction with, the

denial of their presuppositions. The denial of a presupposition is consistent with its related negative sentence, but not with its related positive sentence. The entailment analysis predicts this configuration; for some presuppositional approaches designed to accommodate it, see below.

Consider now the following conjunctions of presupposition-carrying sentences:

- (43) Bill knew that Bighand was dead, and wasted no time regretting that he was still alive
- (44) Groucho regrets that my thesis is true, and not that it is false
- (45) She didn't dirty the bathroom, she cleaned it.

According to the presuppositional analysis, (43)-(45) will have contradictory presuppositions. (43), for example, will presuppose both that Bighand was dead and that Bighand was still alive; (44) will presuppose both that my thesis is true and that it is false; and (45) [on the analysis proposed by the Kiparskys, among others] will presuppose both that the bathroom was clean and that the bathroom was dirty. Thus (43)-(45) will be predicted as anomalous, or at least as necessarily lacking a truth-value, while intuitively they are perfectly well-formed sentences, and capable of being true. On the entailment analysis, since in each of (43)-(45) there is one negative conjunct as well as one positive one, these sentences will correctly be predicted as well-formed and capable of being true. The entailment analysis, moreover, will predict as deviant such sentences as (46) and (47):

- (46) ? Parsifal knows that God is dead, and also that he is alive
(47) ? Jeremiah regrets that my thesis is true, and realises that it is false.

Here (46) and (47) would be treated as having contradictory entailments, and thus predicted as anomalous. The presuppositional analysis will also predict (46) and (47) as deviant, correctly this time, just as it did, incorrectly, with (43)-(45). It will then have the further onus of explaining why whatever mechanism it invokes to account for the non-deviance of (43)-(45) does not automatically apply to (46) and (47), rendering them non-deviant as well. While there are mechanisms which go some way towards accounting for this asymmetry between positive and negative sentences, it should be borne in mind that the entailment analysis directly predicts this asymmetry, and does so extremely simply.

Further difficulties arise for the strong presuppositional theory when one considers the behaviour of 'presuppositions' in embedded sentences, conditionals and disjunctions. On the strong presuppositional approach, (48)-(51) will all carry presuppositions:

- (48) Either Maddy regrets that Beowulf is dead, or Beowulf isn't dead
(49) If Maddy regrets that Beowulf is dead, then Beowulf is dead
(50) Bill thinks we've just stopped playing chess, but Charley believes we couldn't play chess to save our lives
(51) Maria just told Sebastian that she knows that Nixon is dead.

In each of these sentences there occurs a presupposition-carrying verb [either regret or know or stop]. In none of these sentences is there any presumption that the complement of this verb is true. Each of them is compatible with the overt denial of its presupposition: to (49), for

example, one could add the rider but he isn't dead and the resulting sentence would be perfectly capable of being true. This new sentence would then entail the negation of its presupposition. Since there are circumstances in which it could itself be true, it follows from the formal points established above that it cannot presuppose what it is claimed to presuppose.

In the light of these examples, it seems that the strong presuppositional theory is false. Presuppositions of positive simple sentences do not carry over intact to related negatives, or to conjunctions one clause of which is a related negative, or to disjunctions or conditionals in which either the positive simple sentence or its related negative occurs as a main constituent, or to certain types of sentence in which the positive simple sentence or its related negative occurs embedded. It is quite clear that in many cases the predicted presuppositions either do not occur at all or else can be cancelled, suspended or removed. The only place where such suspensions cannot take place is in simple positive sentences and positive conjunctions. These are precisely the places in which entailments are predicted to exist. In precisely the range of places where presuppositions, if they exist, must be cancellable, the entailment analysis will directly predict the resulting possibilities of 'presupposition-denial'. In other words, the distribution of presuppositions and entailments over simplex and complex sentences is identical, contrary to the predictions of the strong presuppositional theory.

b) Deducibility of a negative sentence from the negation of its 'presupposition'.

The next argument is designed to show that in certain cases a negative sentence is not only compatible with, but also deducible from, the negation of its putative presupposition. By the formal points established above, this situation cannot arise if there are circumstances under which the putative presupposition would itself be false.

Consider the following argument:

(52) Premise 1: John can't know that Nixon is bald if Nixon isn't bald

Premise 2: Nixon isn't bald

Conclusion 1: John can't know that Nixon is bald

Premise 3: If someone cannot know something, then he does not know it

Conclusion 2: John doesn't know that Nixon is bald.

This argument seems to me to be valid. Premise 2 is the negation of a factive complement, and conclusion 2 is the negation of the factive itself. Premises 1 and 3 are, as far as I can see, necessary truths: hence conclusion 2 follows from premise 2 alone: premise 2 entails conclusion 2. If premise 2 would be false under certain circumstances - as it clearly would - it follows that conclusion 2, a negative factive, cannot presuppose its complement.

Parallel arguments can be constructed for other factives, and for aspectuals too. To take one aspectual example, in which the negation of the presupposition entails the negation of the aspectual:

(53) Premise 1: No-one can stop doing something if he has never done it before

Premise 2: John has never played chess with Spassky

Conclusion: John cannot stop playing chess with Spassky.

Again, since premise 1 is a necessary truth and premise 2 is clearly contingent, it follows that premise 2 entails the conclusion. The conclusion cannot therefore presuppose the negation of premise 2.

A similar argument may be used against the presuppositional analysis of cleft sentences. Consider the following:

- (54) Premise 1: If it was John who left, then someone left
Premise 2: No-one left
Conclusion: It wasn't John who left.

Here, since premise 1 is a necessary truth, premise 2 entails the conclusion. But the conclusion is a negative cleft, and premise 2 is the negation of its presupposition. Hence the conclusion cannot presuppose what it is claimed to presuppose: that someone left.

Keenan [(1971) p. 51-2] discusses a counterexample of Bever and Savin's to the proposal that cleft sentences have logical presuppositions. The counterexample runs as follows:

"'You say that someone in this room loves Mary. Well, it certainly isn't Fred. And clearly it isn't John. And ...'
The speaker goes on until he has mentioned all the people in the room, and concludes 'Therefore no-one in this room loves Mary.'"

Here the speaker has used a cleft sentence which is claimed to presuppose that someone in the room loves Mary, but he has used it to reach the conclusion that no-one in the room loves Mary. This seems to indicate that the cleft sentence does not carry the relevant presupposition. Keenan, dismissing this counterexample in a footnote as 'putative', goes

on to say:

"Thus it is reasonable to say that It is John who loves Mary presupposes that Someone loves Mary even though a speaker of the above discourse would not believe the presupposition. Thus there are a variety of ways a sentence can be uttered without it being true or even believed."

Keenan bases this conclusion on the claim that in giving a reductio proof it is natural for a speaker to utter sentences whose presuppositions he does not believe - as in the argument above. This may well be true, but it does not seem to me to dispose of the counterexample at all satisfactorily.

Consider a comparable example:

(55) Premise 1: It won't be America who wins the Ryder cup

Premise 2: It won't be Britain who wins the Ryder cup

Premise 3: No-one but Britain and America can enter the Ryder cup

Conclusion: Therefore no-one will win the Ryder cup.

This is a valid argument in which the conclusion reached is the negation of the presupposition of two of the premises. It is open to a presuppositionalist to say, as Keenan seems to be saying, that though (55) is a valid argument, it does not follow that its premises are true. In fact, on the presuppositional analysis, if the conclusion is true, the first two premises will lack a truth-value, but this will in no way affect the validity of the argument. However, it must be remembered that the main claim of the presuppositional approach is that it captures the full range of speaker-intuitions in a way which the entailment approach does

not. Yet I believe that when presented with the argument in (55) most people can conceive of circumstances under which all three premises and the conclusion can be true simultaneously - for instance if the next Ryder cup is a washout or a draw. This is a situation which the presuppositional analysis of cleft sentences rules out: on this analysis it is impossible for all three premises to be true together, for if they were, the conclusion would be false and the argument invalid. On the other hand, the entailment analysis allows for all three premises and conclusion being simultaneously true, and in this case accords with speaker-intuitions better than does the entailment analysis.

c) A special problem with clefts.

Notice too that a presuppositional analysis of cleft sentences violates one of the formal points made earlier. On such an analysis, (56) will be treated as presupposing (57):

(56) It was John who left

(57) Someone left.

On the other hand, (56) entails (58), which in turn entails (59):

(58) John left

(59) Someone left.

Hence (56) both presupposes and entails that someone left. But by the formal points established above, this situation can only arise if there are no circumstances under which Someone left could be false. But there clearly are such circumstances. Hence either (56) does not entail (59) or it does not presuppose (57).

One countermove for the presuppositionalist would be to maintain that though (56) entails (58), (58) does not entail (59), but rather presupposes it. It would follow that (59) would be twice presupposed, rather than presupposed and entailed, by (56). However, this move would destroy much of the claim of presuppositional analysis to accord with our immediate intuitions. For example, if (58) presupposes that someone left, so, by definition, will the related negative of (58). In this case, the sentence John didn't leave will be incapable of being true unless someone left, and (58) itself will be incapable of being false unless someone other than John left. This is clearly counterintuitive. More generally, this move would result in giving the same presuppositional analysis to any given sentence and its related cleft, and violating any intuitions we have about the differences between these two types of sentence. In view of this, it seems that what intuitions we have about clefts cannot be explained in terms of a presuppositional theory.

Chomsky [personal communication] has suggested to me that the correct countermove to make is to deny that (56) entails (58). The question then arises of what exactly the relation is between (56) and (58). It can clearly not be that of presupposition: no-one would maintain that (56) and its related negative both presupposed (58). The correct relation would probably be that of weak entailment rather than the strong definition I have been using: weak entailment would predict that if (56) is true (58) must also be true, but would make no claim about the consequences for (56) if (58) is false. This move would indeed secure the presuppositional analysis from the formal points made

above, which make crucial use of the strong definition of entailment. I have not investigated whether similar points can be constructed using the weak definition.

A Modified Presuppositional Analysis

I now consider various modifications to the presuppositional approach, modifications designed to make it flexible enough to accommodate the distributional facts I have mentioned, while preserving its scope and intuitive appeal. In particular, such modifications must allow for the fact that in various types of negative, conditional, disjunctive and embedded sentences the presuppositions predicted by the strong presuppositional theory do not appear to exist. My main argument against the modified theory I shall examine is that it attempts to account for what seems to me to be a unitary phenomenon in all these sentence-types in radically different ways. The unitary phenomenon is that the predicted presuppositions do not exist. In the case of each sentence-type, however, a different explanation for this fact has been given.

a) Negatives.

Many of the arguments I gave above were based on the same rather obvious point. Strong presuppositional analyses assume that if a presupposition is false the negative sentence which presupposes it must lack a truth-value. But often the strongest way of arguing for the truth of a negative sentence is to show that its putative presupposition is false. Thus, what could be stronger proof that John does not know, or regret, or realise that Nixon is bald, than that Nixon is not bald? What

stronger proof could there be that I did not stop playing chess with Spassky, than that I have never played chess in my life, and so am not in a position either to stop or to go on? Such natural a fortiori arguments are ruled out by a strong presuppositional analysis which automatically deprives a negative presupposing sentence of a truth-value if its presupposition is false.

This objection can be accommodated by arguing that negative sentences are ambiguous, and many presuppositional theories incorporate such a view. For example, we can define two senses of negation as follows. Internal negation [also referred to as choice-negation] is the only negation allowed by the strong presuppositional theory. An internal negation preserves all the presuppositions carried by its related positive, and if a presupposition is false, the internal negation, like its related positive, lacks a truth-value. External negation [also referred to as exclusion-negation] is true if and only if the related positive is not true: is either false or lacking a truth-value. The difference between the two types of negation is that, while an internal negation lacks a truth-value if a presupposition carried by the related positive is false, under the same circumstances the external negation is true. Hence many of the arguments I gave above - at least those concerned with negative sentences - will go through only if the negatives are interpreted as external negations. [For further discussion, see Thomason (1972) p. 44-51.]

The general picture of negative sentences which emerges from this

modified theory is as follows. A negative sentence has a preferred internal interpretation in the absence of any indication to the contrary. The external interpretation may be invoked in a number of ways: by placing heavy stress on the verb, for example, or by explicitly stating that the presupposition is false, or by adding something which itself entails the negation of the presupposition. It should be noted that these latter devices must work in conjunction with an explicit theory of two negations if they are to account for the type of examples I have given. There are serious objections to the use of cancelling devices without such a theory of ambiguity. For example, if there is only a single, internal sense of negation, then if a given presupposition is false its presupposing sentence will by definition lack a truth-value. This situation will be in no way changed by a tacit or explicit statement that the presupposition is indeed false, which is what is contributed by a cancelling device. Since it is very often felt that negatives come out as true when conjoined with the denial of their own presuppositions, there must be an additional sense of negation which will be true under such circumstances: there must be two negations. Moreover, heavy stress, explicit denial, and other cancelling devices in all cases lead to anomalous results unless there is another interpretation available. For example, presupposition-cancelling heavy stress, like explicit denial of a presupposition, does not occur in positive, as opposed to negative main clauses. Presuppositions are suspended in (60) and (61), but not in (62) or (63):

- (60) You only think Mao is a monster - you don't know it.
- (61) John doesn't regret that Nixon is dead, but then Nixon isn't dead.
- (62) You don't think Mao is a monster - you know it.
- (63) ? John regrets that Nixon is dead, but then Nixon isn't dead.

It is true that heavy stress on positive know may sometimes be taken as suggesting that one doesn't really know, as in (64):

- (64) I just knew I'd win - I can't see how I lost.

But this is very much an exceptional case: compare (65) and (66):

- (65) ? I just regret killing that wombat - I can't see how it escaped.
- (66) ? I just resumed beating Fischer - it's strange to think I never really played him.

Notice also that in a sentence containing both a heavy-stressed factive negative and a heavy-stresses factive positive the presupposition is invariably preserved, as in (67) and (68):

- (67) I don't resent it that Bill got promoted - I just regret it.
- (68) I regret that Bill got promoted, but I don't resent it.

Heavy stress in itself, then, is not enough to suspend a presupposition: it must occur in a negative sentence, and if it does, there must be no semantic material in the rest of the sentence which would reinstate it. In other words, there must be an alternative interpretation available for one to shift to, and such alternative interpretations are not available for simple positive main clauses.

Lakoff (1972) gives two examples which seem to argue against the view that presuppositions on positive sentences cannot be cancelled:

(69) Sam has stopped beating his wife, if he has ever beaten her at all

(70) If the FBI were tapping my phone, I'd be paranoid, but then I am anyway.

It is quite true that in (69) there is no presumption that Sam has ever beaten his wife. On the other hand, as can be seen from (63), while it is possible to cast doubt on whether the presupposition of a positive is true, it is not possible to state explicitly that it is not true. Thus the asymmetry between positives and negatives remains. Moreover, one can use a conditional clause as well to cast doubt on whether an entailment of a positive main clause is true as one can to cast doubt on the truth of a presupposition. (71)-(73) are examples:

(71) What I sold you was a genuine Louis Quinze escritoire, if it was an escritoire at all.

(72) Johnny Raver is the most eligible bachelor in town, if, indeed he is a bachelor.

(73) Billy will write a pornographic book if he ever writes a book at all.

Examples (69) and (71)-(73), then, raise general problems about the behaviour of presuppositions and entailments in conditional sentences. Quite clearly these problems cannot be solved merely by postulating two different senses of negation.

Example (70) shows an explicit denial of what on many presuppositional analyses would be a presupposition carried by (70). According to these analyses [see, for example, G. Lakoff (1972) p. 573] counterfactual conditionals presuppose the negations of both their antecedent and their consequent clauses. Yet in (70) the consequent itself is expressly

asserted. This would seem, then, to be a counterexample to the claim that presuppositions of positive main clauses cannot be cancelled. However, the fact that this is the only known type of case in which such a presupposition can be expressly denied without contradiction seems rather to indicate that it is not a presupposition at all, and hence requires no modification of presuppositional theory. Karttunen (1971) proposes an alternative treatment of the consequents of counterfactuals without appeal to presuppositions, and I suspect that some similar treatment may be correct. [See Part III for further discussion.]

To sum up the discussion so far, it seems that an adequate theory of presuppositions must allow for negative sentences to be ambiguous between readings on which they carry presuppositions and readings on which they do not. I have mentioned one type of theory which uses a distinction between internal and external negation. Another type of theory would rely on a distinction between presupposition-carrying and presupposition-denying negations. The difference between external and presupposition-denying negations is that an external negation picks out the class of cases where the related positive is either false or lacking a truth-value. A presupposition-denying negation picks out only the case where the related positive lacks a truth-value. Further reference to these two distinctions will be made later. In passing, I note that on the entailment analysis of negation there is no ambiguity: merely a disjunctive set of truth-conditions, the truth of any of which is sufficient for the truth of the negation.

b) Disjunctions, conditionals and embedded sentences.

An adequate theory of presuppositions must do more than incorporate two negations, since there are many examples of non-negative sentences which would be predicted as presupposition-carrying on the strong presuppositional theory, but which do not in fact carry presuppositions. Examples (48)-(50) and (69) of this chapter illustrate the phenomenon, which is by no means isolated. Many more examples are given in Karttunen (1973). Since this article presents the most detailed and comprehensive treatment of presupposition-cancellation that I know of, I shall devote some time to discussing it here.

Karttunen argues that three types of presuppositional behaviour occur in compound sentences, and that the type of behaviour which can occur depends on the type of predicates used. The first type of predicates he calls plugs: these are "predicates which block off all the presuppositions of the complement sentence" [p. 174]. The verbs say, mention, tell, ask, promise, and in general all verbs which introduce or describe reported speech, are plugs. When such a verb occurs, the presuppositions of its complement sentence do not function as presuppositions of the sentence as a whole. Karttunen's examples are:

(74) Sheila accuses Harry of beating his wife. (Does not presuppose that Harry has a wife.)

(75) Cecilia asked Fred to kiss her again. (Does not presuppose that Fred had kissed Cecilia before.) [p. 174]

My counterexample in (51) of this chapter can thus be treated as containing a plug, and Karttunen's theory predicts it correctly.

Karttunen also gives evidence, though rather more hesitantly, for believing that verbs of propositional attitude, such as think and believe, are also plugs; this would dispose of my example (50).

The second type of predicates he calls holes: these are "predicates which let all the presuppositions of the complement sentence become presuppositions of the matrix sentence" [p. 174]. This class contains "all ordinary run-of-the-mill complementizable predicates", including factives, aspectuals, and seem, avoid, be possible, be probable [p. 175]. It is the existence of this class of predicates which led to the strong presuppositional hypothesis in the first place. However, there are predicates which do not belong to it, and so refute the strong presuppositional hypothesis itself.

The third type of presuppositional behaviour occurs only with logical connectives: if...then, and, and either...or. Karttunen refers to these as filters: "predicates which, under certain conditions, cancel some of the presuppositions of the complement" [p. 174]. The main body of the article is devoted to describing the conditions under which such cancellation occurs. I summarise the results here.

For a conjunction of the form A and B: if A presupposes C, then the whole conjunction presupposes C; if B presupposes C, then the whole conjunction presupposes C unless A necessitates C [where A necessitates C iff whenever A is true C must also be true.] [p. 179]. [Karttunen later complicates the conditions slightly, but in ways irrelevant to the present discussion.]

For a conditional of the form if A then B: if A presupposes C, then the whole conditional presupposes C; if B presupposes C, then the whole conditional presupposes C unless A necessitates C [p. 178]. This condition is identical to that for A and B.

For a disjunction of the form A or B: if A presupposes C, then the whole disjunction presupposes C; if B presupposes C, then the whole disjunction presupposes C unless the internal negation of A necessitates C [p. 181].

Within this modified theory, then, three different explanations are given for why a presupposition associated with a given simple positive sentence fails to appear when that sentence is embedded in various ways. If the resulting sentence is negative, the presupposition need not appear, because negatives are ambiguous, and in one of their senses they do not carry presuppositions. If the resulting sentence has a main-clause predicate which is a plug, then the presupposition never appears at all. There is no question of ambiguity; the presupposition simply vanishes. If the resulting sentence is a conjunction, conditional or disjunction, then whether the presupposition appears or not will depend on the type of conditional, etc. Some such sentences always carry presuppositions, and others never do. I list below some preliminary objections to such a theory: they will be extended in Chapter III.

Some Objections to the Modified Theory

Karttunen's most important claim is that there is an asymmetry between the behaviour of presuppositions on the first and second clauses of conditionals, conjunctions and disjunctions. Presuppositions on the first clauses can never be cancelled, but presuppositions on the second clauses can. If this asymmetry can be established, the entailment

analysis I have proposed will automatically be disproved, since it predicts symmetrical behaviour. However, Karttunen's claim seems to me to be false.

Karttunen himself gives a case of a disjunction whose first clause has a presupposition which is not in turn presupposed by the whole sentence:

(76) Either all of Jack's letters have been held up or he has not written any. [footnote 11, p. 180]

On a widely accepted presuppositional analysis, the first clause of (76) presupposes that some letters from Jack are in existence, but the second clause denies this, and the whole disjunction does not presuppose it, or even presume it. Karttunen states that he is not sure whether (76) is a good sentence, but agrees that if it is, the asymmetrical analysis is in jeopardy. He adds:

"This could be remedied by making the condition symmetric, but I fear that the change would soon lead to trouble elsewhere."
[p. 180]

I think most people would agree that (76) is indeed a good sentence, and that it does not presuppose that there are some letters of Jack's in existence. There are in fact much simpler sentences of this type where presuppositions of the first clause do not stand as presuppositions of the whole sentence. (77) is an example:

(77) Either Jowett knows the war is over or the war isn't over.

If one assumes a presuppositional approach, the first clause of (77) will presuppose that the war is over, and by Karttunen's condition (77) as a

whole should also have this presupposition. But clearly (77) neither presupposes nor suggests that the war is over. Hence Karttunen's condition is wrong.

The asymmetry condition also fails for and-conjunctions. Karttunen explicitly denies this, giving as an example (78):

(78) All of Jack's children are bald and Jack has children.

He says, first, that (78) is strange and pointless, and second, that (78) as a whole presupposes what the first conjunct presupposes: namely, that Jack has children. This is in accordance with his asymmetry condition, but it is not true. The second conjunct of (78) entails that Jack has children, and so (78) as a whole entails that Jack has children. By the formal points established above, it cannot then presuppose that Jack has children if there are circumstances under which it would be false that Jack had children. Clearly such circumstances exist. Hence (78) cannot presuppose that Jack has children, and the asymmetry condition for conjunctions is refuted.

Karttunen makes much of the fact that the conditions for conjunctions and conditionals are identical [p. 181]. Hence if there is no asymmetry condition on conjunctions there should also be none on conditionals. This is in fact correct. In (79), for example, the presupposition of the first clause is not presupposed by the whole conditional:

(79) If Nixon knows that the war is over, then the war is over.

One could, for example, add to (79) but the war's not over without any resulting contradiction. Hence there can be no presupposition in (79) that the war is over. Further examples are (80) and (81):

(80) If McQueen hasn't stopped smoking, he's stopped smirking. The loudspeaker wasn't too good.

(81) Either McQueen's stopped smoking or he's stopped smirking.

Karttunen's theory predicts that both (80) and (81) presuppose that McQueen has been a smoker. Again, however, by judicious additions, one can bring out an interpretation which is not contradictory, and which denies that this presupposition is true. To (81), for example, one could add and since he's never smoked he must have stopped smirking. Hence the asymmetry condition is wrong.

Karttunen is not explicit about exactly what range of facts his filtering condition applies to: he simply says that it applies to logical connectives, and gives three examples. One connective which he does not mention is if and only if, which is logically equivalent to a conjunction of conditionals, and should thus be subject to the filtering condition. This connective appears crucially in certain necessary truths of a semantic nature. For example, one presumably wants something like (82) to be a necessary truth:

(82) John stopped smoking on Tuesday if and only if before Tuesday John smoked and after Tuesday John didn't smoke.

If (82) is treated as a conjunction of conditionals, and if the filtering condition applies to such conjunctions, it will in fact not be able to remove the presupposition that before Tuesday John smoked, which will remain as a presupposition of the whole sentence (82). But (82) cannot

be a necessary truth if it has a contingent presupposition. Since one would want, I imagine, to treat (82) and similar sentences as necessary truths, Karttunen's filtering condition cannot be allowed to apply to them in this way. Again it is the claim that there is asymmetry that is at fault.

If but is included in the class of connectives subject to the filtering condition, similar problems arise. (83) and (84), for example, entail what on Karttunen's account would be their presuppositions:

(83) It's surprising that John won, but he certainly won

(84) It's bizarre that your theory works, but nonetheless it works.

The first conjuncts of (83) and (84), and hence the whole conjunctions, according to the filtering condition, presuppose the complements of their factive predicates. On the other hand, their second conjuncts, and hence by general principles the whole conjunctions, entail these complements. Since the complements are contingent sentences - since there are circumstances under which they could be false - this is impossible, by the formal points established earlier. Again the conclusion must be that the filtering condition is wrong, and that no such presuppositions are carried. Moreover, there is nothing in the slightest odd or pointless about either of these sentences, and an adequate semantic theory should be able to account for them.

It seems, then, that presupposition cancellation or suspension occurs quite freely in conditionals, disjunctions and conjunctions with at least one negative conjunct, as well as in negatives themselves. In the case of negatives, I argued that a cancelling device in itself was

not enough to account for the non-presupposition-carrying occurrences of negative sentences. What was needed in addition was the assumption that negatives were in fact ambiguous, so that there was an interpretation already available which could be brought out by use of explicit or implicit cancelling procedures. By the same token, in the case of conditionals and disjunctions there are similar arguments for setting up two interpretations, and against filtering conditions which operate in such a way that each sentence has only one available interpretation. For example, if (85) has a non-presupposition-carrying interpretation, as I have argued it must, then (86) should have a similar interpretation:

(85) If Jowett knows the war is over, then the war is over

(86) If Jowett knows the war is over, I'll give you five dollars.

This is in fact true. Similarly, one can find presupposition-suspending interpretations of (87):

(87) If Jowett knows the war is over, Bill should leave.

And in general, conditionals and disjunctions with 'presupposition-carrying' clauses will have two possible interpretations: one on which the presupposition is suspended and one on which it is not. It is quite true that some such sentences will be more likely to be interpreted in one way than in another. However, the fact remains that in such cases two interpretations are possible, and that this should be taken into account by the semantics in a way which Karttunen's filtering conditions explicitly rule out.

There is no reason why the same principle [of ambiguity] which works for negatives, conditionals and disjunctions should not also be used for

those predicates which Karttunen calls plugs. It is clear that there are two possible interpretations of (88), one on which (89) is also true and one on which it is not:

(88) Mary said John regrets that you are out to get him

(89) You are out to get John.

By calling say and similar verbs plugs, Karttunen is in effect denying that the same relation holds between (88) and (89) as holds between other sentences and their preferred or presupposition-carrying interpretations. By simply allowing the same ambiguity to occur in (88) as occurs in negatives, for example, a modified presuppositional theory could account neatly for a range of preferred and non-preferred interpretations which all seem to follow the same general principle.

In conclusion, then, the evidence from non-existential cases seems to support a presuppositional theory which allows 'presupposition-carrying' sentences to be ambiguous between presupposition-preserving and presupposition-suspending readings, except, as we have seen, where they occur as simple positive main clauses and positive conjuncts. Some explanation of this particular distribution might then be expected to be forthcoming.

The evidence from non-existential cases also supports an entailment analysis such as the one I have proposed. This has the advantage of being able to explain why suspension does not occur in positive main clauses and conjuncts. Apart from this, the entailment analysis would differ from the modified presuppositional analysis in treating the remaining classes of case, not as ambiguous, but as having disjunctive

truth-conditions, and in leaving an account of preferred interpretations to pragmatics.

In the next chapter I consider the evidence from existential cases, and give further arguments for preferring the entailment analysis over modified presuppositional analyses, including the one I have proposed here.

Chapter III

Presupposition and Entailment: Existential Cases

Three approaches to simplex existentials.

The philosophical debate about the existence of logical presuppositions has centered on the semantic analysis of sentences like (1) and (2):

- (1) The archbishop of Manchester read the lesson
- (2) The archbishop of Manchester didn't read the lesson.

Russell (1905) analysed (1) as equivalent to (3), and (2) as having the alternative readings in (4) and (5):

- (3) There is one and only one archbishop of Manchester, and he read the lesson
- (4) There is one and only one archbishop of Manchester, and he didn't read the lesson
- (5) It is not the case that there is one and only one archbishop of Manchester, and that he read the lesson.

On this analysis (1) and (2) [= (4)] entail that there is an archbishop of Manchester, and if there is no such person then these two sentences are false. On the other hand (2) [= (5)] does not entail that there is an archbishop of Manchester, and will be true if there is no such person (or if there is more than one).

Strawson, following Frege (1952), proposed analysing (1) and (2) as presupposing, rather than entailing, that there was an archbishop of Manchester, and treating both (1) and (2) as lacking a truth-value if

this presupposition was not satisfied. It was of these conflicting analyses that Strawson said in 1964 that both were reasonable and irrefutable, and that they merely reflected the differing interests of analysts in simplifying the chaotic data of ordinary language use. His position in 1964 was that the Russell-Strawson debate had confused two quite separate issues. The first was a disagreement about whether sentences like (1) and (2) were used to assert that there was an archbishop of Manchester. Strawson felt that Russell had been clearly wrong in maintaining this, and that it was obvious that in the pragmatic sense (1) and (2) would presuppose rather than assert that there was such a person. The second issue was over the consequences for (1) and (2) if this pragmatic presupposition was not satisfied. Here Strawson felt that it was up to the individual analyst to decide whether in such circumstances he wished to analyse (1) and (2) [= (4)] as false, or whether he wanted to treat them as merely lacking a truth-value: whether, in other words, he chose to treat the pragmatic presupposition as a logical presupposition, or whether he preferred to see it as an entailment. [Strawson (1964) p. 92-3.]

My treatment of (1) and (2) will differ from those of both Russell and Strawson. I shall argue, as in the previous chapter, that (1) entails that there is an archbishop of Manchester, while (2) does not. Hence, if there is no archbishop of Manchester, (1) will be false but (2), its related negative, will be true: (1) and (2) will be contradictories rather than contraries. I shall argue that this analysis provides the

best way of accounting for the differences in behaviour between these two sentences. On the issue of whether these sentences assert or pragmatically presuppose that there is an archbishop of Manchester, I tend to agree with Strawson that they do not assert it, but that they take it for granted in rather different ways. However, I shall reserve discussion of this point until Part II. [I shall also differ from Strawson in conducting the discussion in terms of sentences rather than statements, but for the reasons given in Chapter I, I believe that this will not seriously affect the issue.]

Objections to the Presuppositional Approach to Simplex Existentials.

Before going on to consider the behaviour of definite NPs in more complex sentences, I consider some arguments against the presuppositional treatment of sentences like (1) and (2).

First, [an argument adapted from Strawson (1964) p. 93], for sentences like (1) it is often possible to find an equivalent sentence which is clearly false if the associated 'presupposition' is false. Compare (1) with its passive (6):

(6) The lesson was read by the archbishop of Manchester.

Here, if there is no archbishop of Manchester, most people would regard (6) as false. But if (6) is semantically equivalent to (1), then (1) must also be false, and the entailment analysis is borne out. Hence the presuppositional analysis must be wrong. Strawson claims that this argument is either inconclusive or question-begging. If two sentences are regarded as equivalent just in case if either one is true the other

must also be true, then (1) and (6) will be equivalent on both the presuppositional and the entailment analyses, and the argument is inconclusive. On the other hand, if the definition of equivalence further requires that if either sentence is false the other must also be false, then the presuppositional analyst may simply refuse to treat (1) and (6) as equivalent in this sense. It is precisely their equivalence in this sense that is the point at issue. Hence the argument is question-begging. On my treatment (1) and (6) are indeed equivalent in this sense, but I agree with Strawson's conclusion that this is not a sufficient recommendation of the entailment analysis.

Second, [again adapted from Strawson (1964)], the presuppositional analysis involves a rejection of what seems to many to be an obvious truth: that any sentence S entails the sentence It is true that S, and vice versa, (and similarly that there is a two-way entailment between not-S and It is not true that S). To see that these truths break down on a presuppositional analysis, consider the presuppositional treatment of (7) and (8) on the assumption that there is no archbishop of Manchester:

(7) The archbishop of Manchester is an atheist

(8) It is true that the archbishop of Manchester is an atheist.

(7) will lack a truth-value: that is, be neither true nor false. But if (7) is neither true nor false, it is not true, and hence (8) must be false. Here we have a different assignment of truth-values to (7) and (8), and so the two sentences cannot be participants in a two-way entailment relation. Furthermore, if (8) is false, (9) must be true:

(9) It is not true that the archbishop of Manchester is an atheist.
From (9) it is normal to infer (10):

(10) The archbishop of Manchester is not an atheist.

But on the presuppositional analysis, if there is no archbishop of Manchester, (10) will lack a truth-value while (9) will be true. This means that (9) and (10) are not participants in a two-way entailment relation. Hence, adopting the presuppositional analysis will involve a rejection of two rather appealing views about the relations between a sentence and its embedding in the contexts It is (not) true that [Strawson's version of the argument above is stronger, in that it derives a contradiction from the presuppositional approach, but it seems to me less obvious that it goes through than that the one I have given goes through.]

Strawson disposes of this type of argument very swiftly:

"To [this] the reply is that if a statement lacks a truth-value, any statement assessing it as true simpliciter or false simpliciter similarly lacks a truth-value. So no contradiction is derivable."
[Strawson (1964) p. 93]

I am not sure what is meant by simpliciter in the above quotation: in particular whether it is meant to deprive both It is true that S and It is not true that S of a truth-value when the presuppositions of S are false, or whether it applies merely to the former sentence and not to the latter. On either interpretation there are unfortunate consequences. First, consider the interpretation on which both positive and negative predications of truth are deprived of a truth-value when the presuppositions

of S are false. This amounts to treating true as a hole in Karttunen's terms, so that the presuppositions of the embedded sentence are also treated as presuppositions of the complex sentence as a whole. In this case it will be in principle impossible to draw the full range of deductive consequences from the statement that a given sentence lacks a truth-value. The presuppositional approach argues that any sentence with a violated presupposition is itself neither true nor false. Take a sentence S with a violated presupposition: then it follows that it is neither true nor false. It should follow from this that it is not true. Unfortunately, because of Strawson's decision to treat true as a hole, we will never be able to say truly that S is not true, since this statement itself will lack a truth-value. Thus by legislating himself out of one paradox, Strawson has legislated himself into a worse one: the presuppositional theory can say little true about the very sentences it was designed to explain.

Returning to the weaker definition of simpliciter, according to which a positive predication of truth, but not a negative one, lacks a truth-value if the sentence of which it is predicated lacks a truth-value, this also creates serious problems for presuppositional theory. In the first place, it involves a denial of one of the basic assumptions of presuppositionalists: that presuppositions are preserved under negation. This assumption will now be true of all presupposition-carrying sentences except those containing main-clause predicates true and false. These sentences alone will carry presuppositions if they are positive, but not if they are negative. Moreover, if one associates presuppositions with

lexical items, then there will have to be two entries each for true and false: one occurring only in negative sentences, and lacking presuppositions, and one occurring only in positive sentences, and carrying presuppositions.

A further consequence of both interpretations seems to me to be simply false. If It is true that S presupposes what S presupposes, then It is true that S presupposes that S has a truth-value, according to my definition of presupposition. But it seems to me to be demonstrable that It is true that S entails, rather than presupposes, that S has a truth-value. Both sides of the entailment relation seem to be satisfied. First, if It is true that S is true, then clearly S has a truth-value must also be true. Second, if S has a truth-value is false, equally clearly It is true that S must be false. But if It is true that S entails that S has a truth-value, it cannot, as I have repeatedly emphasised, simultaneously presuppose it if, as seems to be true, S has a truth-value is a contingent sentence.

Since other treatments of true as a hole share the above counter-intuitive consequence, I move directly to a consideration of true when treated as a plug, like say, which blocks off the presuppositions of the complement. The consequences of this position are as follows. First, the two-way entailment between S and It is true that S breaks down in the way illustrated with examples (7) and (8) above. The two sentences will still be true together, but will not be false together. This is a situation which many presuppositionalists would be happy to accept. Indeed, the assumption that such a relationship holds between the two

sentences has been used in an elegant treatment of certain paradoxes. [See, for example, van Fraassen (1968) and Katz (1972) p.136-7.] On the other hand, one cannot accept this situation without maintaining that the relations between (11) and (13) and (12) and (13) are radically different:

- (11) The archbishop of Manchester is an atheist
- (12) It is true that the archbishop of Manchester is an atheist
- (13) There is an archbishop of Manchester.

On this treatment, (11), but not (12), will presuppose that there is an archbishop of Manchester. Yet it is clear that both (11) and (12) would normally be taken as suggesting, or taking for granted, that there is an archbishop of Manchester. In this case, either the fact that (11) presupposes (13) and (12) does not is entirely irrelevant to any explanation of their pragmatic presuppositions or suggestions, or else the suggestion conveyed by (12) must arise from an entirely different source from that conveyed by (11). This in turn means that an analysis of the logical presuppositions of a given sentence cannot form an entirely adequate basis for predicting or explaining the suggestions it conveys - even the existential suggestions it conveys. This in turn weakens the appeal of the logical presuppositional approach as a basis for doing semantics.

On the assumption that true is a plug, not true could be given the univocal disjunctive definition either false or lacking a truth-value. On the assumption that true is a hole, not true would be ambiguous between either internal and external or presupposition-denying and presupposition-preserving senses. The assumption that true is a plug, then, raises the

question of whether other negatives could not also be treated as univocal rather than ambiguous. This is in fact the treatment proposed under the entailment analysis: a negative would have a single disjunctive set of truth-conditions, with one of the disjuncts yielding the preferred interpretation. If true is treated as a plug, exactly this solution will have to be taken by presuppositional theorists to explain the fact that not true has the preferred interpretation false. The difference between such a presuppositional approach and a full-fledged entailment analysis will then be one not of principle but of scope. An entailment analysis will say that the treatment of other negatives will be modelled exactly on that of true, while a presuppositional analyst will be forced to defend treating true quite differently from other predicates which convey suggestions.

Paul Kiparsky [personal communication] has proposed a further way of handling the situation. This combines the assumption that true is a plug with the further assumption that not true is ambiguous between the senses false and either false or lacking a truth-value. It would on the one hand avoid the difficulties raised by treating true as a hole, and on the other hand preserve the view that negations are ambiguous. However, whatever its recommendations as a treatment of language use, I find this lacking conviction as a proposal about semantics. This is because on the assumption that true is a plug, there is no reason why there should be a sense of not true which corresponds to false as well as one which corresponds to either false or neither true nor false. With true as a hole, not true

on its presupposition-preserving interpretation would be translatable naturally as false, but on Kiparsky's system there is no presupposition carried by true, and hence there should be no special presupposition-preserving sense of its negation.

Rather than pursue further the different treatments of true which have been tacitly or explicitly adopted in the presuppositional literature, let me emphasise here what I have briefly indicated in this section: that there is no immediately appealing and completely workable solution to this problem. Again, the presuppositional treatment of true cannot, as can other presuppositional treatments, be justified by appealing to the fact that it captures and explains our intuitive judgments.

The Behaviour of Existentials in Complex Sentences

a) Asymmetry arguments.

Complex sentences carrying existential presuppositions or entailments behave very similarly to those carrying non-existential presuppositions or entailments. Hence many arguments used in Chapter II carry over unchanged to the analysis of existential presuppositions. For example, there is an asymmetry between positives and negatives when conjoined with the denial of their presuppositions, as shown in (14)-(17):

(14) There is no archbishop of Manchester, and so the archbishop of Manchester is not the man you saw

(15) ?There is no archbishop of Manchester, and so the archbishop of Manchester is the man you saw.

(16) The king of Sussex did not come to my party, since there's no king of Sussex

- (17) ?The king of Sussex came to my party, since there's no king of Sussex.

This asymmetry argues against those strong presuppositional systems which do not allow for presupposition-denying negations, while it is predicted by the entailment analysis. As with non-existential cases, the predicted presuppositions do not always show up in disjunctions or conditionals either, as witness (18) and (19):

- (18) Either the Queen of Tonga rules despotically or there is no Queen of Tonga

- (19) If Ellery Queen has crossed America on a motorcycle, Ellery Queen must exist.

As with the non-existential parallels, Karttunen's filtering system fails to handle (18) and (19), since it predicts that the first clauses of these sentences carry presuppositions which are still carried by the sentences as a whole. These sentences, like their non-existential counterparts, argue against presuppositional systems which do not allow for cancellation of presuppositions on conditionals and disjunctions. Again, they are directly predicted by the entailment analysis. [While the final version of this thesis was being typed I learned that Karttunen had modified his filtering system to allow for symmetrical cancellation on disjunctions, though not, as far as I know, on conditionals and conjunctions. I have had no time to take account of this here.]

There are further types of positive sentence which have definite NP subjects without, apparently, carrying existential presuppositions. With certain modal auxiliaries the same presupposition-cancelling phenomena occur as occur with negatives. Compare the odd sentence (20), which is

positive but lacks a modal, with the well-formed negative (21) and positive modals (22) and (23):

- (20) ? The archbishop of Manchester read the lesson, but there was no archbishop of Manchester at the time.
- (21) The archbishop of Manchester didn't read the lesson, since there was no archbishop of Manchester at the time.
- (22) The archbishop of Manchester should read the lesson, but since there isn't one at the moment the Bishop of Crookham will have to do.
- (23) The archbishop of Manchester might read the lesson, though I don't know whether they'll have appointed one by then.

None of (21)-(23) presupposes (or entails) that there is an archbishop of Manchester. By a parallel argument to that constructed for negatives, it should follow that there are not only presupposition-carrying and non-presupposition-carrying uses of negation, disjunction and conditionals, but also such uses of certain modals. Nor is this a special feature of definite descriptions referring to occupations which can be successively filled, such as president of the US or archbishop of Manchester. The following sentences, which do not contain such descriptions, seem to me to exhibit the same behaviour:

- (24) Bill Bloggs isn't here, because there's no such person
- (25) Bill Bloggs might be here - I don't know whether such a person exists.

It should be clear from these examples that existential presuppositions show a close parallel in their behaviour to the non-existential presuppositions discussed in Chapter II. They resist cancellation only in simple positive non-modal clauses and conjuncts. This behaviour is explained by the entailment analysis. In all other places they can be cancelled. This behaviour can be explained by the entailment analysis.

The parallel can be made even closer by showing that there are verbal or adjectival predicates which can affect the behaviour of existential presuppositions in just the ways that factive and non-factive predicates affect the behaviour of sentential subjects and objects. The following sentences all have definite NP subjects, but none of them carries an existential presupposition:

- (26) The king of France exists
- (27) The king of France does not exist
- (28) The king of France is a fiction
- (29) The king of France is not a fiction
- (30) The king of France was invented by SDS
- (31) The king of France is a figment of Russell's imagination.

If (26), for example, carries an existential presupposition, it also carries a similar existential entailment. But it follows from the formal points given above that this is an impossible situation. Hence exists does not permit existential presuppositions on its definite NP subjects. [Janet Fodor has pointed out to me that even if this formal difficulty can be surmounted, the assumption that (26) carries an existential presupposition rather than an entailment will lead to the counterintuitive prediction that if there is no king of France (26) will lack a truth-value rather than being simply false.] Hence sentences containing certain predicates, like exists with NP subjects and is likely with sentential subjects, do not presuppose that their NP subjects exist or that their sentential subjects are true. Other predicates, like is bald with NP subjects and is tragic with sentential subjects, do carry such

presuppositions.

This parallel between the behaviour of existential and non-existential presuppositions argues strongly for giving them a unitary treatment: either for treating them all as entailments or for treating them all as presuppositions. I have so far in this chapter tried to illustrate the considerable complexity of the facts which a presuppositional analysis has to contend with. I should now like to consider the problem of derived nominal subjects. I cannot recall seeing these discussed in the literature on presuppositions. I want to discuss them here because they seem to me to present a much stronger threat to the entailment analysis, and much more promising data for the presuppositional approach, than any other single set of facts that I can think of. Given the close parallel between the various types of presupposition, if presuppositional theory provides the only way of handling these facts, then it should be possible to argue that it must be allowed to handle other types of presupposition too.

b) Derived Nominals and Absolute Presuppositions.

Consider the following sentences, which contain complex NP subjects:

- (32) The claim that Hiawatha was a communist has (not) destroyed Bill's faith in Longfellow
- (33) The argument that phlogiston exists was (not) first put forward by Polycarp
- (34) The fact that my husband was President did (not) affect my chances of promotion.

I presume that a presuppositional analyst would treat (32), (33) and (34) as presupposing that it has been claimed that Hiawatha was a communist, that there is an argument that phlogiston exists, and that it is a fact

that my husband is President, respectively. On the entailment analysis I have proposed, the positive versions of these sentences will carry entailments rather than presuppositions, and the negative versions will carry neither the relevant entailments nor the relevant presuppositions.

The entailment analysis accordingly predicts the following sentences as semantically well-formed and capable of being true:

- (35) No-one has ever claimed that Hiawatha was a communist; the claim that Hiawatha was a communist, then, has not destroyed Bill's faith in Longfellow.
- (36) There is no argument that phlogiston exists; hence the argument that phlogiston exists was not first put forward by Polycarp.
- (37) Since your husband has never been President, the fact that your husband was President could not have affected your chances of promotion.

A common reaction of informants to these sentences is first to reject them as contradictory, and then to accept them with varying degrees of alacrity when asked to construe them as denials of a prior statement. (35), for example, would be accepted as the rejection of a prior statement that the claim that Hiawatha was a communist had destroyed Bill's faith in Longfellow. I shall discuss the role of denial briefly in Part II, but mention in passing the extreme difficulty of capturing this notion explicitly, since the same acceptability adheres to a statement which denies, not an actual prior utterance, but a possible utterance which was not in fact uttered by anyone.

I can see two ways for a presuppositional analyst to handle such sentences as (35)-(37). The first is to set up a special class of what I shall call absolute presuppositions, which can never be cancelled and

do not participate in non-presupposition-carrying senses of negation. This approach would predict (35)-(37) as contradictory, and would capture the fact that (32)-(34) all carry particularly strong existential suggestions. The second approach would be to treat the presuppositions carried by derived nominals in the same way as those carried by other constructions. This will involve predicting (35)-(37) as true on non-presupposition-carrying interpretations of negation, just as they are predicted as true by the entailment analysis.

A choice in favour of absolute presuppositions is perhaps motivated by consideration of some even more striking instances of the strength with which certain types of NP subject convey existential suggestions, even in negative sentences. Compare the a) and b) versions of (38)-(41) in this respect:

- (38a) The ontological disproof of God's existence is not well-known
- (38b) Harry's ontological disproof of God's existence is not well-known
- (39a) The seduction of these women has not ruined their lives
- (39b) My client's seduction of these women has not ruined their lives
- (40a) The portrait of my wife is not libellous
- (40b) Bacon's portrait of my wife is not libellous
- (41a) The fact that you are insane was not held against you
- (41b) *Nixon's fact that you are insane was not held against you.

Now it is undeniable that a defending counsel who uttered (39b) in mitigation would be held to have conceded his client's guilt rather than

argued for his innocence. And in general, however strong the existential suggestion in the a) version, it is even stronger in the b) version. I still want to maintain that the negative sentences are true if the existential suggestions they carry are false, and I have a number of reasons for doing so.

First, notice that the existential suggestions carried by (38)-(41) are also conveyed by (45)-(48):

- (45) It's not likely that Harry's ontological disproof of God's existence is well-known
- (46) It's not possible that my client's seduction of these women has ruined their lives
- (47) It's not clear that Bacon's portrait of my wife is libellous
- (48) It's not certain that the fact that you were insane was held against you.

The entailment analysis, as I have already pointed out, cannot account for these suggestions. Predicates such as possible, likely, clear and certain do not entail their sentential subjects, and only if the sentential subjects are entailed will there be the needed existential entailment, on the analysis I am proposing here. Hence the existential suggestions carried by (45)-(48) are left unexplained by the entailment analysis.

Either presuppositional analysis I have mentioned is on the face of it a promising candidate if one wants to capture existential suggestions at the semantic level. Although likely, clear, etc. are not factive predicates, and do not presuppose the truth of their sentential subjects, Karttunen (1973) has proposed that they should be analysed as holes, letting the presuppositions of these sentential subjects through to stand

as presuppositions of the sentences in which they are embedded. On this analysis, allied with a theory of ambiguous negation, (41)-(48) would all carry existential presuppositions on one reading of negation, and their existential suggestions thus find a natural explanation. And of course if these NP subjects are treated as carrying absolute presuppositions, regardless of the type of sentence in which they occur, (41)-(48) will all univocally carry existential presuppositions, and their existential suggestions will again be explained.

There are in fact a number of things which these proposals leave unexplained. In the first place, there is a striking variation in the strength of existential suggestions carried by different types of definite NP. Suggestions carried by NPs like the king of France can be cancelled or denied without difficulty, as in examples (14), (16), (18), (19) and (21)-(23) above. Examples (35)-(37) show that it is less easy, but sometimes possible, to deny the suggestions carried by definite NPs such as the claim that and the fact that. There is a further difference between these last NPs and their related possessives, such as Harry's claim that: it is extremely odd to find such a possessive occurring in the same sentence as a denial of its existential suggestion. Compare the a) and b) versions of (49) and (50) in this respect:

- (49a) The claim that Hiawatha is a communist is most unlikely ever to be made
- (49b) ?Maria's claim that Hiawatha is a communist is most unlikely ever to be made
- (50a) The seduction of your ugly daughter (by Barney) is most unlikely to take place
- (50b) ?Barney's seduction of your ugly daughter is most unlikely to take place.

This problem about degrees of strength of individual suggestions is a perfectly general one for presuppositional theory. It has often been pointed out to me, for example, that certain of the arguments I used in Chapter II go through much more easily and naturally with sentences containing know than with those containing regret or stop. While the introduction of absolute presuppositions would make available two degrees of strength, rather than a single degree, what is needed in order to account for the full range of differences in strength on the semantic level seems to be a full-scale logic of degrees of entailment and presupposition. At the moment I suspect that such an account is more feasible on the pragmatic than on the semantic level. For a brief sketch of an approach, see Chapter V. It remains to point out only that if such an account of degrees of strength of suggestion is available at the pragmatic level, one of the main reasons for having a presuppositional account at the semantic level has been destroyed.

Another main reason for doubting the ability of presuppositional analysis to handle the existential suggestions carried particularly strongly by possessive NPs is that among the predicates which seem to allow such suggestions or presuppositions through is the predicate true. Just as (51) and (52) carry an existential suggestion, so do (53) and (54), where (51) and (52) are embedded under true:

- (51) Jacqueline's refutation of the theory of gravity has (not) had serious repercussions for NASA
- (52) Bill's discovery of phlogiston has (not) been universally acclaimed
- (53) It's not true that Jacqueline's refutation of the theory of

gravity has had serious repercussions for NASA.

- (54) It's not true that Bill's discovery of phlogiston has been universally acclaimed.

If, on the strength of this, the presuppositional analyst decides to treat (53) and (54) as carrying existential presuppositions, he runs up against a form of the argument I outlined earlier in this chapter. By depriving (53) and (54) of a truth-value if their existential presuppositions are not satisfied, he deprives himself of the ability to state truly that (51) and (52) lack a truth-value, and hence are not true, if their NP subjects fail to refer. In other words, he will deprive himself of the ability to capture the very facts about truth-value gaps which the presuppositional analysis was set up to describe. This problem is particularly severe for one who wishes to adopt the notion of absolute presuppositions.

If, on the other hand, he chooses to treat true as a plug, while continuing to treat possible and likely as holes, he will be faced with the fact that, contrary to his predictions, (55) and (56) seem to carry existential suggestions in exactly parallel ways, and with exactly the same strength:

- (55) It's not possible that Fred's failure to arrive at your party caused the Korean war
- (56) It's not true that Fred's failure to arrive at your party caused the Korean war.

Hence his dilemma is as follows. If he invokes logical presuppositions as a semantic basis for explaining the existential suggestions conveyed by many sentences, since (56) carries such a suggestion it should also carry

a logical presupposition. But if it carries a presupposition, and this presupposition is not satisfied, then (56) must lack a truth-value in the very cases where its truth is required by the definition of logical presupposition itself. On the other hand, if (56) suggests, without presupposing, that Fred failed to arrive at your party, then presuppositions alone cannot offer an adequate explanation of how existential suggestions are conveyed. And if some such suggestions can be explained without resort to logical presuppositions, then it is at least up to someone to investigate whether in fact all can. In short, what looked like a range of cases which would very clearly bring out the superiority of the presuppositional approach turns out not to confirm the presuppositional analysis at all. The puzzling feature of the entailment analysis is that it predicts such sentences as (35)-(37) as capable of being true. However, any standard presuppositional approach which permits ambiguity of negation will similarly have to admit that these sentences may be true on one interpretation. An approach in terms of absolute presuppositions, which does not have this consequence in its treatment of (35)-(37), nonetheless has equally unfortunate consequences in its treatment of (51)-(56). Hence my original conclusion about the treatment of putative presuppositions - that all types show such parallel behaviour that they should be given the same treatment - cannot be resolved in favour of a treatment in terms of logical presuppositions - or at least not on the basis of derived nominals.

Three Approaches to Quantified Sentences

What I shall say in this brief final section is extremely tentative,

and I have included it only for the sake of completeness. Pending a satisfactory account of the syntax of quantifiers in natural language, any semantic account is likely to be inadequate. I shall discuss three models for the analysis of quantified sentences, and continue my argument that an entailment analysis which makes no appeal to presuppositions is in principle adequate for the semantics of natural language.

The first model I shall consider is one yielded by the standard predicate calculus treatment of natural language quantified sentences. In this system four basic types of quantified sentences would be symbolised as follows:

$$A: \text{ All S is P} = (x)(Gx \rightarrow Hx) = -(\exists x)(Gx \ \& \ -Hx)$$

$$E: \text{ No S is P} = (x)(Gx \rightarrow -Hx) = -(\exists x)(Gx \ \& \ Hx)$$

$$I: \text{ Some S is P} = (\exists x)(Gx \ \& \ Hx) = -(x)(Gx \rightarrow -Hx)$$

$$O: \text{ Some S is not P} = (\exists x)(Gx \ \& \ -Hx) = -(x)(Gx \rightarrow Hx)$$

A crucial feature of this system is the distinction it draws between universal (A and E) and existential (I and O) sentences with respect to reference failure. If there is no object with property G, then universal sentences will be true, but the corresponding existentials will be false. In my terms, existential sentences entail that there is an object with property G, but universal sentences do not.

If this is the correct model for natural-language quantified sentences, it follows that (57)-(60) are not valid arguments:

(57) All your apple trees are rotten. Therefore you have apple trees.

(58) All your apple trees are rotten. Therefore some of your apple trees are rotten.

(59) None of your apple trees are rotten. Therefore you have apple trees.

(60) None of your apple trees are rotten. Therefore some of your apple trees are not rotten.

In the situation where you have no apple trees, the premises of (57)-(60) will be true, while the conclusions will be false. To make these arguments valid would require an extra premise in each case: namely, that you have apple trees. It is true that there are some types of sentence where this treatment seems to be quite suitable: which we would be inclined to treat as true, rather than false or lacking a truth-value, if their quantified NPs failed to refer to an existing object. Such examples are the cautious (61), the sarcastic (62) and the lawlike (63):

(61) I'll give you all my Bingo-winnings tonight if you meet me outside the hall

(62) Reykjavik has all the charm of a wet Sunday night in Aberdeen

(63) All pure metal light-bulbs expand on heating.

However, there is in general a very strong suggestion that the subjects of natural-language universal sentences do indeed refer to existing objects, and the model under consideration provides no way of capturing this implication. It is, of course, open to someone who finds the above treatment attractive to attempt to explain these existential suggestions on the pragmatic, rather than the semantic level, as I have offered to do with other types of suggestion. I suspect that such an explanation could be found fairly easily. The reason why I do not adopt this position here is that I find the parallel between (64)-(67) extremely strong:

- (64) Your child is delightful
- (65) Both your children are delightful
- (66) All three of your children are delightful
- (67) All your children are delightful.

I cannot see how (64) can be treated as not entailing (or of course presupposing) that you have a child. Since (65)-(67) seem to demand the same treatment, I feel that they too must be treated as entailing (or presupposing) that their subject NPs refer, and hence by some other model than that afforded by the standard interpretation of the predicate calculus.

The second model is that proposed by Strawson (1952) and since adopted by many of those who favour presuppositional analyses. Strawson proposed that A, E, I and O sentences should all be treated as presupposing that their subject NPs referred. In this case, arguments (57)-(60) would all go through. Thus the merit of this treatment is that it records a similar status to universal and existential sentences, and captures the existential implications of universal sentences in a way which the previous model does not. In Strawson's system, (68) and (69) will both presuppose that there are beagles, and if there are no beagles, both sentences will lack a truth-value:

- (68) All beagles look like Snoopy
- (69) Some beagles look like Snoopy.

The logic of my attack on presuppositions in this chapter and the last commits me to rejecting Strawson's treatment, in spite of its attractions. Let me reiterate here some arguments which seem to me to

hold against the presuppositional treatment of quantifiers. First, notice that all and some, if they carry presuppositions, are candidates for treatment as carrying absolute presuppositions. In other words, like derived nominals, they still carry an existential commitment when embedded under non-factive predicates, including true:

- (70) It's not clear that all your answers were correct
- (71) It's not possible that some bricklayers like their work
- (72) It's not true that some of the mistakes were deliberate
- (73) It's not true that all the mistakes were deliberate.

This raises the same problem for the presuppositional approach as the one I mentioned in discussing derived nominals. If all and some carry existential presuppositions even when embedded under true, and true is a hole, then in the case where presuppositions fail it will not be possible to say truly that (72) and (73) are not true. On the other hand, if all and some do not carry existential presuppositions in such sentences, and true is a plug, then the presuppositional approach is not able to explain why (72) and (73) do suggest that mistakes were made. And if these existential suggestions can be explained without resort to logical presuppositions, then it should be possible to explain other suggestions in similar ways, and dispense with the logical presuppositional approach entirely. [For further argument along these lines, see Chapter V.]

Second, (74) and (75) neither suggest nor presuppose that Bill has friends:

- (74) Either all Bill's friends are keeping very quiet or he has no friends
- (75) If all Bill's friends have encouraged him, he must have friends.

Hence the presuppositions on all and some do not necessarily appear in disjunctions and conditionals, parallelling the behaviour of other alleged presuppositions in this respect.

Third, (76) entails, rather than presupposes, that Bill has friends:

(76) All Bill's friends are horrible, but he does have friends.

This is surely indicative that quantified NPs entail in general, rather than presupposing in general, or else that in general they neither entail nor presuppose. Neither Karttunen's filtering system nor any other system that I know of can handle (74)-(76) correctly within a presuppositional framework.

Presuppositions on quantified NPs seem to exhibit exactly the same distribution through simple and complex sentences as do other alleged presuppositions whose behaviour I have considered in greater detail. Accordingly, I propose handling them, as I propose handling the other cases I have discussed, by a version of entailment analysis. Thus the third model I shall mention, and the one I am proposing here, is one in which A and I sentences entail that their quantified subjects refer, but E and O sentences do not. In predicate calculus terms, this model yields the following results:

A: All S is P = $(\exists x)Fx \ \& \ (x)(Fx \rightarrow Gx)$

E: No S is P = $(x)(Fx \rightarrow -Gx)$

I: Some S is P = $(\exists x)(Fx \ \& \ Gx)$

O: Some S is not P = $(\exists x)(Fx \ \& \ -Gx) \vee \neg(\exists x)Fx.$

Here A and O sentences are contradictory. Whenever A is true, I must also be true, and the inference from A to I is thus valid. The inference

from Some S is not P to Not all S is P is also preserved. My preference for this model rests on its ability to capture these facts, and also to accommodate the parallels between (64)-(67) above, which I feel are fairly compelling. However, since so much still remains to be discovered about the functioning of quantifiers in natural language, I will not pursue the model any further here.

Conclusion to Part I

In summarising the main conclusions reached so far in this thesis, I would like to draw particular attention to two points. First, presuppositional analyses rest on the assumption that there is a difference in distribution between presuppositions and entailments, in particular in negatives and various types of complex sentences. I have tried to show that this assumption is incorrect. What is correct is that presuppositions, if they exist, are freely cancellable in these negatives and complex sentences. An adequate presuppositional theory would have to account for this fact. I have suggested that such a theory would treat all these sentence-types as ambiguous between presupposition-carrying and non-presupposition-carrying interpretations. Given a choice between such a theory and an entailment analysis of the type I have described, how would one choose between them?

The entailment analysis is certainly simpler. One might attempt to justify a presuppositional approach on the grounds that it makes it possible to state significant generalisations on the semantic level,

generalisations which the entailment analysis ignores. There are two arguments against this sort of justification. First, an adequate presuppositional theory will now amount to a theory of preferred interpretations for modals, negatives, conditionals and embedded sentences. But it is not at all clear that intuitions about preferred interpretations are semantic intuitions. For example, most ambiguous sentences will have a preferred interpretation relative to a given context, yet it is not normally considered the job of a semantic theory to specify the preferred interpretations of ambiguous sentences. More generally, it might be argued that wherever context plays a part in the interpretation of a sentence it is the job of a pragmatic, rather than a semantic theory to determine the part it plays. But if this is true, there is no need for a semantic theory of presuppositions, since an entailment analysis provides the alternative interpretations of conditionals, disjunctions, etc., between which the pragmatics has to choose, and does it in an extremely uncomplicated way.

Moreover, most presuppositional theories with which I am familiar blatantly fail to capture certain generalisations. I have attempted to show, for example, that certain intuitions about preferred interpretations cannot in principle be captured by a presuppositional account, and that there are others which cannot in practice be captured by particular proposed analyses. Yet those intuitions which cannot be captured seem to be of exactly the same type as those which can. The suggestions conveyed by sentences containing possible and true, for example, seem to be of the same type. A presuppositional analysis captures only the former. The same holds of suggestions conveyed by sentences

containing know as opposed to those containing say. Both types of sentence seem to me to have preferred interpretations on which the 'presuppositions' of their complements are treated as true. By classifying say as a plug, one makes it in principle impossible to give a unitary presuppositional explanation of this fact. It follows that presuppositional theory must leave some intuitions to be captured on the pragmatic level, and by doing so ignores what seems to be a significant generalisation.

Second, even if it is decided that preferred interpretations should be treated at the semantic level, it does not follow that they should be handled by presuppositional analysis. Suppose that instead of using logical presuppositiona and truth-value gaps, one used the much simpler entailment analysis, but allied it with a semantic theory of preferred interpretations. (77), for example, would be treated as entailing (78):

(77) Nixon is not bald

(78) Either Nixon does not exist, or Nixon exists and is not bald.

One would simply mark the second disjunct as figuring in preferred interpretations. As far as I can see, the only difference between this account and an adequate presuppositional account would be that on the entailment analysis certain sentences on certain interpretations would be called false, while on the presuppositional analysis the same sentences on the same interpretations would be called neither true nor false. But now, in choosing between these two approaches, we need to have available not only intuitions about preferred or normal interpretation - which by

hypothesis are captured by both - but intuitions about when a given sentence is false and when it merely lacks a truth-value. This brings me to the second main point which I wished to establish.

It seems to me to be demonstrable that there is no consistent set of intuitions about when a given sentence is false as opposed to lacking a truth-value. I have discussed various possible treatments of true, some of which would capture the intuition that it was a hole, and others of which would capture the intuition that it was a plug. Similarly, strong and modified presuppositional theories differ mainly in that they set out to capture entirely different intuitions about presuppositional behaviour - about when sentences lack a truth-value. Examples of such alternative treatments, even by those who have thought deeply about the presuppositional approach, are freely available in the literature. It is not even obvious that there are any clear cases at all. There are certainly sentences which would consistently be treated as odd or misleading in certain contexts, but it does not follow that this fact should be treated at the semantic rather than the pragmatic level, and if it is treated at the semantic level it does not follow that it should be handled in terms of truth-value gaps.

My final conclusion about logical presuppositions, then, is as follows. If an adequate presuppositional analysis could be achieved, it would have to make available exactly the range of interpretations which is made available by the entailment analysis. The only way of

justifying the presuppositional approach over the entailment approach would then be to show that the presuppositional approach stated significant generalisations - which I have tried to show it does not - or else to appeal to a clear set of intuitions about when a sentence lacked a truth-value as opposed to being false - which I have tried to show do not exist. Hence the entailment analysis, with or without a semantic theory of preferred interpretations, is the correct analysis to choose.

PART II

PRESUPPOSITION AND ASSERTION

Chapter IV

Presupposition, Assertion and Lexical Items

The Relation between Logical and Pragmatic Presuppositions

In Part I, I considered certain types of semantic theory which are based on the following assumption. Every declarative sentence S has two sets of associated conditions: first, a set of truth-conditions such that if any of its members is false S must also be false; second, a set of logical presuppositions such that if any of its members is false S must lack a truth-value. I now consider certain types of semantic theory based on the following rather different assumption. Every sentence S has two sets of associated conditions: the first expresses the semantic content of speech-acts such as asserting, questioning and ordering, which S may be used to perform; the second expresses preconditions on the use, or the appropriate use, of S to perform a speech-act at all. I shall refer to such preconditions in general as appropriateness conditions or pragmatic presuppositions; when discussing certain variants of the basic theory I shall also use the terms speaker-presupposition and psychological presupposition. However, in all cases which I discuss in the present chapter such preconditions are crucially seen as figuring in semantic description proper, rather than in a theory of pragmatics.

As regards relations between the two types of theory, various positions are possible. Perhaps the most natural position would be

to assume an item-by-item correspondence between logical and pragmatic presuppositions, and between entailments and speech-act content conditions (with appropriate adjustments for non-declaratives). On this view, a theory of the first type will form a natural basis for a theory of the second type, the appropriateness conditions associated with a given sentence being directly predictable from its logical presuppositions. On the other hand, if the arguments I have given against the logical presuppositional approach are sound, this will militate against an approach in terms of appropriateness conditions as well.

However, it would be possible to have a theory of the second type without having a theory of the first type. Someone who rejected the notion of logical presuppositions but kept the notion of entailments might simply regard a subset of entailments as expressing appropriateness conditions, and another subset as expressing speech-act content. On this view, if an appropriateness condition was false the related sentence would be false, and the speech-act it was being used to perform would either be inappropriate or fail to be a speech-act. This position is compatible with the entailment analysis I proposed in Part I, but I shall argue that it has serious defects.

It would also be possible to have theories of both types, but to regard truth-conditions and logical presuppositions as cross-classifying with appropriateness conditions and conditions expressing the semantic

content of a speech-act [hereafter assertion-conditions], so that the former classification made no predictions about the latter. If either of the last two positions is adopted, some independent justification for a classification into appropriateness conditions and assertion conditions is needed, since it will not follow naturally from a classification into logical presuppositions and entailments. [I am indebted to Sylvain Bromberger for this point.]

Finally, it would be possible to adopt either an entailment analysis or an entailment-plus-logical-presuppositions analysis without having a theory of the second type (at the semantic level) at all. One might argue that the first type of theory either exhausts the job of semantic description or receives no help from the second type. Similarly, one might adopt a presupposition-assertion analysis without admitting either entailments or logical presuppositions into semantic theory. Hence the two types of theory are largely independent of each other, and they demand separate assessment.

Pragmatic Presuppositional Analysis

Although there is much variation in detail between the proposals of individual writers using the presupposition-assertion dichotomy, I think that I have brought out above their common central claim: namely, that the distinction between the content of a speech-act and certain types of appropriateness condition is relevant for semantic description. I cite here a number of suggestions put forward by these authors.

Kiparsky and Kiparsky (1971) claim that positive and negative factive verbs presuppose, rather than assert, that their complements are true:

"Factivity depends on presupposition and not assertion."
[Kiparsky and Kiparsky (1971) p. 348]

Their comments on (1) and (2) make it clear that in their system presuppositions do not form part of the content of the speech-act of assertion performed by use of these sentences:

- (1) It is odd that the door is closed
- (2) I regret that the door is closed

"The speaker of these sentences presupposes 'The door is closed', and furthermore asserts something else about that presupposed fact." [ibid. p. 349]

They give a sample analysis of (3) in terms of presupposition and assertion, thus:

(3) Mary cleaned the room

Asserts: a) Mary caused the room to become clean

b) The room became clean

Presupposes: The room was not clean [ibid. p. 350]

Here the semantic content of the assertion is very clearly distinguished from its presuppositional content. On the analysis proposed by the Kiparskys this distinction is seen to even more striking effect in (4):

- (4) I want you to point it out to 006 that the transmitter will function poorly in a cave.

Point out is a factive, and therefore presupposes its complement the transmitter will function poorly in a cave. However, although point out itself occurs in an embedded sentence, its presupposition acts as a presupposition of the total assertion made by use of (A), and in no way figures as part of the content of the assertion. (A) does not assert that I want the transmitter to function poorly in a cave, nor that I want you to point it out that I presuppose that the transmitter will function poorly in a cave, nor yet that I want to presuppose that the transmitter will function poorly in a cave [ibid. p. 353-4]. In other words, where a presupposition is associated with an item occurring in an embedded sentence, the correct analysis is produced by detaching the presupposition from its embedded position, and from the content of the speech-act itself, and allowing it to function independently as a precondition on the total speech-act performed. I shall refer to this type of behaviour as detachability, and I shall have more to say about it later. In the meantime, let me note that the Kiparskys' view is that it is the job of the semantic component to take account of the behaviour both of assertions and of presuppositions:

"In formulating the semantic structure of sentences, or ... the lexical entries for predicates, we must posit a special status for presuppositions, as opposed to what we are calling assertions." [ibid. p. 349]

Fillmore too regards the presupposition-assertion distinction as semantically relevant:

"I shall deal with a distinction between the presuppositional aspects of the semantic structure of a predicate on the one hand and the 'meaning' proper of the predicate on the other hand. We may identify the presuppositions of a sentence as those conditions which must be satisfied before the sentence can be used in any of the functions just mentioned [= 'asking questions, giving commands, making assertions, expressing feelings, etc.']. [Fillmore (1969) p. 120]

Moreover, it applies as well to nouns - or at least to nouns in predicative position - as it does to verbs:

"It is important to realise that the difference between assertion and presupposition is a difference that is not merely to be found in the typical predicate words known as verbs and adjectives. The difference is found in predicatively used nouns as well. In the best-known meaning of BACHELOR, for example ... only the property of 'having never been married' is part of the meaning proper. Uses of this word (as predicate) presuppose that the entities being described are human, male and adult. We know that this is so because the sentence (1)

(1) That person is not a bachelor

is only used as a claim that the person is or has been married, never as a claim that the person is a female or a child. That is, it is simply not appropriate to use (1), or its non-negative counterpart, when speaking of anyone who is not a human, male adult." [ibid. p. 123]

From these two quotations we receive rather different impressions of Fillmore's views on the consequences of presupposition-failure. From the first quotation it appears that the consequence is that no speech-act is performed at all; from the second, that a speech-act is performed but that it is inappropriate. Pragmatic presuppositional theories of the type I am considering here are in fact extremely inexplicit about a number of things. Apart from the disagreement or unclarity about the consequences of presupposition-failure, which I

have just mentioned, there is similar equivocation or vagueness about the nature of presuppositions themselves. For some they are conditions which the world must meet if a given speech-act is to be appropriate; for others they are beliefs which the speaker or the speaker and hearers must hold if a given speech-act is to be appropriate. Further disagreement arises about the behaviour of presuppositions in complex sentences. I have attempted here to concentrate on what these theories have in common, and to avoid labouring the discrepancies between them. However, it is perhaps worth pointing out that no adequate, explicit theory of this type can be achieved without resolving the above equivocations or unclarities.

Other writers who make use of the presupposition-assertion distinction are Langendoen and Savin, who define presupposition in almost the same words as Fillmore:

"By 'presupposition' we mean, following Frege ..., the expression of those conditions which must be satisfied (be true) for the sentence as a whole to be a statement, question, command, and so forth." [Langendoen and Savin (1971) p. 55]

They were among the first subscribers to the detachability hypothesis about the behaviour of presuppositions on embedded sentences, and in this respect their approach has strong similarities to that of the Kiparskys. Zwicky defines presuppositions in the same spirit, though more vaguely, as "the conditions on the correct use of the sentence" [Zwicky (1971) p. 73]. He also contrasts presupposition with assertion

and accepts the detachability hypothesis, saying that "the presuppositions of the assertions are represented independently of the meanings of the assertions." [ibid. p. 77]

A distinctive feature of the approach of Morgan (1969) is that, although subscribing to the detachability hypothesis in general, he argues that it breaks down in certain places: for example in certain conditionals and certain complements of verbs such as dream. His conclusions have since been generalised by Karttunen (1973) to further plugging and filtering predicates, from which presuppositions could not be detached. Karttunen claims that the system he proposes works for both semantic/logical and pragmatic presuppositions. I hope to illustrate that it breaks down in the same way for pragmatic presuppositions as it does for logical presuppositions.

These brief illustrations should be enough to indicate that semantic theories based on the presupposition-assertion distinction are widely accepted enough to merit serious consideration. I concentrate here on those versions which regard presuppositions as associated with individual lexical items, and single out two special problems for attention. The first is the problem of truth-value assignment within such theories: what exactly is it of which truth or falsehood is predicated in a system with a presupposition-assertion distinction? The second is whether the detachability hypothesis, or indeed any hypothesis available at the moment, is capable of doing justice to the behaviour of presuppositions in

complex sentences. Discussion of these two problems should shed light on two further questions raised by presupposition-assertion theories: first, what is the evidence that such theories are relevant to strictly semantic description; and second, if presuppositions of this type are cancellable, as logical presuppositions are, how does this square with the claim that if an appropriateness condition is false its related sentence may either not be used to perform a speech-act at all, or else be used in an inappropriate speech-act?

Consider first the question of how truth-values are to be assigned, or truth-conditions stated, in a semantic description based on the presupposition-assertion dichotomy. It might be claimed that presuppositions play no part whatsoever in truth-value assignment. They might merely constrain the appropriateness of the resulting assertion, while truth-values are assigned on the basis of the semantic content of the assertion alone. Where this view is allied with the view that presupposition-failure results in an inappropriate assertion rather than no assertion at all, it can be rejected out of hand, as the following considerations suggest. I have said that Fillmore proposes analysing predicative uses of bachelor and spinster as follows:

x is a bachelor: Asserts: x is unmarried
Presupposes: x is adult and male

x is a spinster: Asserts: x is unmarried
Presupposes: x is adult and female

With this analysis, on the view I have just outlined, (5) and (6) will

be true and false together:

(5) My neighbour is a spinster

(6) My neighbour is a bachelor.

Given that my neighbour must be either male or female, but not both, one of (5) and (6) must have a false presupposition, and hence one of the speech-acts performed by use of (5) and (6) will be predicted as inappropriate. Unfortunately, given that my neighbour is unmarried, the treatment proposed will assign both (5) and (6) the value true. Both will assert merely that my neighbour is unmarried, and my neighbour's marital status alone will therefore determine the truth-values of (5) and (6). But clearly the view that (5) and (6) may be true together, even with the proviso that one of them will be true but inappropriate, does violence to any intuitions we have about truth-value assignment.

Hence one who believes that pragmatic presuppositions of this type are irrelevant to truth-value assignment must also hold the view that if a pragmatic presupposition is false the associated speech-act will be void, rather than merely inappropriate. On this assumption, only one of (5) or (6) may be used to make an assertion at all in any given situation, and so there will be no circumstances in which they will be true or false together. [I am indebted to Sylvain Bromberger for pointing this possibility out to me.] It would be natural to ally this position with the view that pragmatic presuppositions are also logical presuppositions. If a logical presupposition is false, its related sentence must lack a truth-value; and, one could go on to add, cannot be used to make an assertion. Here the consequences of presupposition-failure of both

logical and pragmatic types are neatly linked. This approach will yield the following analysis of (7):

(7) Bill's great-aunt Japonica is (not) a spinster

Asserts: Bill's great-aunt Japonica is (not) unmarried

Presupposes: Bill's great-aunt Japonica is adult and female.

If the presupposition is false, no assertion will be made, and no truth-value will be assigned. If the presupposition is true, an assertion will be made, and this assertion will be true or false according to Bill's great-aunt's marital status. This position has much to recommend it; however, it will be undermined by any argument against logical presuppositions, and I give some independent arguments against it in what follows.

A further possible position is that truth and falsehood are predicated, not of the assertion alone, but of the assertion and presupposition combined. This is the position which is most compatible with entailment analyses of the type I proposed in Part I. On this treatment, pragmatic presuppositions would function as ordinary truth-conditions as regards truth-value assignment, but in addition would constrain the appropriateness of a given speech-act performed by use of their related sentence. According to the treatment I proposed in Part I, this would mean that the positive version of (7) would be both false and inappropriate if Bill's great-aunt Japonica was not adult and female, whereas it would merely be false if she was unmarried. According to the entailment analysis envisaged by Strawson, where certain truth-conditions

are common to both positive and negative sentences, the negative version of (7) could be seen as behaving similarly to the positive. It can thus be seen that choice of a particular approach to the logical presupposition/entailment distinction will largely determine the predictions made about the behaviour of pragmatic presuppositions or appropriateness conditions with respect to truth-value assignment.

Consider now the behaviour of presuppositions and assertions in complex sentences. Where presuppositions and assertions are seen as associated with individual lexical items, this will involve a consideration of how presupposition-features and assertion-features so associated contribute to the presuppositions and assertions made by complex sentences in which these lexical items occur. There is an obvious point to be made about assertion-features. The words bachelor and spinster, for example, carry the assertion-feature unmarried. However, this does not mean that any declarative sentence in which the words occur may be used to assert that someone is unmarried. In (8)-(10) the words occur, but no such assertion would be made by use of these sentences:

- (8) Either Bill's great-aunt Japonica is a spinster, or her marriage-certificate was lost in the Great Fire of London.
- (9) If your teacher was a bachelor, you were extremely lucky.
- (10) Sebastian thinks my husband is a bachelor.

In no circumstances could (8)-(10) be used to assert that someone is unmarried. Assertion-features, then, do not function to make independent

assertions, but merely contribute to the assertion made by the sentence as a whole. [For a discussion of assertion, see Geach (1965).] If assertions are defined as a subset of entailments, this behaviour will follow naturally from the fact that (8)-(10) do not entail that someone is unmarried: if no entailment is predicted, no assertion will be made. In fact, on the analysis of bachelor and spinster given above, the assertions made by use of (8)-(10) will be those in (11)-(13):

- (11) Either Bill's great-aunt Japonica is unmarried, or her marriage-certificate was lost in the Great Fire of London.
- (12) If your teacher was unmarried, you were extremely lucky.
- (13) Sebastian thinks my husband is unmarried.

Although this point about assertion-features is obvious, it does raise the possibility that if an assertion-feature like unmarried does not necessarily involve an assertion that someone is unmarried, then a presupposition-feature like male need not necessarily involve a presupposition that anyone is male. As I have shown, this approach to presuppositions is not the one generally adopted, although it is the one which I have suggested in Part I is probably the most adequate. It is more normal for those who use the presupposition-assertion distinction to treat presuppositions, unlike assertions, as preserved under some or all types of embedding. It is, of course, on the basis of this difference in distribution that the distinction must ultimately be justified. I shall attempt to argue here that a number of theories based on this assumption fail to do justice to the behaviour of presuppositions, both on simple and on complex sentences. In other words, I shall argue that the basis for the presupposition-assertion distinction does not exist.

Objections to the Pragmatic Approach

a) Arguments from complex sentences.

Consider the following sentences:

- (14) Your teacher will be either a bachelor or a spinster
- (15) If your teacher was a bachelor you were lucky, but if your teacher was a spinster you were unlucky.

I take it that (14) and (15) are well-formed sentences, and could be used appropriately to make assertions. If we take seriously the detachability hypothesis, we will analyse (14) and (15) as follows:

- (14) Asserts: Your teacher will be either unmarried or unmarried
- Presupposes: a) Your teacher will be adult and male
- b) Your teacher will be adult and female.

Here the presuppositions are contradictory, and the assertion is redundant. (15) presents even worse problems, since on a similar analysis it will have both contradictory presuppositions and a contradictory assertion:

- (15) Asserts: If your teacher was unmarried you were lucky, but if your teacher was unmarried, you were unlucky
- Presupposes: a) Your teacher was adult and male
- b) Your teacher was adult and female.

Thus the proposed analysis makes radically wrong predictions about (14) and (15).

It might be argued that the detachability hypothesis can be preserved and the problem of contradictory presuppositions eliminated by postulating disjunctive presuppositions on disjunctive sentences, so that (14) is reanalysed as follows:

(14') Your teacher will be either a bachelor or a spinster

Presupposes: Your teacher will be either adult and male
or adult and female.

While this eliminates the contradictory presuppositions on (14), it does not eliminate the redundancy of the assertion. Nor will it yield a correct representation of sentences only one disjunct of which carries a presuppositions about age or sex, as for example (16):

(16) Either the victim was a bachelor or no-one got killed :

On the assumption that the second disjunct of this sentence carries presuppositions about age or sex, even on the disjunctive hypothesis about presuppositions (16) will have (17) as one of its presuppositions:

(17) Presupposes: The victim was adult and male.

Clearly (17) is entirely wrong as an appropriateness condition on asserting (16).

However, I think it is the analysis of (15) which demonstrates most clearly the total inadequacy of the detachability hypothesis. On my original analysis of (15), both the assertion and the presuppositions were contradictory. Extending the view that disjunctive sentences have disjunctive presuppositions, we may assume that conditional sentences have conditional presuppositions, and reanalyse the presuppositions of (15) as follows, thus eliminating one of the contradictions:

(15') If your teacher was a bachelor, you were lucky, but if your teacher was a spinster, you were unlucky.

Presupposes: If your teacher was adult and male, you were lucky,
but if your teacher was adult and female, you were
unlucky.

Unfortunately, in addition to the fact that (15) still has a contradictory assertion, the presupposition stated in (15') totally

misrepresents the semantic content of (15). (15) says that if your teacher was a bachelor you were lucky, but makes no claim at all about your position if your teacher was a married man. The presupposition in (15') states that if your teacher was male, whether married or unmarried, you were lucky. This is clearly quite wrong as an appropriateness condition on asserting (15). Similarly for the analysis of spinster.

The obvious way to resolve this dilemma about presuppositions, and at the same time eliminate the contradictory assertion, is simply to represent (15) as follows:

(15'') If your teacher was a bachelor you were lucky, but if your teacher was a spinster you were unlucky.

Asserts: If your teacher was adult, unmarried and male you were lucky, but if your teacher was adult, unmarried and female you were unlucky.

This representation, which seems to me the only adequate one, has a number of unfortunate consequences for the presuppositional approach. In the first place, it eliminates the presupposition. In the second place, it treats the presupposition-features on bachelor and spinster in exactly the same way as it treats their assertion-features, leaving them in their embedded positions, and thus involving a rejection of the detachability hypothesis. In the third place, it treats the presupposition-features and assertion-features of bachelor and spinster as contributing equally to the assertion made by use of (15), thus involving a rejection of the assumption that presupposition-features contribute to the appropriateness conditions alone, while assertion-

features determine the whole semantic content of the assertion. It seems to me that if this conclusion is generalisable to other analyses of lexical items in terms of presupposition and assertion, then the whole approach will have to be radically rethought.

The presuppositional analysis of factives and aspectuals seems to me to run into the same difficulties as that of bachelor and spinster.

(18), for example, would be given the following analysis:

(18) If Sartre knows that Chomsky is alive, I'll be surprised,
but if he knows that Chomsky is dead, I'll be amazed

Asserts: If Sartre is aware that Chomsky is alive I'll be surprised, but if he is aware that Chomsky is dead I'll be amazed

Presupposes: a) Chomsky is alive
b) Chomsky is dead.

This analysis would predict, falsely, that (18) could never be appropriately used, since its presuppositions could never be true together. Similar examples can be constructed with regret and realise. Using conditional presuppositions would again misrepresent the content of (18), giving it (18') as an appropriateness condition:

(18') Presupposes: If Chomsky is alive I'll be surprised, but if Chomsky is dead I'll be amazed.

Clearly the surprise mentioned in (18) is not caused by Chomsky's being alive, but by Sartre's being aware of it. Hence (18') does not give a correct representation of the content of (18).

Similarly, (19) would be given the following analysis:

(19) If John stopped smoking at midnight I'll be surprised, but if he started smoking at midnight I'll be amazed

Asserts: If John didn't smoke after midnight I'll be surprised, but if he smoked after midnight I'll be amazed

Presupposes: a) John smoked before midnight

b) John didn't smoke before midnight.

Here too the presuppositions are contradictory. Again, the use of conditional presuppositions will misrepresent the content of (19):

(19') Presupposes: If John smoked before midnight I'll be surprised, but if he didn't smoke before midnight I'll be amazed.

This is a particularly interesting example, since it seems to me that there is no way to capture a fairly standard interpretation of the sentence while holding the presuppositions distinct from the assertion. On this interpretation, my surprise would be caused by the fact that Bill had not smoked after midnight - part of the assertive content on the above analysis - while my amazement would be caused by finding out that after all Bill had never smoked - part of the presuppositional content on the above analysis. I cannot see any way of capturing this interpretation except by eliminating the presuppositions entirely and representing (19) as (19'')

(19'') Asserts: If John smoked before midnight and didn't smoke after midnight I'll be surprised, but if he didn't smoke before midnight and smoked after midnight I'll be amazed.

Fillmore (1971) analyses the verbs accuse and criticize so that each presupposes what the other asserts, and asserts what the other presupposes. (20) and (21) illustrate this analysis:

(20) Blodwen accused Bill of sabotaging her LAD

Asserts: Blodwen indicated that Bill sabotaged her LAD

Presupposes: Blodwen judged that sabotaging her LAD was bad.

(21) Blodwen criticized Bill for sabotaging her LAD

Asserts: Blodwen indicated that sabotaging her LAD was bad

Presupposes: Blodwen judged that Bill sabotaged her LAD.

Chomsky (1972) points out that (22) raises problems for this proposal:

(22) For John to accuse Bill of lying is worse than for John to indicate that Bill lied

Asserts: For John to indicate that Bill lied is worse than for John to indicate that Bill lied

Presupposes: John judged that it was bad for Bill to lie.

(22) makes a contradictory assertion, on this analysis. Moreover, according to the detachability hypothesis, whereby presuppositions on embedded clauses function as presuppositions of the associated speech-act as a whole, the same structure will be assigned to (22) and (23), and probably to (24) as well:

(23) For John to indicate that Bill lied is worse than for John to accuse Bill of lying.

(24) For John to accuse Bill of lying is worse than for John to accuse Bill of lying.

Chomsky concludes:

"Somehow, the presupposition must be linked in the underlying 'semantic representation' to the specific point in the phrase-marker to which it is relevant." [Chomsky (1972) p. 81]

Clearly this conclusion is correct.

Consider (25) and (26):

(25) Either Joanie accused her husband of reading her letters or she accused him of not reading them.

Asserts: Either Joanie indicated that her husband read her letters or she indicated that he did not read them

Presupposes: a) Joanie judged that reading her letters was bad
b) Joanie judged that not reading her letters was bad.

(26) If Joanie indicated that her husband read her letters, she behaved most uncharacteristically

Asserts: If Joanie indicated that her husband read her letters, she behaved most uncharacteristically

Presupposes: Joanie judged that reading her letters was bad.

On the above analysis, (25) will require Joanie to judge that both reading her letters and not reading them are bad. Yet (25) in no way suggests this: it suggests that she holds one of these opinions, but not both. The claim made by the analysis of (26) is that (26) cannot be used to perform an appropriate speech-act unless Joanie judges that reading her letters is bad. But this is much too strong a requirement to place on (26). (26) precisely casts doubt on whether this is true. Moreover, on this analysis (26) asserts that Joanie's uncharacteristic behaviour consisted in indicating that her husband read her letters, yet a much more natural interpretation would be that it was uncharacteristic of her to make an accusation, or to make this accusation: this interpretation is entirely ruled out by the above analysis. It seems to me that in view of this the correct representation for (25) and (26) is as follows:

(25') Asserts: Either Joanie judged that reading her letters was bad, and indicated that her husband read her letters, or she judged that not reading her letters was bad, and indicated that her husband didn't read her letters.

(26') Asserts: If Joanie judged that reading her letters was bad, and indicated that her husband read her letters, she behaved most uncharacteristically.

This representation captures exactly the correct set of possible interpretations for (25) and (26). But if it is correct, then the putative presuppositions must figure embedded in the semantic content of the speech-acts whose appropriateness they are supposed to constrain. Moreover, given that these presuppositions do not in fact, as I have indicated, act as appropriateness conditions on the assertion of (25) and (26), they must figure only in the speech-act content. Hence the view that appropriateness conditions perform a double function is still too strong.

Similar difficulties arise with the proposed analysis of criticize.

I consider just one example:

(27) Harry didn't criticize Bill for being the last man out of the room; he criticized Charley

Asserts: Harry didn't indicate that it was bad for Bill to be the last man out of the room; he indicated that it was bad for Charley to be the last man out of the room.

Presupposes: a) Harry judged that Bill was the last man out of the room
b) Harry judged that Charley was the last man out of the room.

The proposed presuppositions on (27) indicate that (27) cannot be used to make an appropriate assertion unless Harry held contradictory

opinions: but this is absurd. If (27) requires Harry to hold any opinions at all, they will only be opinions about Charley. In other words, the presuppositions on the negative clause in (27) do not act as constraints on the appropriate assertion of (27); again, neither the detachability hypothesis nor Karttunen's filtering system predict this.

These conclusions indicate the correct solution to the problem raised earlier about the role of presuppositions in truth-value assignment. The putative presuppositions on the examples I have given behave exactly as do standard truth-conditions on simple sentences when these sentences become embedded: their truth is no longer required for the truth of the complex sentence as a whole. If they are analysed as logical presuppositions, then if they are false their associated sentences will lack a truth-value and be incapable of being used to make appropriate assertions. Yet these sentences may be both true and appropriately used if their putative presuppositions are false. Hence, at least in the examples I have given, the alleged presuppositions exhibit all the characteristics of standard truth-conditions, and none of those of logical or pragmatic presuppositions.

It is, of course, open to a presuppositionalist to argue that either ... or, if ... then and worse than are plugs. This would correctly predict the lack of presuppositions on the complex sentences I have used. The logic of my argument, however, is that as more

examples are considered, by similar reasoning it will become necessary to admit that all predicates are plugs. Since the characteristic of a plug is that it destroys presuppositions - or rather converts presuppositions into assertions, as I have shown - this amounts to saying that there are no presuppositions at all, or at least that there are no presuppositions on complex sentences.

b) Generalisation to non-declaratives and simplex sentences

Parallel arguments apply to the presuppositional treatment of the speech-acts of questioning and ordering. On a presupposition-assertion analysis, (28) and (29) would be represented as follows:

(28) Point out to Jemima that Bill's teacher is a bachelor

Orders: Point out to Jemima that Bill's teacher is unmarried

Presupposes: Bill's teacher is adult and male

(29) Is Bill's teacher a bachelor?

Asks: Is Bill's teacher unmarried?

Presupposes: Bill's teacher is adult and male.

Now clearly the content of the order expressed by (28) need not be merely that Jemima be given the information that Bill's teacher is unmarried. If it were, this would be a striking confirmation of the presuppositional analysis. Unfortunately, the order expressed by (28) is that Jemima be made aware that Bill's teacher has the set of properties unmarried, adult and male. Hence, even if two of these features contribute to the appropriateness conditions of the speech-act of ordering which (28) is used to perform, they must also contribute to the semantic content of the speech-act whose appropriateness they

are supposed to constrain. Even allowing for such a double function, a presuppositional analysis of (28) will often make wrong predictions about the content of a given speech-act. Imagine a situation in which all teachers are unmarried, and all teachers are therefore known to be either bachelors or spinsters. The point of (28) when used to make an order in such circumstances would clearly be that Jemima be told that Bill's teacher is male, which she may not know, rather than that he is unmarried, which would be common knowledge.

The analysis of (29) predicts that it is only possible or appropriate to ask whether someone is a bachelor when one knows or assumes that he is adult and male; or on some treatments, when he is in fact adult and male. In either case the prediction is false. In the situation imagined above, where all teachers are unmarried, the point of asking the question expressed by (29) would be to find out whether Bill's teacher was male. Again, it would be wrong to set up the analysis so that this question would be void or inappropriate unless either one knew or assumed that its answer was yes, or its answer was in fact yes. Moreover, on the above analysis the answer yes would merely confirm that Bill's teacher was unmarried rather than, as is needed in these imaginary circumstances, that he was male. Further problems are created by the interpretation of the answer no to (29). On the above analysis, this would mean unequivocally that Bill's teacher was adult, male and married: in other words, it would preserve the presupposition of the question. However, (30) is a

perfectly possible and appropriate response to (29):

(30) No, Bill's teacher is a spinster.

If this response is to be allowed on a presuppositional analysis, this will involve postulating two possible interpretations of a negative response to a question. More seriously, if (29) can be appropriately asked when Bill's teacher is not, or not known or assumed to be male, then it will be necessary to postulate two senses of questions: one presupposition-preserving and one non-presupposition-carrying. In the latter, at least, the alleged presuppositions will behave exactly like standard speech-act content conditions. And again, sentences like (31) confirm that the detachability hypothesis leads to wrong analyses:

(31) Is Bill's teacher a bachelor or a spinster?

Asks: Is Bill's teacher unmarried or unmarried?

Presupposes:a) Bill's teacher is adult and male

b) Bill's teacher is adult and female.

Hence the detachability hypothesis and the distinction between speech-act content and appropriateness conditions seem to break down in the case of non-declaratives in exactly parallel ways to the ways they break down in the case of declaratives.

As before, this conclusion can be generalised to other lexical items which have been given presuppositional treatment. To take just one example, there is no presumption in (32) that Bill left, although on the presuppositional analysis it presupposes that Bill left:

(32) Does John regret that Bill left, or didn't Bill leave?

Asks: Is John sorry that Bill left, or didn't Bill leave?

Presupposes: Bill left.

In (33) one encounters the problem of contradictory presuppositions:

(33) Does John regret that he left, or that he didn't leave?

Asks: Is John sorry that he left, or that he didn't leave?

Presupposes: a) John left

b) John didn't leave.

Again, one can imagine circumstances where one could ask a question containing regret in order to discover whether its complement was in fact true, rather than presupposing that it was true, as the above analysis dictates. Suppose that I know that for all P, if P is true then John regrets that P. Then the point of asking a question like (34)

(34) Does John regret that Bill left?

might very well be to find out whether Bill left, rather than to find out anything about John's feelings. A speech-act of this type is predicted as impossible by the proposed presuppositional analysis, which requires that the truth of the complement of regret be taken for granted if an appropriate speech-act is to result.

Finally, these conclusions about complex declaratives and about non-declaratives may be generalised to simple sentences in the following way. (35) and (36) are valid arguments, one containing a disjunctive premise and one containing a conditional premise of the type already discussed:

- (35) a) Your teacher will be either a bachelor or a spinster
b) Your teacher will not be a bachelor
c) Therefore your teacher will be a spinster.
- (36) a) If your teacher was not a bachelor, you were unlucky
b) Your teacher was not a bachelor
c) Therefore you were unlucky.

According to Fillmore's analysis, (36) can be appropriately used only if the teacher in question was adult and male, since premise b) presupposes this. This is simply false. (36) has no implications whatsoever about the sex of the teacher in question. According to Fillmore's analysis, (35) can never be appropriately used, since if the presupposition on b) is satisfied, the presupposition on c) will be automatically violated. Yet (35) is a paradigm case of rational argumentation: a semantics which either marks it as necessarily inappropriate or even deprives it of the ability to assert anything at all, is a bad semantics.

The conclusion drawn from (35) and (36) - that their simplex sentences cannot carry presuppositions - is confirmed by an argument adapted from Geach (1965). If (35) and (36) are valid arguments, then the words bachelor and spinster must have the same meaning in both the premises and the conclusions, if the fallacy of equivocation is to be avoided. An argument whose premises and conclusion punned on the alternative readings of bachelor as unmarried adult male and young fur seal when without a mate during the breeding season would clearly be invalid. Fillmore talks of distinguishing the presuppositions of a

lexical item from its 'meaning proper', where the meaning proper of bachelor is simply unmarried. I have argued that the occurrence of bachelor in the first premises of arguments (35) and (36) cannot be analysed in terms of presupposition and assertion; and that the 'meaning proper' of the word in these premises must be unmarried, adult and male. But since the arguments are valid ones, the meaning proper of the word bachelor must remain constant throughout the premises and the conclusion. Hence, the occurrence of the word in the second premises and the conclusions must also be analysed as having the meaning proper of unmarried, adult and male. In this way the conclusion about the inadequacy of the presupposition-assertion distinction in the analysis of embedded sentences can be generalised to simplex sentences too.

Parallel arguments may be constructed for other lexical items.

The following is an example:

- (37) a) If John regrets that Nixon is dead, then Nixon is dead
b) Nixon is not dead
c) Therefore John does not regret that Nixon is dead.

Here, on a presuppositional analysis the presuppositions of a) and c) will contradict b). Moreover, since it can be shown that a) does not carry a presupposition, by arguments already used, it should follow that c), a simple sentence, does not carry one either, or else that (37) commits the fallacy of equivocation.

More generally, one wants a semantics in which sentences such as (38)-(40) will be marked as necessary truths:

- (38) If your neighbour is a bachelor, then your neighbour is male
- (39) If John stopped smoking at midnight, then before midnight John smoked
- (40) If Bill regrets that Fred left, then Fred left.

On the proposed presuppositional analysis, (38)-(40) will carry contingent presuppositions. But if a sentence carries a contingent presupposition, it cannot be a necessary truth. Hence the presuppositional approach must be wrong.

The general lines of a refutation of the presupposition-assertion approach to lexical items should by now be fairly clear. Take any lexical item analysed into presuppositional and assertive elements. Show that in negatives, conditionals, and disjunctions, the presuppositional elements must often or always contribute to the assertion made by use of the sentence. Show further that the presuppositional elements do not in such circumstances constrain the appropriateness of the associated speech-act, and hence do not act as presuppositions of this speech-act. I have provided, both in Part I and in this chapter, many types of argument which may be used for these purposes. Show further that the conclusions based on complex declaratives may be generalised both to simplex positive declaratives and many non-declaratives. I have provided in this chapter various arguments which may be used to this end. The correct conclusion seems to be that pragmatic presuppositions on lexical items can in general be treated as standard truth-conditions, and cannot in general be treated as appropriateness conditions at all. It is perhaps worth

mentioning here that a final way in which the arguments of this chapter can be generalised is to analyses in terms of logical presuppositions and entailments. The reader may check for himself that many of them go through intact with a simple substitution of the words logical presupposition and entailment for appropriateness condition and assertion, and of lacking a truth-value for inappropriate.

Some Modified Proposals

Fillmore offers an objection to some of the above arguments:

"Certain apparent counterexamples to the claims I have been making about presuppositions can be interpreted as 'semi-quotations'. I believe some utterances are to be thought of as comments on the appropriate use of words. Uses of the verb chase presuppose that the entity defined as the direct object is moving fast. Uses of the verb escape presuppose that the entity identified by the subject noun-phrase was contained somewhere 'by force' previous to the time of focus ... It seems to me that sentences like (1) and (2) are partly comments on the appropriacy of the words chase and escape for the situations being described. These are sentences that would most naturally be used in contexts in which the word chase or escape had just been uttered:

(1) I didn't 'chase' the thief; as it happened, he couldn't get the car started.

(2) I didn't 'escape' from the prison; they released me."
[Fillmore (1969) p. 122]

Kiparsky and Kiparsky say very similar things about the presupposition-denying negation of the verb clean:

"If you want to deny a presupposition, you must do it explicitly:

Mary didn't clean the room: it wasn't dirty

Abe didn't regret that he had forgotten: he had remembered.

The second clause casts the negative of the first into a different level; it's not the straightforward denial of an event or

situation, but rather the denial of the appropriateness of the word in question -- such negatives sound best with the inappropriate word stressed." [Kiparsky and Kiparsky (1971, p. 351)]

The common view expressed here is that sentences which fail to carry the predicted presuppositions are really denials of the appropriateness of the word which would standardly carry the presupposition. Fillmore sees such uses as semiquotations, and most naturally used in rejecting a prior claim, while the Kiparskys see them as naturally accompanied by heavy stress on the inappropriate word, and add that the sentences must contain an explicit rejection of the presupposition which would otherwise be conveyed.

This last claim is clearly false. I have given many examples of sentences which fail to carry the predicted presuppositions, but contain no explicit statement that the presuppositions are not true.

(41) is a further example:

(41) I didn't clean the bathroom: I cleaned the kitchen.

(41) neither suggests that the bathroom was dirty nor explicitly states that it was not. On the assumption that pragmatic presuppositions behave like logical presuppositions with respect to negation, this is not, of course, surprising. (41) may simply be seen as an external or presupposition-denying negation, and perfectly explicable as such. One might go on to claim that external negations can be seen as denials of appropriateness: however, it does not follow that all cases where a predicted presupposition fails to show up may be successfully treated as denials of appropriateness. It is hard to see how positive conditionals and disjunctions, of which I have given many relevant

examples, can be subjected to such treatment. (42), which contains a modal, does not carry the predicted presupposition either, and can in no way be construed as a denial of appropriateness:

(42) Heath may at this very moment be chasing Wilson down Pall Mall - it's hard to know what politicians will do next.

As far as I can see, there is no presumption in (42) that Wilson is in fact running down Pall Mall at the moment.

It would, of course, be possible to claim that non-presupposition-carrying negatives are denials of appropriateness, while non-presupposition-carrying conditionals are hypothesizations of appropriateness, disjunctions are disjunctive affirmations of appropriateness, modals are affirmations of the possibility of appropriateness, and questions ask for answers about appropriateness. This naturally raises the question of whether there is any difference between a denial of appropriateness and a standard denial, a hypothesization of appropriateness and a standard hypothetical, and so on. Suppose that if an activity is truly to be called chasing, then both the person chasing and the object chased must be moving. If one of these conditions is not met, then the activity cannot truthfully (or appropriately) be called chasing. On the account offered by Fillmore and the Kiparskys, one of these conditions is given a favoured treatment: if the person said to be chasing is not moving, then the statement is appropriate but false, while if the object said to be being chased is not moving, then the statement is said to be inappropriate, or on another level. But this account will only be accepted if we have independent

reasons for calling some truth-conditions pragmatic presuppositions and denying this label to others. I have been arguing in this chapter that there is in fact no justification for doing this. Hence the way out offered by Fillmore and the Kiparskys will only be accepted by one who already believes in pragmatic presuppositions: for someone who has been convinced by my arguments it will have no attractions at all.

One slight further indication that this account is unsatisfactory is as follows. It has been seen that examples such as (41) will have to be construed as carrying denials of appropriateness in their first clauses and standard assertions in their second clauses. Notice, however, that sentences rather like (41) can undergo conjunction-reduction to yield (43) and (44):

(43) I cleaned not the kitchen but the bathroom: the kitchen wasn't dirty anyway.

(44) I cleaned the bathroom and not the kitchen.

It is a condition on conjunction reduction for these sentences that the deleted occurrence of the verb clean must have been semantically identical to the one retained. Hence, if clean does not carry a presupposition in the negative clause - which conveys no suggestion that the kitchen was dirty - then it cannot do so in the positive clause. Similarly, if clean is not a semiquotation in the positive clause - which it clearly is not - then it cannot be one in the negative clause either. These examples provide some confirmation of the inadequacy of this particular account to deal with the many cases of

sentences where predicted presuppositions fail to show up.

Karttunen's plug-hole-filter system fails to account for many of the examples given in this chapter. The objections to it which I listed in Part I are easily adapted to its use in conjunction with pragmatic presuppositions. There is the more general objection to any presupposition-suspending or presupposition-cancelling mechanism, that the arguments of this chapter have been designed to show that presuppositions on simple sentences may drop in the same way as presuppositions on more complex sentences: that depending on the circumstances of utterance even a simple positive sentence like Your neighbour is a bachelor may be seen as taking for granted, now the fact that your neighbour is male, now the fact that your neighbour is unmarried. I do not know of any explicit proposal rich enough to allow for all these possibilities within a presuppositional framework.

Paul Kiparsky [personal communication] has proposed a very interesting alternative to the view that presuppositions are cancellable - a view which would accommodate the fact, widely ignored by presuppositional analysts, that 'cancelled presuppositions' are not eliminated, but in fact become part of the content of the speech-act performed by use of their associated sentence. Kiparsky's proposal is that instead of a cancellation-mechanism, what is at work is a "perfectly general mechanism" whereby presuppositions may be promoted to become part of the assertion made. This mechanism would work in both positive and negative sentences, and operates as follows. (45) has three slightly different possible

interpretations, as indicated in (46)-(48):

- (45) John stopped reading War and Peace
- (46) John stopped reading War and Peace - as opposed to Bartholomew Fair
- (47) John stopped - as opposed to continued - reading War and Peace
- (48) John stopped reading War and Peace - as opposed to taking up opium.

(46) and (47) might be treated as presupposing that John had been reading War and Peace, and asserting that he is no longer reading it. In (48), however, one might feel that two assertions are made: one that John had been reading War and Peace, and the other that he is no longer reading it. Hence (45) might be treated as either presupposition-carrying or not presupposition-carrying, depending on the exact interpretation intended. Given this treatment, there is now an explanation for the alternative interpretations of negatives, questions, conditionals, modals and disjunctions. These interpretations will themselves be parasitic on the two available interpretations of positives, and they will be expected to have both presupposition-carrying and non-presupposition-carrying uses on exactly the same pattern as their related positives.

This is the most adequate treatment of pragmatic presuppositions that I know of. Many of my arguments so far have been directed towards establishing what it assumes: namely, that a wide range of clause-types which may be interpreted as presupposition-carrying have alternative, non-presupposition-carrying interpretations. Other of my arguments have been aimed at establishing that presuppositions may or must contribute to speech-act content and truth-conditions; again

Kiparsky's proposal accommodates this, since in his system certain conditions may function at one time as truth-conditions and assertions, and at another time as logical and pragmatic presuppositions. Given that the general mechanism for converting presuppositions into assertions can be made explicit, the question now arises of whether it is possible to choose between Kiparsky's presuppositional system and an entailment analysis allied with a theory of preferred interpretations.

The predictions made by these two systems will, as far as I can see, be identical up to the point where the consequences of 'presupposition-violation' are stated. These consequences, however, will be different. For Kiparsky, if a presupposition is false, the associated speech-act will be void or inappropriate, and the associated sentence will lack a truth-value. For the entailment analysis, a false 'presupposition' will have the same consequences as any other false truth-condition, resulting in the falsehood of its associated sentence. No prediction will be made about when a speech-act will be inappropriate as distinct from merely false.

Just as I argued at the end of Part I that a theory of preferred interpretations does not involve a theory of logical presuppositions, I now argue that such a theory does not necessarily involve a theory of pragmatic presuppositions, or at least pragmatic presuppositions as I have been treating them here. What is needed to enable us to choose between Kiparsky's presuppositional approach and an entailment analysis with an account of preferred interpretations, is a range of intuitions about whether a given speech-act which has an acceptable non-presupposition-

carrying interpretation (by hypothesis) would be void or inappropriate, or simply false, if interpreted as presupposition-carrying. As far as I can see, only intuitions of this type will motivate a choice between the two theories on empirical grounds. It seems to me highly unlikely that any such intuitions are available.

If this were all that could be said about the two systems, the only way of choosing between them would be to invoke some sort of evaluation-measure. However, I believe that there is one further consideration which argues strongly in favour of the entailment analysis, and against any system based on analysing lexical items into pragmatic presuppositional elements and speech-act-content elements, Kiparsky's system included. I end the chapter by mentioning this consideration.

What is common to the approaches I have been considering in this chapter is the view that the syntactic categories of declarative, interrogative and imperative are typically associated with certain speech-acts: say asserting, requesting information and ordering. In giving the semantic analysis of a word, one examines the conditions in which it is 'normally' used to perform the associated speech-act. For example, one does not 'normally' assert or deny that someone is a bachelor unless one is fairly sure that he is an adult male. One does not 'normally' assert or deny that someone stopped doing something unless one is fairly sure that he has done it in the past. Hence, it must be mentioned in the semantic description of bachelor that it is appropriately used only of adult males, and in the semantic description of stop that it is appropriately used only of an action that has been done before. This

conclusion, I think, is mistaken.

It is probably true that there are certain felicity-conditions attached to the speech-act of assertion. If I utter a declarative sentence without having evidence for its truth, for example, then what I say may not count as an assertion but rather as a guess or a fantasy. If I utter an imperative sentence without believing that what it enjoins can be carried out, then it may not count as an order, but rather as an exhortation, a wish, or part of an experiment. The declarative or imperative sentence is itself quite neutral as between the various speech-acts which it may be used to perform, each of which will have its own idiosyncratic appropriateness conditions. What seems to me to be a fundamental mistake in the presupposition-assertion approach to semantics is to single out one of the many speech-acts which can be performed by use of a syntactic sentence-type, and then build its appropriateness conditions into the semantic analysis of lexical items. The unfortunate consequences of this decision can best be seen by looking at the predictions made when the item in question figures in a less typical speech-act. Take guessing, for example. Guessing is the opposite of asserting, to the extent that a guess is under-evidenced, often non-evidenced. If I guess that the next person to come into the room will be a bachelor, I am obviously not taking for granted, but guessing also, that the next person to come into the room will be adult and male. If I guess that Martians criticize each other for looping the loop, then I am not taking for granted, but guessing,

that Martians occasionally loop the loop. Thus the construal of all declaratives as evidenced declaratives, and the incorporation of this fact about a particular speech-act into the lexical entries for words, will often lead to radically wrong predictions about the appropriateness of other speech-acts.

The fact that what may be an inappropriate assertion may be a perfectly appropriate denial, fantasy or guess seems to me to argue decisively against pragmatic presuppositional theories as conceived in this chapter. Most of the counterexamples I have used have been the sort of sentences which would typically not be used to make evidenced assertions: they were necessary truths, or valid arguments, or evidenced in one of their clauses but not in another. I do not think that one should conclude from this that these sentences should be given an entirely different semantic treatment from that given to evidenced assertions. One would not want to say that they differed in meaning from sentences with more standard uses. But if the semantic analyses of lexical items are to enable them to enter appropriately into the full range of sentences and possible speech-acts, then it does not seem possible to draw a single distinction in these analyses between appropriateness conditions on the one hand and speech-act content on the other. In other words, it seems to me fairly important not to assume, as Fillmore does, a "distinction between the presuppositional aspect of the semantic structure of a predicate on the one hand and the 'meaning' proper of the predicate on the other hand."

This being so, the correct conclusion seems to be as follows. Theories of logical presupposition and theories of appropriateness conditions are best construed as semantic approaches to the problem of preferred interpretation. Since neither of them provides an entirely adequate solution, it might be best to abandon the semantic approach to it, and to throw the whole question of preferred interpretations into the domain of pragmatics or performance. What would then be needed on the semantic level is merely a theory which makes available the requisite number of interpretations for a given sentence, with no preference-ranking among them. The entailment analysis provides an adequate method of doing this. What is needed on the pragmatic level is a theory of speech-acts and their felicity-conditions, about which I shall have nothing to say in this thesis, and a theory of preferred interpretations, to which I shall turn in the next chapter.

Chapter V

Preferred Interpretations

Semantic Approaches to Preferred Interpretation

I assume throughout this chapter that the following position has been established. An adequate entailment analysis will make available the full range of semantic possibilities for interpreting a given sentence, and will make no statement about preferred interpretations. An adequate theory of logical or pragmatic presuppositions will make available the same range of possible interpretations, but will in addition mark as preferred those interpretations which carry presuppositions. In what follows, I present two possible approaches to a pragmatic theory of preferred interpretations, and continue my argument that such a theory, when allied with an entailment analysis on the semantic level, is superior to an approach in terms of logical or pragmatic presuppositions.

The central problem I consider is the following. Sentences (1)-(5) would all be naturally interpreted as suggesting (6): how is this suggestion conveyed?

- (1) Our postillion has been struck by lightning
- (2) Our postillion has not been struck by lightning
- (3) It's true that our postillion has been struck by lightning
- (4) If our postillion has been struck by lightning, let's write a letter to the Times
- (5) Either our postillion has been struck by lightning or Black Beauty has bolted
- (6) We have (or had) a postillion.

Of these sentences, the entailment analysis says merely that (1) and (3) entail (6), and that (2), (4) and (5) have at least one interpretation which is not incompatible with (6). On the face of it, neither of these statements offers any explanation of the fact that (1)-(5) suggest (6). If (1) entails (6), it also entails (7):

(7) All sick pandas are sick.

If (1) entails both (6) and (7), and suggests that (6) is true but not that (7) is true, there must be some additional relation between (1) and (6) which explains how this suggestion is conveyed. Similarly, (4) is not incompatible with (6), but it is also not incompatible with (8):

(8) The man Bill saw last Tuesday has long red hair.

If (4) is compatible with both (6) and (8), and suggests that (6) is true but not that (8) is true, there must be some additional relation between (4) and (6) which explains how this suggestion is conveyed.

According to presuppositional analysis, (1) will presuppose (6), (2), (4) and (5) will have preferred interpretations under which (6) is presupposed, and the relation between (3) and (6) will depend on a decision about how to treat true in presuppositional terms. I believe that the best presuppositional treatment of true assumes that it is a plug. In this case, (3) will not presuppose (6). Within a presuppositional theory the fact that (1), (2), (4) and (5) all suggest (6) may be accounted for as follows. If a sentence has a unique or preferred interpretation on which it carries a presupposition, then a

speaker who uses that sentence suggests that its presupposition is true. On the assumption that true is a plug, this will leave unaccounted for the fact that (3) suggests (6): hence on the presuppositional approach the suggestions conveyed by (1), (2), (4) and (5) form a natural class, while that conveyed by (3) belongs to a different class.

According to the entailment analysis, (1) and (3) will belong to one class in relation to (6), and (2), (4) and (5) will belong to another. (1) and (3) seem to me to be correctly classed together, since if they are true (6) must absolutely be true, while (2), (4) and (5) all have alternative interpretations which are compatible with (6)'s being false. Hence, although I have as yet provided no account of the suggestions conveyed by (1)-(5), the entailment analysis seems to yield a useful classification within which to discuss how these suggestions are conveyed. The presuppositional approach, on the other hand, will have to offer some account of the suggestions conveyed by (3) which differs from the account of that conveyed by (1), and furthermore does not exploit logical presuppositions as a basis for conveying this suggestion.

There is a further range of sentences which would naturally be interpreted as conveying suggestions, for which neither the entailment analysis nor the presuppositional analysis offers any explanation. (9)-(12) all suggest that (13) is true, but neither entail nor (on most accounts) presuppose (13):

- (9) It has been claimed that the king of Thessalonica is the great-grandson of Queen Victoria
- (10) John believes that the king of Thessalonica is insane
- (11) I hope the king of Thessalonica comes to my party
- (12) Since you argue that the king of Thessalonica is your grandfather, I wonder how you are related to Napoleon
- (13) There is a king of Thessalonica.

Karttunen (1973) gives arguments for treating all verbs of propositional attitude, as well as all verbs of saying or reporting, as plugs: in that case (9)-(12) will not presuppose (13), although they suggest that it is true. And indeed it is clear that (13) cannot be a logical presupposition of (9)-(12), since (9)-(12) may clearly be true while (13) is false. On the entailment analysis, (9)-(12) will not entail (13), although they will be compatible with it. Hence the entailment analysis offers the possibility of classing the suggestions conveyed by (9)-(12) with those conveyed by (2), (4) and (5). On the presuppositional approach (9)-(12) must be treated differently from (1), (2), (4) and (5), although there is a possibility of treating them in the same way as (3), which shows a similar lack of presuppositions. Similar groupings will be yielded by the entailment and presuppositional analyses of non-existential presuppositions, as I argued in Part I. The main problem is thus that of deciding which of these groupings is preferable.

Since both the entailment analysis and the presuppositional analysis will have to be supplemented by a separate account of the suggestions conveyed by (9)-(12), I consider first the problem of how these are

conveyed. If the suggestions were restricted to existential ones, then one might consider some principle of preferred interpretation such as Interpret all definite NPs as if they referred. The existential suggestions would then follow automatically from this principle. However, suggestions conveyed by sentences like (9)-(12) may be non-existential as well as existential. (14)-(17), for example, all have natural interpretations on which (18) is true:

- (14) Mary hopes that John has stopped beating his wife
- (15) It is claimed that John has stopped beating his wife
- (16) John's children believe that he has stopped beating his wife
- (17) Since you argue that John has stopped beating his wife, I wonder if you know how he is treating his children
- (18) John has beaten his wife.

In general, where there is an item or construction which has been given a presuppositional analysis, and where a sentence containing this item or construction is embedded under a verb of reporting or saying, or a verb of propositional attitude, the result is a sentence with a preferred or natural interpretation according to which what is presupposed by the embedded sentence is treated as true. However, apart from the strong presuppositional theory which I discussed and dismissed in Part I, I know of no presuppositional theory which treats verbs of reporting or saying as holes, and few which treat verbs of propositional attitude as holes. Hence they offer no treatment of the suggestions conveyed by (14)-(17).

At various points in this thesis I have argued that an adequate presuppositional theory should not resort to plugs, holes and filters, or to other suspension mechanisms, but should simply argue that all

except simple positive declarative sentences are ambiguous between presupposition-carrying and non-presupposition-carrying interpretations. The presupposition-carrying interpretations would be treated as preferred. It now seems that (14)-(17) call for similar treatment: that the best way of accounting for their preferred interpretations is to see them as presupposition-carrying, although there will be alternative, non-presupposition-carrying interpretations as well. In other words, what seems to be called for is a return to the strong presuppositional theory allied with a full-scale postulation of ambiguities. However, this solution cannot be adopted without abandoning the definition of presuppositions which I have used so far in this thesis. It is patently obvious that (9)-(12) and (14)-(17) may be true if (13) and (18) are false: hence there is no immediately obvious sense in which (13) and (18) are acting as logical presuppositions of these sentences. Nor do they seem to be acting as appropriateness conditions on the assertion of (9)-(12) and (14)-(17). In what sense, then, can they still be called presuppositions?

If one were prepared to redefine the notion of presupposition so that it meant, roughly, sentence whose truth is required by a preferred interpretation, but not by non-preferred interpretations, the result might be an adequate 'presuppositional' theory. However, it would then be indistinguishable from the entailment analysis I have proposed, if one simply chose to mark certain entailments as figuring in preferred interpretations. Such an approach, whatever one chooses to call it, seems to me to salvage what is good about presuppositional theories, while jettisoning the definitions of presupposition which led

to unfortunate consequences.

While I think that a theory along these lines could without much difficulty be made explicit, it seems to me to have a rather ad hoc nature. It would involve simply taking each lexical item or construction and marking those of its features which are involved in the preferred interpretation of sentences in which it occurs. There is no general principle given, by which one could predict which aspects of the semantic analysis of an item should figure in preferred interpretations. Given an item with two semantic elements, one of which figured in preferred interpretations, one would not be at all surprised to find another item with the same two elements, this time with the other element figuring in preferred interpretations, rather along the lines of Fillmore's analysis of accuse and criticize. If such items exist, they of course necessitate ad hoc marking. However, I now investigate whether there are in fact any more general principles which may be used to predict preferred interpretations, and which would make the account I have just given superfluous.

A Gricean Approach to Preferred Interpretations

Grice (1968) draws attention to the fact that a speaker often suggests by making a remark more than could be gathered from a strict semantic analysis of this remark. Such suggestions, according to Grice, may be explained on the assumption that conversation is conducted according to certain general rules, and that hearers will interpret remarks in such a way as to preserve the assumption that these rules

are being observed. Since the suggestions conveyed by use of the sentences considered so far in this chapter go beyond what may be gathered from their strict semantic analysis (assuming that this is truth-conditional), we might look to Gricean principles of conversation to explain how they are conveyed. Such principles are clearly pragmatic; hence they would afford a pragmatic explanation for the suggestions under consideration.

Grice's principles of conversation may be summarised as follows:

Co-Operative Principle: Make your contribution to the conversation such as to advance its accepted purpose or direction.

Maxims

1. Quantity:
 - a) Don't give too much information
 - b) Don't give too little information
2. Quality: Try to speak the truth
 - a) Don't lie
 - b) Don't make statements for which you have insufficient evidence
3. Relation: Be relevant
4. Manner: Be easy to understand
 - a) Avoid obscurity and ambiguity
 - b) Be brief and orderly.

According to Grice, a speaker's remarks will be assessed by his hearers against a background assumption that the above maxims are being obeyed. Sometimes, in order to preserve this assumption, the hearer will have to assume that the speaker holds certain views not explicitly expressed

in what he said. For example, suppose that (19) is used to make a remark:

(19) I've just been reading the Times and I'm in a very bad temper.

Assuming that the meaning of and is given by the standard truth-table, (19) would be semantically interpreted simply as entailing that both its conjuncts were true. When used in conversation, however, (19) would suggest in addition that there is a connection between my having read the Times and my being in a bad temper: the connection would most naturally be interpreted as causal. Grice could account for this suggestion by appealing to the maxim of relation: the two conjuncts must be interpreted as being not only relevant to the situation in which (19) is uttered, but also to each other. One natural way of construing the relation between the two conjuncts would be to see them as causally connected. Moreover, the injunction to be orderly would dictate that events should be recounted in the order in which they happened, unless explicit counterindication is given. Hence (19) is taken as conveying more than the mere information that both its conjuncts are true, even though its semantic analysis will yield only this information about the truth of its conjuncts.

It would be possible to account for the suggestion conveyed by (19) on the purely semantic level: for example, by stating that in addition to its strictly truth-functional sense, and has a further sense in which it is equivalent to and so. However, some pragmatic principle of interpretation along the lines suggested above seems to be independently necessary to account for the identical suggestion

which would be conveyed by use of (20):

(20) I've just been reading the Times. I'm in a very bad temper. Here there can be no appeal to the meaning of and. The suggestion conveyed by (20) clearly results from the simple fact that its constituent sentences are uttered in juxtaposition. But if a pragmatic principle is needed to account for (20), it can also account for (19), at no extra cost, at the same time dispensing with the need to treat and as ambiguous.

In a similar way, the maxim of manner might be invoked to explain the suggestion conveyed by (21) that the action mentioned in its first conjunct preceded that mentioned in its second conjunct:

(21) John got married and he had six children.

By reporting events in a particular order, one implies, unless it is explicitly stated otherwise, that they took place in that order. Hence to account for the suggestion conveyed by (21) there is no need to postulate an additional sense of and, this time meaning and then. That some such principle is independently necessary is argued by the fact that (22) conveys a similar suggestion:

(22) John got married. He had six children.

This principle seems to me to go beyond a mere convention: thus the extreme unlikelihood of finding (23) in a dance manual seems to result from the extreme difficulty which would be caused by processing it:

(23) ? You will pause on the second, thirty-ninth, twentieth and first steps.

R. Lakoff (1971) proposes a semantic treatment of and which would account for the suggestions conveyed by (19) and (21), though not by (20) and (22). She argues that and has symmetric and asymmetric uses. It occurs symmetrically when no implications of causal or temporal precedence are involved: with such occurrences the order of the conjuncts may be reversed without change of meaning, so that p and q is equivalent to q and p. It occurs asymmetrically where implications of temporal or causal precedence are involved: with such occurrences the order of the conjuncts may not be reversed without change of meaning, so that p and q is not equivalent to q and p. This is, in effect, a proposal to treat and as ambiguous between its standard truth-table sense and the sense in which it is equivalent to and so or and then. A crucial test of the semantic approach as opposed to the Gricean or pragmatic approach is provided by the behaviour of appositive relative clauses, if one assumes that a fairly widely accepted analysis of the syntax of these clauses is correct. On this analysis, (24)-(26) have a common underlying structure, (25) and (26) being derived from (24) by a transformation which moves the second conjunct of (24) into the subject NP of the first conjunct:

- (24) John is my friend, and John is famous
- (25) John, and he is famous, is my friend
- (26) John, who is famous, is my friend.

If the conjuncts in (24)-(26) are construed as temporally or causally related, Grice will predict that the relations in (25) and (26) are different from those in (24). For Grice, it is the spoken order of the conjuncts which determines the order in which they are interpreted as

occurring. Since the spoken order is partially reversed between (24) and its derived appositive versions, Grice would predict a reversal in accompanying interpretations. For Lakoff, on the other hand, the interpretation should be determined at a deeper level: the level at which the choice between symmetric and asymmetric and is made. [I am assuming here that Lakoff does not allow transformations to change meaning.] She would then predict that if (24)-(26) are taken as containing asymmetric and they will all be given the same interpretation. We should then be able to determine, by examining possible interpretations of underlying conjunctions and their related appositive versions, which of these two proposed approaches is correct.

Consider (27)-(32):

- (27) John got married, and he had six children
- (28) John, and he had six children, got married
- (29) John, who had six children, got married
- (30) The Lone Ranger mounted his horse and rode off into the sunset
- (31) ?The Lone Ranger, and he rode off into the sunset, mounted his horse.
- (32) ?The Lone Ranger, who rode off into the sunset, mounted his horse.

It is clear that the order of events implied in (27) is reversed in (28) and (29). The same is true of the order of events implied in (30), as opposed to (31) and (32): this explains why (31) and (32) sound odd, although derived from the acceptable (30). Hence the predictions made by Grice, and based on surface order, are borne out, while those made by Lakoff, and based on underlying order and the ambiguity of and, are not.

It would, of course, be possible to combine a principle of surface interpretation with the treatment of and as asymmetric. However, this would still provide no account of the suggestions conveyed by use of (20) and (22). These suggestions cannot, as far as I can see, be handled semantically, and if it is necessary to use a pragmatic principle to account for these, there seems to me to be no reason why it should not also be used for the similar suggestions conveyed by sentences containing and, thus simplifying the semantics considerably. And in general, if a Gricean principle can be used to explain certain suggestions conveyed by the use of sentences, and if furthermore these principles are independently necessary and offer the possibility of simplifying semantic description, it seems to me that one should abandon the search for a semantic explanation of the suggestions conveyed.

I have referred at various points in this thesis to the suggestions carried by negatives, conditionals, disjunctions and modals. I have claimed that these suggestions cannot be treated as entailments, since they may be cancelled without contradiction; nonetheless, in the absence of cancellation they are often taken for granted as true. I have also referred at various points to the suggestions carried by sentences containing verbs of reporting speech, or verbs of propositional attitude. These suggestions cannot be treated either as entailments or as presuppositions; nonetheless, in the absence of cancellation they are often taken for granted as true. If Gricean pragmatic principles can offer an explanation of the suggestions carried by verbs of reporting speech and verbs of propositional attitude, they will thus be shown to

be independently necessary. If they also offer an explanation for the suggestions carried by other sentences which have been subjected to semantic presuppositional treatment, it should follow that such presuppositional treatment can be dispensed with in favour of a Gricean approach.

According to the entailment analysis of negatives, any of a)-e) below expresses a sufficient condition for the truth of (33), though none of a)-e) is necessary for the truth of (33):

(33) 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.

Since (33) can be uttered with any of a)-e) appended as clarification, and without anomaly, all of a)-e) express possible interpretations of (33). However, I have listed these interpretations in ascending order of preferability, since if (33) is uttered in isolation, or without clarification, it would normally be taken as suggesting d), or, more likely, e). What has to be explained on Gricean principles is why e) is the preferred interpretation of (33).

First, notice that except when explicitly contradicting a previous remark, there would be no point at all in using (33) 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, (33) 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 (33) 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): it is in general, and ignoring special purposes such as flat contradiction, deliberate confusion of the issue, etc., easier to say straight out that a given person does not exist than to use a more complex negative such as (33).

The elimination of a)-c) interpretations by appeal to Gricean maxims leaves d) and e) as the most likely interpretations of (33). The d) and e) interpretations take for granted that John exists and Bill exists, and that Bill is ill. Hence these presuppositions of a sentence like (33) can be explained by a theory of conversation, and do not need to be accounted for at the semantic level. 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 (34):

(34) John does not know that Bill is ill.

While (33) has (34) as a possible interpretation, it also has the possible interpretation given in e) above. Since there are thus two available ways of conveying the information in (34), of roughly the same length, one of which is open to other interpretations, the Gricean goal of clarity will dictate (34) as the correct form in which to convey this information. This leaves e) as the most likely interpretation of (33) according to Gricean principles - as it in fact is.

What I have been saying about the interpretation of negatives on Gricean lines carries over directly to the interpretation of questions. Someone who asks a question in the form of (35):

(35) Does John regret that Bill is ill?

would normally be taken as assuming that John and Bill exist, and that Bill is ill, and wanting to know whether John was sorry about Bill's being ill. He would not be taken as wanting to know whether Bill was really ill: if he had wanted to know this, he would have asked (36) instead:

(36) Is Bill ill?

Similarly, if he had wanted to know whether John knew that Bill was ill, the need to avoid obscurity would have dictated the form in (37), rather than (35):

(37) Does John know that Bill is ill?

Hence, if a speaker uses the form of words in (35), it follows from Gricean principles that what he is most likely to want to know is whether, given that John and Bill exist, and that Bill is ill and John knows it,

John is sorry about it.

Consider (38) and (39):

(38) If the king of Thessalonia comes to my party, I shall be very happy

(39) If John stopped singing, Bill left the room.

These conditionals, as I have argued, have possible interpretations on which they do not entail that there is a king of Thessalonia, or that John had been singing. Can Gricean analysis give any explanation for the fact that they would normally be interpreted as suggesting that there is a king of Thessalonia, and that John had been singing? A first approach to such an explanation might run as follows. The fact that (38) and (39) are conditional, rather than categorical statements, would indicate that the speaker is not certain that antecedent and consequent are true. If he had been certain of their truth, he would have made the stronger categorical statements, obeying the injunction to give all relevant information: the information here is clearly relevant or else the subject would not have been brought up at all. On the other hand, he must have some evidence that the antecedent is true, since he is prepared to state what follows from it. But in the case of (38), if there is no king of Thessalonia there is no available evidence that he will attend a party. Since a speaker who uses (38) will be presumed to have some evidence for the truth of the antecedent, it will follow that he will be presumed to believe that there is a king of Thessalonia. Similar reasoning applies to (39).

Another case where the truth of a particular sentence is doubtful

but relevant is that of disjunctions, as in (40) and (41):

(40) Either Bill stopped singing or Jack left the room

(41) Either the king of Thessalonia came to your party or Queen Victoria promised to come.

Again, if the speaker had known of either of the disjuncts that it was true, he would have said so. Its truth is clearly relevant to the discussion if he has thought the subject worth bringing up. He must then be presumed to think that at least one of the disjuncts must be true, and that the other may be true too. Again it follows that if he uses (40) or (41) he must have some evidence for the truth of both disjuncts; from which it will again follow that he believes that Bill had been singing, and that there is a king of Thessalonia.

A similar explanation might be given for suggestions conveyed by sentences embedded under verbs of reporting speech or propositional attitude. Consider for example (9) and (16), which I repeat here for convenience:

(9) It has been claimed that the king of Thessalonia is the great-grandson of Queen Victoria

(16) John's children believe that he has stopped beating his wife.

(9) would generally be taken as implying that there is a king of Thessalonia, and (16) that John has beaten his wife. These implications cannot be explained by either the presuppositional approach or the entailment approach. A Gricean account might run as follows. (9) and (16) must have some relevance to the current discussion. Such reports

might be relevant in either of two ways: first, for use in assessing the holder of the belief or maker of the claim; second, as evidence for or against the belief or claim itself. If the first, then it will be presumed that hearers know whether the reported belief or claim is true, and no question of preferred interpretations will arise. For example, if (16) is used in a discussion of John's children, rather than, as is more likely, in discussion of John's treatment of his wife, then it will be presumed that hearers know whether or not John has stopped beating his wife: otherwise they could not use (16) in their assessment of John's children. The more normal case, however, would be the second, where sentences like (9) and (16) are used in discussion of the merits of the claims or beliefs they report. In this case reasoning will proceed exactly as for conditionals and disjunctions. The truth of these claims or beliefs must be relevant, or the speaker would not have mentioned them. If he had known that they were true, he would therefore have said so. Since he has not said so he must be doubtful of their truth, but nonetheless must have some reason for believing that they are true. Therefore in the case of (9) he must at least believe that there is a king of Thessalonica, and in the case of (16) he must at least believe that John has beaten his wife.

Gricean analysis might also be used to account for the differing degrees of strength with which different sentences convey suggestions. I have argued that certain interpretations of negatives, though semantically possible, 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. To take an extreme example, (42) would not be used to suggest that there was no king of France:

- (42) 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.

Nonetheless, on the account I have given, it would still be true if there were no king of France. It would not be used to convey this information, simply because it would not convey it very well: there are very many other interpretations of (42) which would also make it true. We might then take it as a general principle that the more semantically complex a sentence is, the more strongly certain of its possible interpretations will be ruled out on Gricean grounds: in other words, the more strongly it will suggest something which it does not in fact entail. The shorter and simpler a sentence, the less strongly it will suggest anything which it does suggest. Thus consider (43) and (44):

(43) My pet is not a vixen

(44) Robin is not a bachelor.

By Gricean principles, (43) and (44) might be construed as suggesting that my pet is a fox, and that Robin is a man: otherwise I would have given the more explicit information that my pet was not a fox, and that Robin was not a man. And I think that very often (43) and (44) would have these interpretations, but there are also many occasions on which they do not. This will of course depend on the topic of conversation,

and on what has been said before. The weakness of the suggestions on (43) and (44) may be seen as resulting from the fact that these sentences are relatively short and non-complex, and that the saving in length and complexity which would be gained by substituting fox and man for vixen and bachelor would be minimal, whereas the saving by recasting (42) would be immense by comparison. I think that along these lines a conversational theory could start to account for the variation in strength of suggestions which I have claimed that no presuppositional theory can explain.

Returning to some of the examples used in Chapter III, the principle I have suggested would predict that the suggestions carried by sentences with derived nominals like the claim and the painting would be weaker than those carried by sentences containing the possessives Harry's claim and Bacon's painting, precisely because these latter sentences will be semantically more complex. Since derived nominal NPs are probably more complex than non-derived NPs, we would in turn predict a stronger suggestion on NPs like the claim (which might contain a dummy agent) than on NPs like the dog. Again this prediction is borne out by the facts. Conceivably a similar explanation would work for clefts, pseudo-clefts and quantified NPs. All this is extremely tentative, but I think it is undeniable that the suggestions conveyed by these different constructions differ in strength, and some principle of semantic complexity does make a start at accounting for these differences.

Objections to the Gricean Approach: an Alternative Account

I believe that the suggestions conveyed by negatives and questions can be fairly adequately explained on Gricean lines. Those conveyed by conditionals, disjunctions, modals and sentences embedded under verbs of reporting or verbs of propositional attitude strike me as much less obviously Gricean in nature, and I shall shortly turn to an alternative approach to these. Before leaving the subject of Grice, however, I should mention a recent paper by Kroch (1972) which argues that the entire Gricean approach is vacuous. Kroch takes as an illustration sentence (45) and its Gricean analysis below:

(45) John ate the apple.

This is normally taken as meaning that John ate all of the apple. We can explain this interpretation on Gricean lines by appealing to maxim 2b. If the speaker merely knew that John had eaten some of the apple, he would have said so, in order to keep his statement within the bounds of the evidence available to him. Since he has left out the qualifying phrase, then, he must mean to convey that John ate the whole apple. Unfortunately, by similar reasoning we could predict the reverse interpretation. If the speaker had meant to indicate that the whole apple was eaten, he would have said that John ate all of the apple, in order to avoid violating maxim 1b by giving too little information. Moreover, he must also have been obeying maxim 2b and ^{avoiding} saying more than he knew. Hence he was merely indicating that at least part of the apple was eaten. Kroch concludes:

"Obviously, a theory that accounts for what exists and for what does not exist with equal ease can provide no explanations."
[Kroch (1972) p. 266]

Kroch is, I think, correct in arguing that Gricean analysis is inadequate to account for the suggestion conveyed by (45). Notice in particular that the suggestion conveyed by (45) is extremely idiosyncratic. It is not true in general that an unqualified noun-phrase is interpreted as implicitly meaning all of rather than some of. Its interpretation will depend in part on the nature of the noun-phrase itself, and in part on the nature of the associated verb. Thus if I say (46)-(48):

(46) John saw the house

(47) Mary heard the nightingale's song

(48) Susie read the Times

it is extremely unlikely that I will be interpreted as asserting or implying that John saw all of the house, inside and out, front and back, roof and all. (47) leaves it quite open whether Mary heard all or part of the nightingale's song, while (48) would certainly not be accounted false if Susie omitted the article on bean-canning in the business section. On the other hand, with (49)-(51):

(49) Himmler destroyed the house

(50) Charlie quenched the flames

(51) Einstein refuted the theory of gravity

the implication is certainly that after the actions performed there was nothing left of the house, the flames and the theory of gravity respectively. There are also verbs which carry the implication of some rather than all on their associated noun-phrases, as in (52)-(54):

(52) I touched the Pope's robe

(53) I scratched the surface of the table

(54) I pointed out the implications of what he had said.

Obviously (52) does not suggest that I touched the Pope's robe all over, and (53) does not suggest that the whole of the surface of the table got scratched. It is clear, then, that the suggestions conveyed by (46)-(54) cannot be given a unitary interpretation along Gricean lines.

Kroch gives no account of how the suggestions are conveyed, but suggests that the notion of invited inference of Geis and Zwicky might form the basis for a rigorous approach. [See Geis and Zwicky (1971) and Karttunen (1971) for further discussion.] I shall offer no account, but the following remarks may be relevant. If I say "John destroyed the house", I certainly mean that he destroyed some sufficient proportion of it, although this may stop short of total annihilation. The Irish Question destroyed the Liberal Party, even though there are at present eight Liberal Members of Parliament. It may be that for each verb there is a conventional reading of what counts as a 'sufficient proportion' of the reference of the noun-phrase affected, and that only if this sufficient proportion is not met - is either exceeded or fallen short of - does one resort to qualifying phrases like some of, much of, most of, or all of. Thus for reading the Times the exceptional case is where one reads every word: hence such remarks as "John is mad: he read all of the Boston Sunday Globe yesterday", which is quite different in import from "John is mad: he read the Boston Sunday Globe yesterday".

However, it is not correct to argue from the fact that there is one case of a suggestion which cannot be handled by Gricean theory to the conclusion that there are no cases which can be so handled. To prove that the suggestions conveyed by negatives and questions cannot be handled on Gricean lines, Kroch would have to show that in the case of (33), for example, Gricean reasoning would motivate the choice of a)-c) interpretations as easily as it motivates the choice of the e) interpretation; or alternatively that Gricean reasoning could be used to rule out interpretations d)-e) just as efficiently as it can be used to rule out interpretations a)-c). But this cannot be done. Suppose that the preferred interpretation of (33) were simply that Bill was not ill. It would be extremely hard to explain this on Gricean principles. The injunctions against prolixity, obscurity and irrelevance would all point to (55) as the best way to express this information:

(55) Bill is not ill.

There are no maxims which could be used to motivate use of (33) instead of (55) unless, as I have said, one has ulterior purposes, for example, to contradict something which has just been said, or to be as misleading as possible without actually lying, as in some games. Thus it does not seem possible to object to the Gricean approach to negatives on the grounds adduced by Kroch.

Nonetheless, there are objections. One is that the account given on Gricean lines is insufficiently explicit and formal. For an attempt to answer this objection and to produce a more explicit proposal, see Kempson (1973). Another is that the account given of the suggestions

conveyed by conditionals, disjunctions and complex sentences is really rather implausible. It is perhaps significant that the hardest suggestions of all to account for are those conveyed by sentences containing verbs of reporting or verbs of propositional attitude: the sentences which on most presuppositional theories carry no presuppositions. It seems to me undeniable that (56) and (58) suggest (57) and (59) in exactly the same way as 'presupposition-carrying' sentences carry suggestions. Yet I can find no really convincing pragmatic reason why they should do so:

- (56) John suspects that Bill regrets that you left
- (57) You left
- (58) Mary thinks that her aunt is the Queen of Sheba
- (59) Mary has an aunt.

Another objection to the Gricean approach is best illustrated by sentences containing modals. Earlier in this thesis I argued that a sentence like (60) carries no presupposition that Nixon is bald:

- (60) Nixon may regret being bald.

It often suggests that Nixon is bald, but this suggestion can be cancelled, as in (61):

- (61) Nixon may regret being bald - for all I know he wears a toupee.

Similarly a sentence like (62) suggests, but does not presuppose, that there is a High Lama of Aberdeen, as witness (63):

- (62) The High Lama of Aberdeen may present the prizes.
- (63) The High Lama of Aberdeen may present the prizes - who's to say when we'll be taken over by the Tibetans?

On the semantic analysis that I propose, (60) has the additional unlikely interpretation that Nixon may exist, and if he exists he may be bald, and if he is bald he may regret being bald, and the slightly more reasonable interpretation that Nixon does exist, and may be bald, and if bald may regret the fact. As far as I can see, there is no Gricean maxim which would motivate what is in fact the preferred interpretation of (60) as opposed to the possible but less likely interpretations which I have just mentioned. There is a way of ruling out the use of (60) to convey the mere information that Nixon may exist, since there is a shorter and less ambiguous way of conveying this information. But (60) is the shortest possible way of conveying the information that Nixon may exist, and may be bald, and may be sorry that he is bald. Why, then, is this such an unlikely interpretation?

I think to explain the interpretation of modals correctly, it might be necessary to assume that there is a specific principle of interpretation which hearers will try to apply first, and which they will only abandon if it does not square with the facts. The principle is that when someone makes a modal statement, he has some evidence for the truth of its related non-modal. If I say (64), for example:

(64) Our new professor may be a homosexual

it will generally be assumed that I am not just saying this on the basis that anyone may be a homosexual, but rather that I have some evidence that this particular person is one. It is not that this evidence is necessary, just that it is usually assumed to be there. It is open to a speaker to indicate specifically that he has, or has not, this evidence, as witness

the difference between (65) and (66):

- (65) Vassily's geometric semantics may be the most adequate theory yet - it certainly handles all the data I've tried it with
- (66) Vassily's geometric semantics may be the most adequate theory yet - pigs may fly.

But in the absence of such indication, I think the natural interpretation would be in the spirit of (65) rather than (66).

A similar principle might be invoked to explain the suggestions carried by disjunctions. If a speaker produces a disjunction which is a contingent truth, it is generally assumed that he has some evidence for the truth of both disjuncts, although he does not know which is actually true. Again, it is open to him to deny that he has such evidence, but as a matter of conversational fact he will be assumed to have it. The same holds for conditionals: if a speaker produces a conditional statement, he will be assumed to have some, though not complete, evidence for the truth of the antecedent. The same might very well be claimed for some uses of reported claims, wishes or hopes. Such principles cannot be handled on purely Gricean lines, for though they assume that a speaker in saying something must have evidence, they do not depend on his having evidence for what he actually says, but on his having evidence for a related categorical statement.

If these principles exist, they raise as many questions as they answer. In particular, they raise the question of what counts as evidence for a given statement. I have said that in general, if a speaker utters one of (67)-(69) he is assumed to have evidence for (70):

- (67) Nixon may regret being bald
- (68) If Nixon regrets being bald, I'm leaving
- (69) Either Nixon regrets being bald or his brother does
- (70) Nixon regrets being bald.

Now although there are a number of necessary conditions for the truth of (70), only some of these necessary conditions count towards confirming the truth of (70). For example, (70) cannot be true unless Nixon exists; but the fact that Nixon exists does not count as confirmation of (70). Similarly, (70) cannot be true unless Nixon is bald; but the fact that Nixon is bald would not be accepted as evidence in favour of (70). What would count as evidence would be Nixon's behaviour given that the first two conditions were satisfied: for example, his insistence on subsidising the National Foundation for Research on Hair Restoration, or his gloom when looking at the back of his head in the mirror. While it is certainly part of the job of a semantic theory to investigate valid deductive reasoning, it does not seem to me to be part of its job to investigate confirmation theory. And insofar as the interpretation of modals, conditionals and disjunctions depends on what counts as confirmation of a related categorical statement, it does not seem to me to be the job of semantics to investigate this.

If what I have been saying in this section is correct, it provides an additional reason for abandoning the semantic approach to presuppositions. Presuppositions tie up with the theory of confirmation in the following way. What have been treated as presuppositions of

various types are exactly those truth-conditions which would not be counted as evidence for the truth of their related sentences. What have been treated as entailments or assertions are just those truth-conditions which would count as evidence for the truth of their related sentences. Now it is clear that the distinction between evidential and non-evidential truth-conditions has no necessary connection with the notion of truth-value-gaps or the notion of appropriateness conditions. One who insists on recording the distinction between evidence and non-evidence on the semantic level could perfectly well abandon the two definitions of presupposition I have discussed, using a single notion of entailment in his semantics, but classifying entailments according to his new distinction between evidential and non-evidential truth-conditions. However, it seems to me that this distinction is not really one which should be captured by an adequate semantics, and in that case there is no need for a semantic theory of presuppositions.

Conclusion to Part II

I summarise the conclusions of Part II as follows. The view that presuppositions may be defined as appropriateness conditions and incorporated as such into semantic description leads to many false predictions about the appropriateness of particular utterances. Like logical presuppositions, pragmatic presuppositions may best be seen as part of a theory of preferred interpretations. A theory of preferred interpretations is best seen as pragmatic rather than semantic. If such a theory relies on the notion of presupposition, presuppositions

should not be defined in terms of truth-value gaps or appropriateness of utterances, and the strong presuppositional theory, allied with a theory of systematic ambiguity between presupposition-carrying and non-presupposition-carrying senses should be retained. In this way a unitary account could be given of the preferred interpretations of sentences embedded under verbs of reporting and verbs of propositional attitude as well as those of negatives, conditionals, disjunctions, modals and questions. On the pragmatic level, some attempt should be made to find general principles from which preferred interpretations would follow automatically. I have suggested two such approaches: one along Gricean lines and one with confirmation theory as a starting point. I should now like to return to semantics proper, and argue that certain sentences convey suggestions which cannot be handled at the semantic level as entailments, or at the pragmatic level as Gricean implications, which do not exhibit any of the properties of logical or pragmatic presuppositions, but which nevertheless it is the job of semantics to describe.

PART III

NON-TRUTH-CONDITIONAL

SEMANTICS

Chapter VI

Some Problems for the Entailment Analysis

I have tried to show that with a purely truth-conditional analysis on the semantic level, allied with an account of certain pragmatic implications, a large number of cases which have been used to motivate a presuppositional analysis can be satisfactorily handled. In the remainder of this thesis I should like to consider a number of cases which do not seem susceptible to the treatment I have proposed. It is conceivable that these are genuine cases motivating a presuppositional approach, although I shall argue for a rather different treatment. First, a few illustrations of the problem.

a) Deprive and Spare

Consider the following sentences:

- (1) Children used to be deprived of tuition in creative writing, but the situation is very different today.
- (2) Children used to be spared tuition in creative writing, but the situation is very different today.

Clearly (1) and (2) have truth-conditions in common: both state that children used to receive no tuition in creative writing, and now receive it. In addition, (1) suggests that tuition in creative writing is a good thing for children, while (2) suggests that it is a bad thing. These suggestions are obviously attributable to deprive and spare: the question is how to handle them.

Notice first that sentences like (1) and (2) do not necessarily commit the speaker to the view that tuition in creative writing is a good thing (or a bad thing). He can explicitly deny that he believe what his sentence suggests, as in (3) and (4):

- (3) I've deprived my children of sweets between meals, because sweets between meals are bad for them.
- (4) I've spared my students my views on the A over A principle, although it would do them a lot of good to hear them.

The suggestions conveyed by (3) and (4) have to do not with the speaker's attitude to the things withheld, but with the children's and students' attitudes to them. (3) suggests that the children see the sweets as desirable, and (4) suggests that the students regard my views on the A over A principle as undesirable. Since (3) and (4) are not contradictory, it does not seem to be a truth-condition on deprive and spare that the object withheld be desirable or undesirable, respectively.

Neither is it true that the person deprived or spared must see the object withheld as desirable (or undesirable). (5) and (6), where this possibility is denied, are not contradictory:

- (5) The Shoshi have no conception of democracy: in fact they have been deprived of the chance to vote since time immemorial.
- (6) The Shoshi have no conception of democracy: they have been spared the complications of voting since time immemorial.

Here the relevant attitude would normally be seen as held by the speaker, but there are cases where neither the speaker nor the person deprived can be seen as having the relevant attitude, as in (7) and (8):

(7) I've deprived Bill of my company so that you can see me again: though I can't think what you see in me and I rather think Bill was pleased when I told him.

(8) Bill deprived Amanda of his company all afternoon, little realising that she loathes him as much as we do.

In (7) the view that my company is a good thing is clearly attributable to the hearer, and in (8) to Bill. It is even possible without contradiction to deny that the speaker, or the hearer, or the person withholding, or the person from whom the object is withheld, have the relevant attitude, as in (9):

(9) Darling, we've been depriving our children of Vitamin P all these years and never knew it. I bet it hasn't done them any harm, either.

Here the view that Vitamin P is desirable will be seen as coming from the author of the Reader's Digest article in the speaker's hand.

Sentences (1)-(9) present a number of special problems for semantic analysis. In the first place, given that deprivation involves desirability and sparing involves undesirability, it is odd that (3) and (4), and the more explicit (10) and (11), are not contradictory:

(10) I'm going to deprive the reading public of your work on algebraic semiotics, a most undesirable book.

(11) I'm going to spare Fred my daughter's opinion on the revolution, highly desirable though it is.

Even though there are many problems with the analysis of subjective-judgment words in general, it is not normally true that one can propose a subjective judgment and then retract it: (12) and (13), although they embody subjective judgments, are clearly contradictory:

(12) ? Your revolting jokes are not revolting

(13) ? Seaweed, while highly desirable, is not desirable.

The non-contradictoriness of (10) and (11), then, seems to rule out a standard truth-conditional analysis of deprive and spare, according to which (10), for example, would entail (14), and would thus be contradictory:

(14) Your work on algebraic semiotics is desirable.

The obvious place to look for a method of handling these facts is within a theory of presuppositions, either logical or pragmatic. The presuppositional approach would yield analyses such as (15) and (16):

(15) I deprived Bill of seaweed for breakfast

Asserts or entails: I withheld seaweed for breakfast from Bill

Presupposes: Seaweed for breakfast is desirable

(16) I spared Bill seaweed for breakfast

Asserts or entails: I withheld seaweed for breakfast from Bill

Presupposes: Seaweed for breakfast is undesirable.

There are, however, certain clear differences between the suggestions carried by spare and deprive and those carried by other words which have been subjected to presuppositional treatment, some of which I have discussed in the first two parts of this thesis. Whatever the possibilities of presupposition-cancellation, for example, it is never the case that the putative presupposition carried by words like stop, or constructions like definite NP, can be cancelled in positive main clauses. (17)-(19) are straightforward contradictions:

(17) ? Priscilla stopped claiming to be a genius, but then she had never claimed to be one anyway.

- (18) ? My fiance is here, though come to think of it, I haven't got one.
- (19) ? Bill now realises that he is doomed, though of course he's not.

Yet we have seen that cancellation without contradiction occurs with spare and deprive in such positions.

By the same token, it is clear that the speaker commits himself to the truth of the suggestions carried by stop, realise, etc. whereas he is not necessarily committed to the truth of those carried by spare and deprive. With a sentence like (15), for example, where there is no explicit or implicit cancellation, it seems to me that an audience is entitled to attribute the view that seaweed is desirable either to the speaker, or to Bill, or to themselves, or to someone else germane to the discussion, all with perfect freedom:

- (15) I deprived Bill of seaweed for breakfast.

A further difference is that if a 'presupposition' on a word like realise or stop is cancelled, the hearers will radically reorganise their picture of what has gone on. Speaking metaphorically, we have "Bill didn't realise that Nixon was dead (picture of Nixon lying dead and Bill oblivious) - because he wasn't (picture of Nixon walking around and Bill reading a book.)" On the other hand, "Bill is depriving his dog of dog-biscuits (picture of a starving dog) - which it actually hates anyway (picture of a dog still starving)." Of course, this is partly because people's judgments about facts don't make much difference to the look of the facts, but it is also that when a suggestion on realise is

cancelled, it is gone for good and plays no more part in the interpretation of the sentence, whereas when a suggestion on deprive or spare is cancelled, it is not really cancelled at all but merely reinterpreted as coming from someone other than the speaker. Again, the case of deprive and spare shows marked dissimilarities to the cases treated as entailments earlier on in this thesis.

b) Yet

Before going on to discuss how best to handle these facts, let me give a few more illustrations of what seems to me to be the same phenomenon. Consider (20) and (21):

(20) John is not here

(21) John is not yet here.

As with the previous pair in this chapter, (20) and (21) have truth-conditions in common: both are true only if John is not here. (21), unlike (20), suggests that John is coming. As with previous cases in this chapter, the suggestion carried by (21) is not part of what the speaker commits himself to by saying (21): (22) is not a contradiction:

(22) John is not yet here, and in spite of what you said I don't think he's coming.

(22), of course, suggests that it is the hearer, rather than the speaker, who believes that John is coming. Clearly, since (22) is not a contradiction, it cannot be part of the truth-conditions on (21) and (22) that John is coming. On the other hand, if the suggestion is treated as purely pragmatic, this will involve saying that yet has no semantic context at all, since its only function seems to be to carry this suggestion.

As with the suggestions carried by deprive and spare, the speaker need not necessarily commit himself to the truth of the suggestion carried by yet. In (23), the expectation that I will resign is readily attributed to the hearer:

(23) I have not resigned yet, and I have no intention of doing so. Even in (24), where it is denied that either the speaker or the hearer believes that the situation was about to alter, there is no contradiction:

(24) At this stage Pitt was not yet Prime Minister, and indeed as we both know he never became Prime Minister.

Here the expectation that Pitt would become Prime Minister is attributed to Pitt himself, or others at that time, or others apart from the speaker and hearer involved in the current discussion. It is only when the sentence seems to rule out all possibilities of attributing this belief to anyone at all that bafflement begins to arise, as it does in (25):

(25) At this stage Pitt was not yet Prime Minister; and indeed neither he nor anyone else ever dreamed that he would become Prime Minister; and in fact he died the next day without ever holding office of any sort.

Even here, (25) would be perfectly good as a response to someone who had just asked whether at this stage Pitt was Prime Minister yet.

Yet perhaps provides the best illustration of how I propose treating the facts under discussion here. I propose that yet be analysed as carrying a semantic, but non-logical implication that the related positive of the sentence in which it occurs is (was) going to be true. Thus (21) would be analysed as follows:

(21) John is not yet here

Truth-conditions: John is not here

Non-logical implication: John will be here

The speaker is seen as committed to the truth-conditional, but not the

non-logical implications of what he has said. The job of the hearer is to find a satisfactory source for the non-truth-conditional implications: either the speaker, or himself, or someone else germane to the discussion. The meaning of (21) is the sum of the two types of semantic implication, but a truth-value is assigned only on the basis of the truth-conditions: the non-logical implication is separately evaluated, and the hearer is free to agree or disagree with it while still judging (21) true. I propose handling all the examples I shall give in this chapter along similar lines. For further discussion of possible solutions, see Chapter VII.

c) But

A third example of the phenomenon I am concerned with is provided by the contrast between but and and. But clearly has part of its truth-conditions in common with and: a sentence with but will be accounted true only if both its conjuncts are true. Hence (26) will be true only if John likes artichokes and Bill prefers radishes:

(26) John likes artichokes, but Bill prefers radishes.

It is well known that sentences containing but generally imply a contrast between the two conjuncts - a contrast often lacking in the corresponding sentences with and. Thus, the suggestions conveyed by (27) and (28) differ:

(27) My grandmother is coming, and there's a good film on at the Orson Welles tonight (so we'll both go).

(28) My grandmother is coming, but there's a good film on at the Orson Welles tonight (so life's not all bad).

It is also well known that the contrast relevant for the use of but may not consist in an objective non-comparability between the states of affairs described, but rather in the contrasting attitudes of the speaker to them. In (29), for example, the suggestion is that the speaker is happy about one of the conjuncts, but not about the other:

(29) My mother is here, but my grandmother is coming.

An alternative interpretation would be in terms of expectations: given the first conjunct, the second is unexpected. There are, unfortunately, myriad other interpretations, and not all of them involve either an objective contrast between the facts described in the two conjuncts, or a contrast of any sort in the speaker's attitude to them. This, again, seems to rule out any possibility of a truth-conditional treatment of but. If it were a truth-condition on but, for example, that the facts described had to compare and contrast in some respect, it would certainly be contradictory for a speaker to use a but-conjunction and go on to deny that such a contrast existed. Consider the exchange in (30):

(30) A: My MP voted to retain the death penalty. Yours, on the other hand, voted for Concorde.

B: Your MP voted to retain the death penalty, but mine never voted for Concorde. In any case, I don't see the connection.

Here the relevant contrast is not between the two conjuncts in B's reply, or in B's attitude to the facts expressed in them, but between A's view that B's MP voted for Concorde, and B's view that he did not. This means that while the but in B's rejoinder is perfectly well motivated, he can consistently use it and deny that any contrast between the two conjuncts in his own utterance, or his attitude to them, exists. With more

recherche examples, of which I will deprive the reader, it can be shown that but may be a reflex of contrasting attitudes on the part of a hearer, or of someone else connected with the discussion, or of the speaker to one conjunct and of the hearer to another, and so on. It is hard to believe that such fine assessments must be made before assigning a truth-value to a but-conjunction. It seems to me that sentences containing but are assigned a truth-value as a function of the values of their constituent conjuncts, and that in addition hearers attempt to construe a contrast of some sort between the conjuncts. If this is correct, then the contrastive element is not functioning as a truth-condition, even though it seems to be properly part of the semantic content of the sentences containing it.

That the contrastive element in but must be dealt with at the semantic rather than at the pragmatic level is clear if one takes a purely Gricean approach to the pragmatic level. First, there is no way of arguing from Gricean maxims to the suggested contrast between the two conjuncts. Second, there is one type of cancellation always available for Gricean implications which is not, as far as I can see, available for the implications I am considering now. This is a denial that the speaker meant to imply what his utterance suggests. Such a denial results in the odd sentences (31)-(33), as contrasted with (34), a similar retraction of a standard Gricean implication, which is not odd in the same way:

- (31) ? John is a Republican, but Bill will take out the garbage for you - not that I mean to imply that these facts contrast in any way.

- (32) ? This is to notify you that we are depriving your children of school meals - although we do not mean to imply that school meals are desirable.
- (33) ? We have not yet discovered why PX 75 makes teeth whiter, and we do not wish to suggest that we are doing research in this area.
- (34) Fred has been elected President and his mother will shortly be granted a free pardon. Any suggestion that these two facts are connected will be the subject of a civil suit.

Grice, in fact, uses this difference to motivate a separate category of implication, which he calls conventional implicature, and which differs from conversational implicature in just this respect. However, his treatment of conventional implicature is very brief, and he gives no strong justification for his decision to treat it not as part of meaning proper, as I have chosen to do, but as something separate. I suspect that most of the examples I shall give here can be interpreted by a Gricean as falling into the category of conventional implicature.

d) Counterfactuals

But is connected with contrast, deprive with desirability, and yet with expectations. All these notions are notoriously slippery and subjective. It is worth noticing, however, that what I am discussing here is not simply a general problem about subjective judgment. In the first place, as I have already mentioned, in the vast range of cases where subjective judgment is involved, it is not possible to put forward such a judgment and then retract it without contradiction. If I say that the views of Tully on virtue contrast with those of Cicero, and if it later turns out that Tully and Cicero are identical, what I said was clearly false. Beliefs about contrast do not count as contrast, but it is beliefs

about contrast which condition the use of but. Similarly, if I say that Bill is expected to arrive in five minutes, I am not committed to expecting him to arrive, but I am committed to believing that someone expects him to arrive. If no-one expects him to arrive, then what I said would be false. On the other hand, as I have shown, if I say that Bill is not here yet, and it can be proved that no-one was expecting him anyway, it would be very odd to call my utterance false because of this, although it might well be misleading.

There is the further difference that if I assert, or even mention in passing, that something is desirable, I have in general commended it.

(35) and (36) would be taken as words of praise:

(35) To be left a fortune is most desirable.

(36) I hope you will sell me your desirable residence.

However, even though deprivation has a very close connection with desirability, there is very rarely any act of commendation performed by use of the word deprive. (37) could hardly be counted a commendation of dog-biscuits, or (38) of romps in the coal-cellar:

(37) I have decided to deprive my dog of dog-biscuits

(38) My children have lately been deprived of their romps in the coal-cellar.

In fact, the use of deprive to convey a compliment increases as the approbatory attitude becomes more readily attributable to the hearer rather than the speaker. "Do not deprive me of your daughter's company", said by a man on his knees with a gun to his head, is much less of a compliment than the same remark made by a man with three wives to an obviously doting father. Both at the level of speech-acts, then, and at

the level of semantics, special problems arise with the treatment of words like deprive.

In the second place, there are cases parallel to those of deprive, spare, yet and but, where no subjective judgment is involved. There are cases where the truth of what is suggested is a simple matter of objective fact, but where the speaker is not committed to the truth of this suggestion, and can retract it without contradiction. An obvious example of this is the case of counterfactual conditionals. Karttunen (1971) analyses them as follows. Each counterfactual carries an assertion, a presupposition and a suggestion. Thus (39) has the following representation:

(39) If John had left, Barbara would have left

Asserts: If John left, Barbara left

Presupposes: John didn't leave

Suggests: Barbara didn't leave.

According to Karttunen, the difference between presuppositions and suggestions is that presuppositions cannot be cancelled without contradiction, while suggestions can. His data are as follows:

(40) ? If John had left, as he did, Barbara would have left

(41) If John had left, Barbara would have left, which she did anyway.

I have argued elsewhere in this thesis that many so-called presuppositions are cancellable when they occur in if-clauses: it is extremely hard to maintain the view that presuppositions are in general distinguishable by not being cancellable. I do not believe that Karttunen's presupposition in (39) above should be analysed as an entailment, but I do think it is

cancellable, and that therefore he is not correct in drawing this particular distinction between presuppositions and suggestions - between (40) and (41) above. The following sentence is not contradictory:

- (42) If John had left, Barbara would have seen him go, and in fact she did see him go, so John did leave.

Here we have a non-contradictory cancellation of the putative presupposition that John didn't leave. This seems to me to be a fact that semantics should take into account.

If (42) is not contradictory, it cannot be a truth-condition on a counterfactual that its antecedent be not true. On the other hand, it is clearly part of the semantic function of a counterfactual to indicate that its antecedent is not true. These facts can be reconciled on the assumption that the speaker of (39)-(42) is not necessarily committed to what his utterance suggests, and can thus deny without contradiction that he believes what it suggests. (40) now becomes perfectly natural as a response to someone who assumes that John didn't leave, and has asked what would have happened if he had. Use of counterfactual form in (40) is now seen as conditioned, not by the speaker's views, but by the hearer's, and the relevant belief is attributed, not to the speaker, but to the hearer. Thus there is a clear parallel between (42), where the speaker is entertaining a hypothesis which he ultimately rejects, and (43):

- (43) Suppose I was so drunk I did all that: I'd surely have a bit of a hangover today, and I don't have one. So I can't have been drunk at all.

The most obvious difference between the two cases is that (43) is explicit, whereas (42) merely carries an implicit suggestion.

I would propose analysing counterfactual conditionals as follows:

(44) If John had left, Barbara would have left

Truth-conditions: If John left, Barbara left

Non-logical implication: John didn't leave.

The non-logical implication is non-logical in the sense that its truth-value cannot be predicted from the truth-value of the implying sentence, and that it plays no part in truth-value assignment, although it does play a part in the full semantic analysis of (44).

The value of the counterfactual example is that the suggestion carried seems to have all the characteristics of suggestions discussed earlier in this chapter, but is not bound up with subjective judgment, as are the other suggestions discussed so far. There is no involvement of expectation, contrast, or desirability, in the suggestion carried: it is a simple matter of whether the antecedent of the conditional is true or not true. What is important to notice is that although the speaker is responsible for his choice of words, he is not ultimately committed to the truth of his suggestion, as he is committed to the truth of the entailments he brings into play. Use of counterfactual rather than simple conditional form may result from the speaker's assumption that its antecedent is false, but it may equally well result from his assumption that his hearer, or someone else connected with the discussion, assumes that its antecedent is false. This is simply not possible where the words being used have a purely truth-conditional analysis. If I say that John is President, I am committed to John's being President: I cannot go on without contradicting myself to say

that John is not President. But if I produce a counterfactual I am not committed to the falsity of its antecedent: I can go on to argue that its antecedent is true. There is no problem of subjective judgment with these sentences: they are a matter of objective fact. And they differ from normal truth-conditional sentences in a way which demands attention.

e) Pseudo-clefts

A similar example, which presents problems for purely truth-conditional semantics without involving subjective judgment, is that of the pseudo-cleft construction. Consider the following sentences:

(45) John ran down the stairs

(46) What John did was run down the stairs.

Again, these two sentences have truth-conditions in common: both are true only if John ran down the stairs. In addition (46) suggests (and both (45) and (46) of course entail) that John did something. The fact that (46) both suggests and entails the same thing argues that what it suggests cannot be analysed as a logical presupposition: I have already argued this. It seems to me to be clear that (46) entails (45), which in turn entails that John did something. But if (46) entails that John did something, it cannot simultaneously presuppose it. Furthermore, (47) is not a contradiction:

(47) What your generalisation captures is exactly nothing.

(47) clearly entails (48), while suggesting (49):

(48) Your generalisation captures nothing

(49) Your generalisation captures something.

Given these facts, it is impossible to see (49) as either a logical presupposition or an entailment of (47): if it were a logical presupposition, (47) would lack a truth-value; while if it were an entailment, (47) would be a contradiction. Neither of these things seems to be the case. On the other hand, (47) does seem to have some semantic relationship to (49). I see no way of handling these facts except by saying that (49) figures non-logically in the semantic analysis of (47): that (47) suggests, but neither entails nor logically presupposes (49). The natural interpretation of (47) would be that the hearer, or someone other than the speaker, supposes that the generalisation has captured something, and the speaker goes on explicitly to deny this, without any resulting contradiction. The only alternative I can see to this solution is to treat the suggestion as purely pragmatic.

f) Let Alone

Returning to a more subjective area, consider the semantics of the let alone construction, as illustrated in the following sentences:

(50) I didn't vote for Macmillan, let alone Eden

(51) I didn't vote for Eden, let alone Macmillan

(52) I didn't finish Aspects, let alone Syntactic Structures

(53) I didn't finish Syntactic Structures, let alone Aspects.

Not P, let alone Q clearly has part of its truth-conditions in common with Not P and not Q: it can be true only if P did not take place and Q did not take place. In addition, let alone carries an implication about the relative likelihood of P and Q: namely, that Q is less likely

than P, or that Q implies P. The inference from (50), for example, is that I would be less likely to vote for Eden than for Macmillan, or that if I had supported Eden I would a fortiori have supported Macmillan. Now although people may disagree about the relative likelihood of two given states of affairs, such a disagreement will not, as far as I can see, lead to a disagreement about the assignment of truth-values to sentences such as (50)-(53).

Consider sentences (52) and (53) against the following background. Two tutors with different views on Chomsky ask their students to read Aspects and Syntactic Structures before the next tutorials. One tutor remarks that Syntactic Structures is fairly easy going, but that Aspects will require some concentration, while the other remarks that Aspects is obviously relevant to current problems, while Syntactic Structures will be alien and hard to read. At the next tutorial, Fred is asked by the first teacher how he got on with the assignment, and he replies as in (53). An hour later, he is asked by the second teacher how he got on with the assignment, and he replies as in (52). Both responses were clearly appropriate, given the different expectations of his teachers. The question is whether Fred's two remarks were contradictory, as would be predicted by a truth-conditional analysis, or not. I think it should be obvious that the answer is not. In both cases he has told the truth - namely that he did not finish either book. Moreover, it is not his own views but his tutors' views which have dictated the form of his response. Given that, it does not seem that Fred has committed himself to anything

at all concerning his relative likelihood of finishing either book. What he has done is to defer to someone else's views. This is a quite different situation from that in which he replied to the first tutor that he had finished Aspects but not Syntactic Structures, and to the second tutor the reverse. Here it is obvious that he has contradicted himself, or committed himself to two incompatible states of affairs. The only difference that I can see between the two situations, given that the suggestion carried by let alone is semantic, is that the suggestion carried by let alone is not truth-conditional, and that Fred has not committed himself in the let alone case, although he has in the other.

g) Unusual and Abnormal

Consider the following sentences:

- (54) Belinda has unusually large eyes
- (55) Belinda has abnormally large eyes
- (56) It is unusual to take such pains over one's work
- (57) It is abnormal to take such pains over one's work.

Although abnormal and unusual both mean out of the ordinary, abnormal suggests, as unusual does not, that the resulting deviation is not admirable. Generally this suggestion will be seen as expressing the speaker's own views, but he can deny without contradiction that he holds these views, as in (58) and (59):

(58) Belinda's abnormally large eyes in my view enhance rather than detract from her beauty.

(59) I respect Mary for her abnormal ability to take criticism.

In (58) the suggestion is that someone other than the speaker (or the

speaker himself subconsciously) thinks that Belinda's eyes are too large, and in (59) the suggestion is that someone other than the speaker would regard such an ability to take criticism as a defect. The speaker explicitly dissociates himself from these views. To a lesser extent the same distinction is present in the pair odd/strange, where oddness connotes undesirability, while strangeness need not. (Belinda's odd hairstyle ...).

h) Plots and Plans

A plot is a secret plan. Talk of plots or plotting, as opposed to secret plans or secret planning, suggests that the outcome is something undesirable or nefarious. Thus a plot to overthrow the government is something one is tacitly invited to disapprove of, while a plan to overthrow the government is something one may approve of or disapprove of at will. However, to talk of a plot does not necessarily imply that one disapproves of the projected outcome oneself: (60) and (61) are not contradictory:

(60) Our plot to discredit the Conservatives has failed, and as a result the world will be a poorer place.

(61) We are plotting to have you fired, Professor Pringle, and save the department from total collapse.

Here the implication is that plot is not the speaker's description, but a description that someone else might use. This fact could again be captured by allowing the overtones of undesirability to participate in the semantic analysis of plot at a non-truth-conditional level.

1) Trust and Credulity

In the description of character we have the options, given a man who believes everything he is told, of calling him trusting or credulous. Both descriptions imply a certain lack of independence of judgment, but credulous, unlike trusting, is definitely pejorative. However, one can, I think, describe someone as credulous without committing oneself to the view that it is a bad thing to be so. (62) and (63) are not contradictory:

(62) My credulous grandmother still believes in Santa Claus, and as a result she still gets lots of Christmas presents, so credulity can be a good thing.

(63) I was so credulous I took Bill at his word when he proposed to me, and as a result we've lived happily ever after.

In (63), for example, it is suggested that other people at the time thought it was bad to trust Bill, but the speaker explicitly rejects this opinion.

j) Gloating and rejoicing

There is a fine line between gloating and exulting or rejoicing. Gloat suggests, as exult and rejoice do not, that it is rejoicing in bad taste. Compare (64) and (65):

(64) Fassbender gloated to reporters that he had never played better, while Britain's plucky Roger Taylor stood by and tried to smile.

(65) A naturally jubilant Taylor exulted to reporters that he had never played better.

However, views of bad taste differ, as do views of natural jubilation. It is clear that the same objective facts could be described in either way, and also that a speaker in using the word gloat does not necessarily commit himself to the view that the rejoicing was in bad taste. (66)

and (67) are not contradictory:

- (66) In Iceland, etiquette demands that one gloat over one's defeated rivals after a fishing competition.
- (67) Our undercover agent's gloating over her rivals after winning the beauty competition showed exquisite taste and established her firmly in her role.

As before, if the speaker denies that he believes what his sentence suggests, the belief will be reattributed by hearers to someone else.

k) Recklessness and daring

What some see as a daring move, others will see as reckless, or rash, or foolhardy. These latter three adjectives imply imprudence or lack of forethought when acting boldly, while daring need not carry such a connotation. But again, not everyone may agree on what counts as imprudence or lack of forethought. In (68) and (69) the speaker attributes recklessness to an action, while denying, without contradiction, that it is imprudent:

- (68) After long deliberation, I have decided that recklessness is always the most prudent course.
- (69) My reckless second serve was deliberately designed to win me the match, and win me the match it did.

Again, the suggestion is that what the speaker sees as well-planned others would describe as reckless or imprudent.

A Truth-Conditional Approach to a)-k)

In the light of the foregoing, I see only one way of maintaining a purely truth-conditional approach to semantics. This is to claim that what I have called non-logical implications result from special uses of words which in standard uses carry standard logical implications. This

will certainly not work for the pseudo-cleft and counterfactual examples, but I think a case could be made out along these lines for some other examples I have given. It might be claimed, for instance, that many of my examples are acceptable at either the semantic or the pragmatic level only if they are analysed as containing semiquotation uses of words. Thus a parallel might be drawn between these examples and such sentences as (70)-(72):

- (70) The unmarried king of England you refer to in your answer was in fact Henry the Eighth, who had six wives.
- (71) We are granting their niggardly pay rise of 15%, and we are being extremely generous in doing so.
- (72) We saw your old bachelor neighbour, who turned out to be Brigitte Bardot!

Here the phrases unmarried king of England, niggardly pay rise and old bachelor neighbour must be recognised as quotations of someone else's words. If they were not, (70) and (71) would be semantically deviant. If (70) and (71) are not themselves contradictory, then some mechanism must be incorporated into the semantics to predict this on the basis of a semiquotation reading. But if these mechanisms are available for (70) and (71), it would be an easy matter to make use of them to account for the non-deviance of many of the examples I have given, given only the assumption that these examples too may be seen as containing non-standard or semiquotation uses of words, which in normal use in the same sentences would result in contradictions. Hence, nothing that I have said so far demands anything of truth-conditional semantics that it cannot do with mechanisms already needed on independent grounds.

My own feeling is that this solution has serious limitations. In the first place, as was mentioned above, it will not work for all of the examples I have given. There is no way in which counterfactuals and pseudo-clefts can be construed as semiquotation uses, nor is there any possibility of explaining the let alone examples in this way. Yet, too, seems hard to force into this mould, and but presents similar problems:

(73) ? John isn't here, 'but' Bill is

(74) ? I didn't touch the mongoose, 'let alone' kill it

(75) ? If 'I hadn't drunk all that wine', I should feel much better now.

(76) ? What I 'wish I could do tomorrow' is nothing.

[(76) can in fact be acceptably interpreted as a quotation of someone else's words, but the pseudo-cleft has many uses where such an interpretation would grossly misrepresent the intentions of the speaker.] Even if it can be made to work for the remaining examples I have used, the solution will not account for those listed above.

In the second place, the quotation uses in (70)-(72) are clearly parasitic on a prior actual use of the phrases unmarried king of England, niggardly pay rise and old bachelor neighbour. (77) and (78), which deny that such a prior use has occurred, are distinctly odd, although I do not know on what level such oddness should be accounted for:

(77) ? Although you've never said that you have a bachelor neighbour, your 'bachelor neighbour' is Henry the Eighth.

(78) ? They've never said a 15% pay rise was niggardly, but we're granting them their 'niggardly pay rise' of 15% anyway.

None of the examples which I have given in the course of this chapter

depends on a prior actual use of words in the same way. Indeed, it is not at all clear what prior use of words could be demanded. With spare, for example, would it be a prior use of the word spare itself, or would it merely be a prior allusion to undesirability that was needed? In either case, there is nothing odd about the following sentences, which parallel the odd sentences (77) and (78):

- (79) Though the students have never said they don't want to hear it, I've decided to spare them my imitation of Nellie Melba falling downstairs.
- (80) Although you've never asked me to spare you the details of how I became a millionaire, I'm going to spare you them just the same.

This, then, is one difference between quotation uses and the use of words in the examples I have given throughout this chapter.

Another difference between genuine semiquotation uses and the uses of words in my examples can be detected at the level of intonation. Even where a speaker is not directly quoting someone else's misuse of words, if he is deliberately using a word himself in a rather odd sense, he will generally pause just before it, and emphasise it or give it a distinctive intonation:

- (81) You may 'burn' incombustible material by playing on it with a blowtorch while scattering ashes on the floor.
- (82) You may 'chase' an immovable object by running round it very fast in ever-decreasing circles.

This distinctive intonation is lacking in the examples below, and moreover a use of quotation marking renders the sentences distinctly odd:

- (83) . I deprived him of his undesirable toys
- (84) ? I 'deprived' him of his undesirable toys.

- (85) My children are credulous, which I think is a good thing
- (86) ? My children are 'credulous', which I think is a good thing.
- (87) Bill is gloating over his victory, although I should prefer to call it natural jubilation
- (88) ? Bill is 'gloating' over his victory, although I should prefer to call it natural jubilation.

Finally, if what I have been treating as non-logical implications are really entailments, then not only must the examples I have given be treated as either contradictory or else semiquotations, but also the following sentences must be treated as necessary truths:

- (89) John isn't here yet, so he's expected
- (90) Abnormally large eyes are undesirable
- (91) If Mary didn't kiss Bill, let alone Harry, then the likelihood of her kissing Bill was greater than the likelihood of her kissing Harry.
- (92) It is not possible to deprive someone of something that is not desirable.
- (93) Recklessness is always imprudent
- (94) The projected outcome of a plot is always nefarious or undesirable.

For myself, I do not feel that (89)-(94) are necessarily true. If they are, and if the examples I have given elsewhere in this chapter, where a predication of one of these words is conjoined with a denial of what is claimed in (89)-(95) to follow from it, do not contain semiquotation uses of words, then an account must be given of why on the pragmatic level these contradictory sentences emerge as acceptable. At the moment, I see no possibility of such an account.

Chapter VII

Some Possible Approaches

In Parts I and II of this thesis I discussed two approaches which might seem to offer some help with the problems raised in the last chapter. The approach considered in Part I rests on a distinction between entailments and logical presuppositions. I have argued that certain aspects of the analysis of words like yet, spare, let alone, credulous, and so on, are properly semantic, but cannot be correctly handled as entailments. On the other hand, it might be that they can be analysed as logical presuppositions, and hence can be successfully handled within the framework discussed and rejected in Part I as unsuitable for handling rather different phenomena. In that case my thesis could be regarded, not as a total rejection of the notion logical presupposition, but as an attempt to redefine rather narrowly the scope of facts to which this notion could usefully apply.

The approach considered in Part II rests on a distinction between assertions and pragmatic or psychological presuppositions. I have argued that a speaker neither asserts nor commits himself to the truth of certain suggestions conveyed by his use of words. The notion of psychological or pragmatic presupposition might be redefined in such a way as to handle these suggestions correctly. Again, if such an approach could be made to work, my thesis could be seen not as a total

rejection of the notion psychological presupposition, but as an attempt to discredit certain uses of this term, and to redefine its scope.

In the last chapter I have gestured towards a third possible approach, which rests on a distinction between truth-conditional and non-logical semantic implication. I spend this final chapter discussing the merits and disadvantages of these three tentative solutions to the problems raised in the preceding chapter. Before doing this, however, I should make a few remarks about the sort of evidence I have been using, and shall continue to use, in Part III.

First, I have relied heavily on the assumption that the reader would have the same intuitions about truth-value assignment on the one hand, and contradictoriness or non-contradictoriness on the other hand, as I do. My intuitions here are fairly clear, but it would not be at all surprising if they were different from those of other people. If there is strong disagreement about the facts, then my arguments are clearly not going to be accepted.

In the second place, the facts I discussed in the last chapter seem to me to fall into two classes in a rather unfortunate way. The words or constructions which it seems to me simply cannot be analysed as carrying entailments - let alone, counterfactuals, pseudo-clefts, yet, but (and even and until would also fall into this class) - all have defective distributions which make it particularly hard to choose between the different solutions proposed here for handling them. Let alone, for example, cannot occur in a positive sentence; its behaviour in questions and

embedded positions is erratic. It is hard, then, to subject it to any distributional tests of the sort used in Parts I and II, in which it would behave differently according to one or other solution proposed. The fact that it only occurs in negative sentences may, of course, be seen as explaining why it need not, or does not, carry an entailment in the first place. Similarly, I have argued that entailments may drop in subordinate clauses: but the counterfactual antecedent is a subordinate clause, and this may be the explanation of one's intuitions that it does not carry an entailment. Again, there is no way of testing its behaviour in a positive main clause, which is the normal way of establishing entailment or non-entailment relations. Yet occurs in negatives, questions and positive modals, in all of which I have argued that entailments can drop. It does not occur in non-modal positives, where if it did carry an entailment this entailment would be expected to show up (and where a semantically related item still very definitely carries an entailment). Thus in all the cases where I am most certain that there is no entailment, there is a defectiveness of distribution that makes testing this intuition extremely difficult, and, if it holds up, testing of solutions which all depend in various ways on symmetry of distribution, even more difficult.

The cases where there is normal distribution, for example with deprive, credulous, reckless, gloat, plot, abnormal, and so on, seem to me to present rather stronger chances of successful handling as entailments. There is some evidence on either side, and my intuitions in this area are rather weak. Thus, even if I can show that treatment of these items by presuppositional analysis is unsatisfactory, there is always the option

of returning to the original view that they carry standard entailments, and that any odd behaviour can be explained at the pragmatic level.

In spite of these difficulties, I am convinced that all of these cases do present problems for truth-conditional semantics, and that they cannot be successfully handled by a presuppositional approach. However, I leave the reader to make up his own mind about whether he agrees with me.

The Logical Presuppositional Approach

There is a reason of principle for rejecting this approach to the phenomena under discussion. In Chapter VI, I attempted to establish that the relationship between a suggesting sentence and a suggested sentence was non-logical: that it was impossible to argue from the truth of the suggesting sentence to that of the suggested sentence, and that if the suggested sentence was false, nothing followed about the truth-value of the suggesting sentence. If I am correct, then the relationship between the two sentences cannot be that of logical presupposition, just as it cannot be that of entailment. I reiterate here some further considerations which seem to me to argue against the logical presuppositional approach.

I argued earlier in this thesis that logical presuppositions on positive main clauses cannot be cancelled. For example, given that John is a bachelor logically presupposes John is a man, then (1), where the presupposition is denied, is anomalous. Similar examples are given in (2)-(4):

- (1) ? John is a bachelor, but he is not a man
- (2) ? I regret that Bill left, though he didn't
- (3) ? Marmaduke stopped playing chess, which he has never played
- (4) ? Jack realises that we have lost, which of course we have not.

If the problem sentences in the last chapter are treated as carrying logical presuppositions, then the following sentences will also be predicted as anomalous:

- (5) I deprived him of cigarettes, because cigarettes are undesirable
- (6) Bill's abnormal devotion to duty is entirely admirable
- (7) If John had left I would have seen him go; but I did see him go, so he did leave.

There seems to me to be a clear distinction between (1)-(4) and (5)-(7).

If the logical presuppositional solution is adopted, then, it will involve the assumption that all logical presuppositions, including those carried by positive main clauses, are cancellable, and that such items as bachelor, regret, stop and realise should not be analysed in terms of logical presuppositions.

As I mentioned in Chapter VI, (8) entails (9) but suggests (10):

- (8) What Bill chose to do was nothing at all
- (9) Bill chose to do nothing at all
- (10) Bill chose to do something.

If (10) is analysed as a logical presupposition of (8), which in turn entails (9), then (8) can never be true, and must be either false or lacking a truth-value. Again, this seems to me to be counterintuitive. A similar argument about counterfactuals was given in Chapter VI.

A further difficulty with the logical presuppositional approach is that many people would judge sentences (11), (13) and (15) true if and only if sentences (12), (14) and (16) are true:

- (11) We have not yet found the solution
- (12) We have not found the solution
- (13) I didn't go near it, let alone break it
- (14) I didn't go near it, and I didn't break it
- (15) What I ate was the apple
- (16) I ate the apple.

If the logical presuppositional approach is correct, these intuitions about truth-value assignment cannot be right, since the first member of each pair will carry a presupposition not carried by the second member.

Further intuitions which cannot be correct on the logical presuppositional approach are that there is a difference between (17)-(19) below on the one hand, and (20)-(22) below on the other:

- (17) IBM has admitted that their computers often turn into frogs, so their computers obviously often turn into frogs.
- (18) John has given up playing chess, so he must have played at some time.
- (19) De Gaulle is the greatest past President of France, so he was evidently President of France at some stage.
- (20) ?John isn't here yet, so he is obviously coming soon
- (21) ?Fred has deprived Bill of his chewing gum, so his chewing gum is obviously desirable
- (22) ?Bill wasn't nice to Mary, let alone Alice, so he must have been more likely to be nice to Mary than to Alice.

On the logical presuppositional view, the truth of the first conjuncts

in (20)-(22) will be as good a guarantee of the truth of the second conjuncts as the truth of the first conjuncts in (17)-(19) is of the truth of their second conjuncts. I find (20)-(22), unlike (17)-(19), odd.

A further difficulty with both the logical presuppositional approach and the entailment approach - for both of which the truth of the suggested sentence is necessary for the truth of the suggesting sentence - is that one would expect some reference to the fact that the suggested sentence is true in any explanation of how someone comes to believe that the suggesting sentence is true. Thus if the Queen is asked how she knows that her son is the legitimate heir to the throne, she may answer that she was present at his conception and his birth, and can vouch for his legitimacy. Here essential reference is made to some of the necessary conditions for legitimacy. On the other hand, if I am asked how I know that the English have not yet landed on the moon, it seems to me that all that I need to reply is that as far as I know they have not landed on the moon. It would be entirely out of place for me to use as justification for my belief the fact that they are expected to land on the moon at some future date. This again gives some ground for believing that the expectations which condition the use of yet are irrelevant to the truth of the sentences containing it.

Similarly, if I am asked how I have come to believe that St. Francis was credulous, I might reply that he believed everything that was told him, or even that he believed on very slender evidence everything that was told him. This would be equally good ground for believing that he

was trusting, or that he had great faith. The final choice between these two descriptions is motivated by something that would never be brought in as evidence: namely my own opinion of the value of what he believed in. Again, it seems to me that credulous and trusting are synonymous at the level of both truth-conditions and truth-value assignment, and that their obvious difference in meaning never results in different truth-value assignments for sentences containing these words. Again, if I am asked how I have come to believe that a counterfactual is true, I would never bring in as an explanation my belief that its antecedent is false. And as I have shown, the truth of a counterfactual seems to be compatible with the truth of its antecedent - a position that is ruled out by both the entailment and the logical presuppositional approaches.

In the light of this, I do not find the logical presuppositional approach satisfactory either in principle or in practice for handling the cases which present problems for the entailment analysis.

Psychological or Pragmatic Presuppositions

On the face of it, the approach via psychological presuppositions and the presupposition-assertion dichotomy looks much more promising. Why should we not analyse yet, for example, as carrying the psychological or pragmatic presupposition, though not the assertion, that the event thus qualified is expected to happen? Such an approach to the examples I have been discussing would yield analyses like the following:

(23) John is not here yet

Asserts: John is not here

Presupposes: John is expected

(24) If John had been here I would have seen him

Asserts: If John is here I (will) have seen him

Presupposes: John is not here

(25) What I am proposing is that we should leave

Asserts: I am proposing that we should leave

Presupposes: I am proposing something

(26) I didn't go near him, let alone knock him down

Asserts: I didn't go near him, and I didn't knock him down

Presupposes: I would be more likely to go near him than to knock him down [or: Knocking him down implies going near him.]

(27) St. Francis was credulous

Asserts: St. Francis was trusting

Presupposes: It was bad for St. Francis to be trusting [or: St. Francis had faith in worthless opinions.]

This approach would have the following consequences. First, it would explain the facts which I have assumed about truth-value assignment - or at least it could be made to do so. If these pragmatic presuppositions are not also treated as logical presuppositions, then this approach would predict that the suggestions carried by sentences (23)-(27) would play no part in truth-value assignment. Next, and depending on the particular content given to the notion pragmatic presupposition, it would predict certain consequences for the utterance as a whole if the pragmatic presuppositions turned out to be false. If pragmatic presuppositions are

defined in terms of speaker-belief, then if the speaker did not believe the presuppositions of (23)-(27), his performance would be predicted as defective in some way. If pragmatic presuppositions are defined as conditions which must hold in the world, then if the presuppositions of (23)-(27) were not true, the related assertions would also be predicted as defective in some way. I have tried in the last chapter and this one to give explicit examples of cases where pragmatic presuppositions in both the first and the second sense are false, and where the resulting speech-act is not defective. It is this fact which leads me to conclude that falsity of suggestions of this type has no consequences at all, at either the semantic or the pragmatic level, and hence to analysing such suggestions as non-logical semantic implications.

To this it would be natural for a pragmatic presuppositional analyst to respond that there are cancelling mechanisms of either an implicit or an explicit nature, and that where such cancellations take place the presupposition must be regarded not as violated, with resulting infelicity, but simply removed, with no resulting defects at all. My reply to this would be that in the first place this places him in a totally unassailable position, since there are no conceivable counterexamples which cannot be handled by such machinery, and second, that it does not explain what I take to be a crucial feature of these suggestions: namely, that if the speaker denies either that he believes what his sentence suggests, or that what he has suggested is in fact true, the suggestion is not simply removed from consideration, but is re-interpreted as coming from someone else, or believed by someone else,

or reflecting someone else's opinions.

A third difficulty with the pragmatic presuppositional approach, if it is not allied with either an entailment or a logical presuppositional analysis, is that it gives no account at all at the purely semantic level of the phenomena under discussion here. Such an approach would involve saying that yet has no properly semantic meaning at all; that let alone has the same meaning as and not; that counterfactual conditionals mean the same as their related non-counterfactuals; that but means the same as and; that deprive means the same as spare; and so on. Of course, it is possible to disagree about what constitutes the proper scope of semantics, but it seems to me that all these phenomena fall very clearly inside, rather than outside its scope. In fact, one of my own reasons for particularly disliking the pragmatic presuppositional approach to these phenomena is that the logic behind it seems to lead eventually to adopting a use theory of meaning: to casting all analyses of meaning in terms of appropriateness of utterances, as the analysis of the above phenomena would have to be cast.

A further difficulty for the pragmatic presuppositional approach is that the words and constructions it describes solely or partly in terms of pragmatics seem to be subject to semantic projection rules. In this respect they behave exactly as did the presuppositions I analysed in chapters II and III: they are capable of being overridden by semantic material in the rest of the sentence, and they contribute to the full semantic interpretation of the sentences in which they occur.

In (28) and (29), for example, the presuppositions on spare and yet are overridden:

(28) You didn't spare me a day at the seaside: you deprived me of one

(29) John isn't here yet, and he's not expected.

In (30) and (31), analysed in terms of assertion and pragmatic presupposition, the assertions are predicted as contradictory, which they are clearly not:

(30) To deprive a man of a visit from his grandchildren is worse than to spare him a visit from them.

Asserts: ?To see that a man does not get a visit from his grandchildren is worse than seeing that he does not get a visit from them.

Presupposes: ?Being visited by one's grandchildren is desirable, and being visited by one's grandchildren is undesirable.

(31) If your student has a trusting nature it is merely unfortunate, but if he has a credulous one, it is disastrous

Asserts: ?If your student has a trusting nature it is merely unfortunate, but if he has a trusting one, it is disastrous.

Presupposes: It is bad for your student to be trusting [or: Your student has faith in worthless opinions.]

In neither case does the analysis correctly capture the meaning of the sentence being analysed. The only solution to this problem seems to be to let the 'pragmatic' presuppositions participate in the semantic analysis proper of the sentences, and to undergo the projection rules. In this case it is probably a mistake to call them pragmatic.

This objection holds in its strongest form against words of the deprive class, which have a non-defective distribution. Rather similar examples can be constructed for some of the words or constructions with

defective distributions. (32), for example, would have the following analysis:

(32) The reviewer said that if I had thought at all about this problem I would have come up with a solution

Asserts: The reviewer said that if I have thought at all about this problem I (will) have come up with a solution

Presupposes: I have not thought at all about this problem.

The difficulty here is that where the presupposition is analysed as a speaker-belief, the analysis of (32) will require the speaker, rather than the reviewer, to believe that he has not thought at all about the problem. But this is not at all necessary for the successful performance of (32) as a speech-act. If the presupposition is analysed merely as something that has to be true if the performance is to be successful, again this neglects the fact that one can correctly report (32) even if one has thought at length about the problem in question. The most natural interpretation for (32) is simply that the reviewer is suggesting that I have not thought about the problem - but this suggestion can be conveyed regardless of either my own beliefs or of the actual state of affairs - and conveyed successfully. Similarly with the pseudo-cleft in (33):

(33) Fred claims that what will stop Prince Philip being an alcoholic is an introduction to heroin

Asserts: Fred claims that an introduction to heroin will stop Prince Philip being an alcoholic

Presupposes: Something will stop Prince Philip being an alcoholic

Here the presupposition is required either to be true or to be believed by the speaker if the use of (33) is to be felicitous. But again (33) may be felicitously used as an indirect report of Fred's actual words,

regardless of the beliefs of the reporter, or of the actual situation in the world. It is clear that (32) suggests that I have not thought about the problem, and (33) that Prince Philip is an alcoholic. But these suggestions need to be neither true nor believed by the speaker for their associated sentences to be used felicitously.

In Part II, I argued that the best pragmatic presuppositional theory would be one in which various types of complex sentence were treated as ambiguous between presupposition-carrying and non-presupposition-carrying senses. I further argued that where the sentence was non-presupposition-carrying, what normally acted as its pragmatic presupposition became part of the assertion, and functioned like a standard truth-condition. If this solution is adopted, further difficulties will arise. The new theory will have the defects of pragmatic presuppositional theories, allied with the defects of the entailment analysis in the handling of the phenomena under discussion. One main gain to be achieved from the pragmatic presuppositional approach is that it does not set up necessary truth-relations between sentences which, according to my intuitions, are not necessarily truth-related. This gain will now be lost, since every sentence of the type now being considered will have one sense in which its 'presupposition' functions non-logically, and another in which it must act as a standard truth-condition. This is an extremely unappealing position to be forced into.

One recent treatment of pragmatic, as opposed to semantic presupposition, defines a pragmatic presupposition as follows:

"A pragmatically presupposes B relative to C [a class of contexts] if A conversationally implicates B relative to C and -A conversationally implicates B relative to C". [Thomason (1973) p. 10]

On this definition it is inconceivable that a purely pragmatic account can be given of the phenomena under discussion here. In the first place, a Gricean conversational implicature can only be generated by apparent violation of a maxim of conversation. Moreover, according to Grice it must be possible to give an explicit reconstruction of the steps by which a hearer recovers the intended implicature from the content of what is actually said, together with the maxims of conversation themselves. But on the view we are now considering, sentences containing the problem words have exact synonyms on the semantic level, but which do not carry the same suggestions. Trusting, for example, would be a semantic synonym of credulous, but would not carry the pejorative connotations. It is impossible to explain these connotations in purely Gricean terms, since they are associated with only one member of a synonymous pair. Yet would add nothing semantically to the sentences in which it occurs, and so again there would be no possible way in which hearers could reason "he wouldn't have said yet unless he thought ...", and so recover a suggestion. Since the semantics makes nothing available for the suggestion-carrying sentences which is not available for non-suggestion-carrying sentence synonyms, a Gricean account of these suggestions must at the very least be backed up by, if not rendered superfluous by, an additional account at the level of semantics.

In the light of this, the account in terms of pragmatic presuppositions seems to offer even less in the way of an explanation of the phenomena under discussion than either the entailment or the logical presuppositional accounts.

Non-Truth-Conditional Implication

What I propose here might be better seen as constraints on a solution, rather than an actual solution to the problem I have raised in this chapter and the last. Such a solution must, as far as I can see, take account of the following facts.

First, given a sentence which carries a suggestion and an associated sentence which expresses the content of the suggestion, there is no logical relationship between the truth of the first and the truth-value of the second. It is for this reason that solutions in terms of truth-conditions and logical presuppositions fail. At the level of truth-relations, the suggestions I have analysed show a much greater similarity to the class of Gricean implicatures than they do to standard truth-conditions or logical presuppositions. Gricean implicatures have to be valued independently of the value of the sentence which conveys them. (34), for example, carries the Gricean implicature expressed in (35), but if (34) is true (35) may equally well be true or false:

- (34) John has been elected President and his mother will shortly be granted a free pardon
- (35) John's mother will be granted a free pardon as a result of John's election to the Presidency.

The same is true of the relation between (36) and (37), (38) and (39), and (40) and (41):

- (36) John is not here yet
- (37) John is coming
- (38) I spared Bill a visit to the theatre
- (39) Visits to the theatre are unpleasant
- (40) Fred didn't kiss Mary, let alone Sue
- (41) Fred was more likely to kiss Mary than to kiss Sue.

This is by no means all that needs to be said on the subject of truth-relations and truth-value assignment. For example, I find (42) and (43) perfectly well-formed and comprehensible, but I have great difficulty in coming to a decision about (44) and (45):

- (42) Bill spared Jack and deprived Fred of a visit to the theatre
- (43) Bill didn't read Aspects, let alone Syntactic Structures, and Fred didn't read Syntactic Structures, let alone Aspects.
- (44) Bill both spared me and deprived me of a visit to the theatre
- (45) You_i didn't read Aspects, let alone Syntactic Structures, and you_i didn't read Syntactic Structures, let alone Aspects.

(42) suggests that visits to the theatre are both desirable and undesirable, but these incompatible views may be attributed to different people: Jack in the one case and Fred in the other. In (43) there are again incompatible suggestions, but they may again be attributed to different people, this time Fred and Bill. If this is the correct analysis of (42) and (43), and if what I have said elsewhere about the behaviour of this type of suggestion is true, then (44) and (45) should be interpretable on similar lines, with the incompatible views being attributed in (44) to

Bill and the speaker, say, and in (45) to the speaker on the one hand and the hearer on the other. And perhaps with this possibility in mind (44) and (45) seem less strained and unnatural than they do at first sight. One might then account for the unnaturalness on pragmatic grounds, or by setting up a specific semantic principle of interpretation which would rule out making incompatible suggestions about a single event or action. Clearly much more work has to be done in this area before any explicit proposal can be made.

The second fact which any adequate solution must take into account is the fact that the speaker is not necessarily committed to the truth of the suggested sentence. This is, in part, a corollary of the first fact. Since what is suggested need not be true, the speaker is free to cancel the suggestion: if he does, and occasionally if he does not, the suggestion will then be seen as expressing the views of someone other than the speaker. In this respect the suggestions under discussion seem to differ from Gricean implicatures, since if Gricean implicatures are cancelled they would not be reinterpreted as expressing someone else's views. This second fact is the one which seems to me to rule out pragmatic presuppositions, as well as Gricean implicatures, as a satisfactory source for the suggestions. Pragmatic presuppositions (appropriateness conditions) are generally formulated either as speaker-beliefs or as conditions which the world must fulfil if an utterance is to be appropriate. The lack of speaker-commitment rules out speaker-beliefs as a source: the fact that it may be the beliefs of someone other than the speaker, rather than actual conditions

obtaining in the world, which trigger the use of suggestion-carrying sentences, seems to rule out the alternative explanation in terms of conditions obtaining in the world. (42)-(45) confirm this, since they would presuppose incompatible conditions, but seem to be well-formed if interpreted as referring to incompatible beliefs held by different people.

The third fact which must be taken into account by any adequate solution is that the suggestions are properly speaking semantic. I have argued that they cannot be accounted for by either a Gricean theory or a pragmatic presuppositional approach. Moreover, as already mentioned, they seem to undergo the semantic projection rules. Further discussion of exactly how they undergo the projection rules emerges in what follows.

If these three facts are correct, it follows automatically that the phenomena discussed in Chapter VI lie well beyond the range of truth-conditional semantics, and also of any presuppositional theory I know of at the moment. The approach I favour would look as follows. Every sentence has associated with it two types of conditions: first, truth-conditions as defined above; and second, conditions of a non-truth-related sort, such that in general, given the truth of the sentence being analysed, it will not be possible to predict the truth-value of the suggested sentence, and vice versa. The speaker, in uttering a sentence, commits himself to the truth of its related truth-conditions, but not to that of the related non-truth-conditions. Certain principles

of interpretation, either semantic or, more probably, pragmatic, govern the decision of the hearer to attribute a belief in the suggested sentence to the speaker, or himself, or someone mentioned in the sentence, or someone else germane to the discussion.

Such an approach has certain advantages of principle, though it remains to see how it would work in practice. It will explain why those examples in Chapter VI which I claimed were not contradictory, are not contradictory. Although the sentences in question suggest certain things, since these suggestions are non-truth-conditional the speaker is not committed to their truth, and can deny them at will. It also explains why, when such denials occur, the suggestions may be reinterpreted as coming from someone other than the speaker, and why, even if such denials are not explicitly made, the hearer is free to interpret them as coming from someone other than the speaker, as in examples (46) and (47):

(46) John isn't here, let alone his wife

(47) Bill's credulity obviously offends you.

In (46) and (47) it is just as easy to see the use of let alone and credulity as conditioned by the hearer's beliefs as by those of the speaker. The fact that the proposed approach may take this into consideration also seems to constitute an advantage over the other approaches mentioned.

On the other hand, negative and embedded sentences seem to present considerable problems for my analysis. I have argued that sentences (30)-(33) of this chapter are misrepresented by the pragmatic

presuppositional account: I have as yet said nothing about how I propose to treat suggestions on negative and embedded sentences, but my treatment must clearly offer some way of avoiding any such misrepresentation of meaning. If, for example, I merely substituted the label non-logical implication for the label pragmatic presupposition in examples (30)-(33), I would be no better off. But since I have stipulated that suggestions carried should be treated on the semantic rather than the pragmatic level, there ought to be some possibility of letting them undergo the normal semantic projection rules. It is the detachability hypothesis which leads to trouble with (30)-(33): it seems, then, that an adequate solution must not incorporate the detachability hypothesis, but must allow the non-logical implications to remain in their embedded positions. I now investigate how this might be done.

For the class of sentences for which this approach seems most suitable - the let alone, yet, counterfactual class - negatives and embedding present little difficulty. Let me give a few illustrations. With standard truth-conditional words like bachelor, embedding in a conditional amounts to hypothesizing that all the associated truth-conditions are satisfied. Thus (48) may be paraphrased as (49):

- (48) If your new teacher is a bachelor, I congratulate you
- (49) If your new teacher is unmarried, adult and male, I congratulate you.

When a word or construction with a partial analysis in terms of non-logical implication is embedded in a conditional, the result seems to be a hypothesis only about the truth-conditional aspects. The suggestion

generally remains intact. (50) and (52), for example, may be paraphrased as in (51) and (53), where I have put the associated suggestion in square brackets. This suggestion should be interpreted as an appositive clause, appositive clauses being a paradigm case of non-truth-conditional implications:

(50) If Fred didn't hit Bill, let alone Jack, then he's not going to touch you

(51) If Fred didn't hit Bill, and didn't hit Jack [and he would have been more likely to hit Jack than Bill], then he's not going to touch you.

(52) If Bill isn't here yet, I'm leaving

(53) If Bill isn't here [and he's expected], then I'm leaving.

(50) cannot be seen as a hypothesis about the relative likelihood of Jack's departure and Bill's departure, and (52) cannot be seen as a hypothesis about whether Bill is expected. The same goes for (54) and (56), which can be paraphrased as (55) and (57) respectively:

(54) If what you want to do is take on the British navy single-handed, then good luck to you

(55) If you want to take on the British navy single-handed [and you want to do something] then good luck to you.

(56) If John voted for dissolution but Bill kept his head, then my opinion of Bill goes up.

(57) If John voted for dissolution and Bill kept his head [and there is a contrast between these two situations] then my opinion of Bill goes up.

Again, these sentences cannot be seen as hypotheses about the truth of the parenthesized remarks, although they still suggest that someone, whether the speaker or someone else, believes that they are true.

Moreover, the parenthesized suggestions do not seem to play any part in the assignment of truth-values to the sentences in which they are embedded.

The same is true of disjunctions. (58) would paraphrase as (59), and (60) as (61):

- (58) Either you didn't kill Bill, let alone Jack, or you assassinated Caligula's horse
- (59) Either you didn't kill Bill and you didn't kill Jack [and you would have been more likely to kill Bill than Jack], or you assassinated Caligula's horse.
- (60) Either John voted for dissolution but Bill kept his head, or I'm a Dutchman
- (61) Either John voted for dissolution and Bill kept his head [and these two facts contrast], or I'm a Dutchman.

Where it is possible to embed examples of this class of phenomena under negatives, again the suggestions remain intact, in general. The negative is not in general interpreted as cancelling or retracting the suggestion:

- (62) It's not that he hasn't discovered the solution yet; he hasn't found the problem.
- (63) It's not that he hasn't discovered the solution [and he is expected to discover the solution]; he hasn't found the problem.

Here the belief that the suggested sentence is true is obviously attributable to someone other than the speaker, but it is still there.

- (64) It's not likely that John has claimed to know the answer but that Jack has been equally dishonest.
- (65) It's not likely that John has claimed to know the answer and that Jack has been equally dishonest [and these positions contrast in some way].

In neither of these cases does the negative offer the possibility of interpreting it as suggestion-retracting, although in both cases the suggestion need not involve a commitment on the part of the speaker to

its truth. Similarly with (66):

(66) It's not that what I should have done was leave at once,
but I'm sorry your Ming vase got broken

(67) It's not that I should have left at once [and I should have
done something], but I'm sorry your Ming vase got broken.

The suggestions on this class of examples also remain unretractable, though with varying interpretations as to source, when embedded under factives. Whether factives are analysed as carrying entailments or presuppositions about the truth of their complements, it is clear that speakers of factive sentences are committed to the truth of their complements. However, they do not seem to be committed to the truth of any suggestions carried by these complements in turn. (68), for example, entails or logically presupposes (69), while I would paraphrase it as (70):

(68) Jeremy admits that Sebastian is not here yet

(69) Sebastian is not here yet

(70) Jeremy admits that Sebastian is not here [and Sebastian is expected].

Although the speaker of (68) is committed to the truth of (69), he is not committed to the belief that Sebastian is expected. (71) is not a contradiction:

(71) Jeremy admits that Sebastian is not here yet, and will soon admit what we all know: that he's not expected either.

Given the two occurrences of the factive verb admit, (71) must entail or logically presuppose (72) and (73):

(72) Sebastian is not here yet

(73) Sebastian is not expected.

If the speaker is committed to the truth of both (72) and (73), and if

(71) is not a contradiction, then the speaker cannot also be committed to the truth of (74), nor can (74) be entailed by (71):

(74) Sebastian is expected.

The most natural interpretation of (71) is that Jeremy would be prepared to maintain that Sebastian is expected, although neither the speaker nor the hearer would be prepared to do the same. Just as suggestions carried by positive main clauses may be attributed to people other than the speaker, and are not entailed, so those carried by factives do not commit the speaker to their truth, and may be reinterpreted if necessary as propositions which people other than the speaker would be prepared to maintain. This, of course, explains why there is more than one straightforward interpretation of (68): the yet may be seen as expressing a commitment of the speaker, or of Jeremy, or of Sebastian, or of the hearer, to the belief that Sebastian is expected to be there soon.

It is not only factives which carry suggestions without speaker-commitments on embedded sentences. Non-factives do so too. Consider (75):

(75) Juniper suspects that Aristotle won't acknowledge paternity of Archiphoneme, let alone Sappho.

I would paraphrase this as (76):

(76) Juniper suspects that Aristotle won't acknowledge paternity of Archiphoneme, and won't acknowledge paternity of Sappho [and he would be more likely to admit the former than the latter].

Here again, there are three likely people who might be prepared to maintain that the suggested sentence is true: the speaker, Juniper and the hearer; and failing these, Aristotle and others. In other words,

it is not a simple problem of 'speaker's description' versus the 'subject of a verb of saying's description', although the two problems are clearly related.

Similar examples can be constructed for but in embedded positions, and also for pseudo-clefts, even, and counterfactuals. In (77), for example, the suggestion that the antecedent of the counterfactual is false cannot be attributed to John, but may be attributed to the speaker, the hearer or someone other than John, while in (78) it cannot be attributed to the hearer or the speaker, but may be attributed to John or to someone other than the speaker or the hearer:

(77) When he was six, John used to claim that if his firstborn son had been a genius he would have sent him to Eton.

(78) John claims that if he had been a fool he would never have discovered the exact sort of cheese of which the moon was made - still the one fact on which you and I agree is that John is a fool.

Restricted to this narrow class of examples, the analysis of suggested sentences as non-logical implications rather than as entailments, logical presuppositions or pragmatic presuppositions, has much to recommend it. Assuming that the facts are as I have presented them, it gives the correct assignment of truth-values and the correct (weak) predictions about semantic anomaly. It explains how a speaker can defer to another's views in certain areas and within certain limits, while denying that he agrees with these views. It suggests an interesting way of handling the semantic interpretation of indirect discourse, although I have not had time to pursue this here; it treats as semantic in nature facts which seem obviously to be so, but without

the counterintuitive consequences which seem to follow on adopting an entailment or a logical presuppositional approach. Any theory which can provide a principled way of dealing with (79) without either treating it as contradictory or treating it as pragmatically deviant, seems to me worth pursuing:

- (79) John wouldn't talk to Sue, let alone Mary, and Bill wouldn't talk to Mary, let alone Sue.

Trouble starts to arise if sentences like (80)-(82) are judged good:

- (80) It's not that I've not solved it yet: I've just not solved it.
- (81) I didn't say that my grandmother was coming but I would soon feel better: I said that my grandmother was coming and I would soon feel better.
- (82) I'm not saying that nothing could persuade me to take Brigitte Bardot out tonight, let alone your daughter, but I will say that nothing could persuade me to take either Brigitte Bardot or your daughter out tonight.

These troubles hinge on my claim that truth-value assignment should ignore the parenthesised elements in the paraphrases (83)-(85):

- (83) It's not that I've not solved it [and I'm expected to solve it]: I've just not solved it.
- (84) I didn't say my grandmother was coming and I would soon feel better [and these situations contrast]: I said my grandmother was coming and I would soon feel better.
- (85) I'm not saying that nothing could persuade me to take Brigitte Bardot or your daughter out tonight [and I would be more likely to take out the former than the latter], but I will say that nothing could persuade me to take either Brigitte Bardot or your daughter out tonight.

If the parenthesized elements do not participate in truth-value assignment, (83)-(85) will be predicted as necessarily false. [This is

clearly very closely connected with the problem which arises when one attempts to analyse an utterance into a presupposition and an assertion, and often finds the assertions redundant or contradictory, and the presuppositions contradictory or misleading.]

When words of the deprive, gloat, credulous class are subjected to analysis along the lines indicated above, the problem emerges in even more striking form. (86)-(89) would paraphrase as (90)-(93):

- (86) I didn't deprive him of 15 hours' teaching: I spared him it
- (87) I either deprived him of, or spared him, a visit from his grandchildren, but I'm not sure which.
- (88) It is an advantage to have a trusting wife, but it is of even greater value to have a credulous one.
- (89) While not actually gloating over his victory, Merckxx was certainly jubilant.
- (90) I didn't withhold 15 hours' teaching from him [and 15 hours' teaching is desirable]: I withheld 15 hours' teaching from him [and 15 hours' teaching is not desirable].
- (91) I either withheld from him a visit from his grandchildren [and a visit from his grandchildren is desirable] or I withheld from him a visit from his grandchildren [and a visit from his grandchildren is not desirable], but I'm not sure which.
- (92) It is an advantage to have a trusting wife, but it is of even greater value to have a trusting one [and trusting in the pejorative sense].
- (93) While not actually rejoicing over his victory [and rejoicing in bad taste], Merckxx was certainly jubilant.

Although these sentences would be good at the level where both types of semantic implication were taken into account, they would be predicted as either redundant or contradictory at the purely truth-conditional level. Yet they do not seem to be in the slightest contradictory.

This may simply indicate that words of the deprive class cannot be subjected to the type of analysis I am proposing here. However, I think that there are certain steps which could be taken within my framework to account for (84)-(93). Notice first that the following sentences are not (or are not immediately perceived as) contradictory:

(94) I'm not happy: I'm ecstatic

(95) The next Prime Minister won't be Heath: it will be Heath or Wilson

(96) I don't love Johnny: I love Johnny or Billy [examples (95) and (96) adapted from Grice (1968)]

(97) He didn't lose his little finger: they removed his whole arm.

These sentences present a problem for semantic description. From (95), for example, it should be possible to deduce that the next Prime Minister will be Wilson: given not-p and p or q, it follows that q. But this is not at all what is meant by (95). (95) merely substitutes the assertion that the next Prime Minister will be Wilson or Heath for the assertion that the next Prime Minister will be Heath. Similar treatment should be given to (96). In (94), if ecstatic is analysed as extremely happy, it should follow from the fact that I'm not happy that I'm not ecstatic, and from the fact that I'm ecstatic that I'm happy. Either way, (94) will be predicted as contradictory, and again this prediction will be wrong. (94) substitutes the assertion that I'm ecstatic for the assertion that I'm happy. Similarly, in (97) it follows from the fact that he lost his arm that he also lost his finger, and (97) should be contradictory. But again (97) must be seen as substituting an assertion that does full justice to the facts for one that clearly does not.

Sentences (94)-(97) demand very special handling within a semantics as generally conceived at the moment. The main job of semantics is to describe and predict paraphrase and entailment relations, and contradictions or anomalies. Such a semantics is bound to regard something like the following as necessary truths:

(98) If x is not ecstatic, then x is not happy

(99) (p or q and not- p) entails q

(100) x lost an arm entails x lost a finger.

But these truths will in turn either predict contradictions in or make wrong deductions from (94)-(97). The solution obviously lies in the treatment of negation. To assert that not- p (or to deny that p) cannot be the same thing as to assert that p is false. It may also be to assert that p is inadequate to the facts without necessarily being false: it may be too weak, or too strong, or misleading. In this way, once negation and falsity are distinguished, semantic statements of entailment and contradiction could be made in terms of falsity, while the treatment of negation could include, but go beyond, relations of falsity alone.

What I have done here is merely state that there is a problem about the relation between negation and falsity. I have no idea what the semantics should say about sentences (94)-(97). Given that loss of an arm entails loss of a finger, and given that in (97) it is true that they removed his whole arm, it certainly follows that he lost his little finger. One might then allow two possible interpretations: if negation is taken as denial of truth, then (97) emerges as contradictory, while

if negation is seen as having non-truth-functional aspects to its interpretation, then (97) may come out as true.

By negation's having non-truth-functional aspects to its interpretation, I mean that the value of not-p is not necessarily a function of the value of p. If p is false, that is one good reason for asserting not-p, but an equally good reason for making this assertion would be that one did not wish to make the assertion that p, for some other reason than that it was false. Now one very obvious reason for not wishing to make a given assertion is that it would be misleading: it would suggest something with which one disagrees. [This is at other times a very good reason for wishing to make the assertion, of course.] So given that uttering p might suggest q, and given that one does not want to suggest q, one might say not-p, not because p would be false, but because it would be misleading. On the treatment of negation I am considering now, such an assertion would still come out as true, without negating an actual truth-condition.

With this independently necessary machinery it should be possible to explain sentences (80)-(82) and sentence (89). On a truth-functional interpretation of negation, these sentences would indeed be predicted as contradictory, just as are sentences (94)-(97). However, where the negative is seen as refusal to assert rather than as purely truth-functional, these sentences would come out as true retractions on the ground that their suggestions would be misleading, rather than that they are themselves false. Since some such mechanism seems to be necessary to account for (94)-(97), it might well dispose of the negative counterexamples to the non-truth-conditional approach I am now suggesting.

A rather similar mechanism, which also seems to be independently necessary, may be used to account for the non-negative counterexamples (87) and (88). On the assumption that and is purely truth-functional, and only acquires temporal connotations by Gricean means, some special mechanism must be invoked to account for the non-contradictoriness of (101) and (102):

- (101) He either got married and had a child, or had a child and got married, but I'm not sure which.
- (102) To have a child and get married is worse than getting married and having a child.

On the truth-functional treatment of and, there is no difference between the situations being compared in (101) and (102), and to say that one was worse than the other, as in (102), or that one was not sure which of them happened, as in (101), would be contradictory or anomalous.

Similarly, if Jack is Mary's father, then Mary is Jack's daughter, and it should be impossible to get sentences like (103):

- (103) Either Jack's Mary's father or Mary's Jack's daughter, but I always forget which

Compare with (104):

- (104) I'm not Mary's father: she's my daughter.

Similarly (105):

- (105) It would be better for Mary if she were Jack's daughter occasionally, rather than his always being her father.

It seems that these sentences behave in exactly parallel ways, and that not only in negatives but also in disjunctions and comparisons one can play on Gricean implications rather than standard truth-conditions, and still come out with a true sentence. [The Gricean implication on possessive phrases is that the less important member of the pair is

described in relation to the other: so if Mary is the important member, then Jack is described as Mary's father, and so on.] But given that such machinery already exists, turning sentences which would be contradictory on a standard reading into sentences which are true on a non-standard reading, it will account perfectly adequately for examples like (87) and (88), and also for (106)-(108):

(106) Gloating is not the same as rejoicing

(107) I would rather be unusual than be abnormal

(108) Either he's famous or he's notorious, but I'm not sure which.

The relevant differences here would have to be seen as lying in 'manner of presentation', or connotation, rather than in standard truth-conditions.

Given that for independent reasons it seems that non-truth-functional considerations may need to be taken into account in the interpretation of negative and embedded sentences, it should be possible to reconcile my claim that certain words have both truth-conditional and non-truth-conditional aspects to their meaning, with the fact that these non-truth-conditional aspects may figure truth-conditionally when simplex positive sentences in which they occur become embedded or negated. I have tried to give uncontroversial examples of the same process happening with Gricean implicatures, which would standardly not even be semantic, let alone truth-conditional. This simply means that negating, embedding, disjoining or hypothesising may be based on more than a simple computation over the truth-conditions of the related positive sentences, and that the projection rules must accordingly be complicated to allow for this. Clearly an enormous

amount of work still needs to be done in this area.

Conclusion to Part III

I started thinking about the problems discussed in these last two chapters on the basis of some differential patterns noticed in Kiparsky and Kiparsky (1971). The Kiparskys presented the following examples, which they proceeded to explain by using the presupposition-assertion distinction:

(109) I deprived the frogs of food, and the lizards didn't get any either

(110) ?I deprived the frogs of food, and the lizards wanted some too.

According to the Kiparskys, a conjunction of the form S₁ and S₂ too requires that the S₂ conjunct refers to an assertion, rather than a presupposition, of S₁. The difference between (109) and (110) can then be explained on the assumption that sentences with deprive assert that a particular act of withholding has taken place, but merely presuppose that the object withheld is desired or desirable. Since I was rejecting the presupposition-assertion distinction, I had to explain the pattern some other way, and I also had to attempt to define deprive purely in terms of truth-conditions. As regards the patterning, I found that very few words which had been subjected to presuppositional analysis behaved according to this pattern. (111) and (112), for example, seem to me to be equally well-formed:

(111) I chased the giraffe, and Fred ran after it too

(112) I chased the giraffe, and its mate ran away too.

Other examples may quite easily be constructed. It then seemed that there was a special problem about deprive which did not arise with other words.

At first I thought that the special problem had to do with subjective-judgment words, and I spent some time on the analysis of deprive. Deprivation has to do with the wants, needs or rights of the person deprived, or his beliefs about any of these; or the beliefs of the depriver about any of these; or the beliefs of a speaker using the word; or the beliefs of a hearer, and so on. Since desirability may be a function of wants, needs or rights, the shortest solution seemed to be to say that deprive was associated with the condition that the object withheld be desirable. It then became necessary to propose a principle of interpretation which would allow hearers to attribute this view indifferently to any of the people whose beliefs about desirability could be deferred to by use of a sentence with deprive. From this it followed that there was no necessary speaker-commitment, and that a speaker could use the word deprive while denying that he found the object desirable. My conclusion about non-truth-conditional implication followed automatically from this analysis.

It was only when I became convinced that this same semantic behaviour was common, not only to words like deprive, but also to sentences which did not involve subjective judgment - counterfactuals, pseudo-clefts and appositive clauses - that I began to think that there was some serious reason for doubting that truth-conditional semantics could handle these cases in principle. I have really not tried to do more in Part III than indicate my own doubts, and show that they are doubts which should infect the presuppositional approach as much as they affect the truth-conditional approach. Since so much work remains to be done in this area, I have simply listed the type of behaviour which I think causes these problems,

and indicate some of the standards which any proposed solution must meet. It is not, of course, inconceivable that either a truth-conditional semantics or a presuppositional semantics can be constructed, which will handle all of these problems satisfactorily. I must confess, though, that I think it is unlikely.

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