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Preliminaries

1.1   Semantics and Pragmatics

It is not my aim in this book to define or sharpen the distinction between semantics and pragmatics. I am mainly interested in the linguistic phenomena themselves which lie on the borderline. I do think, at the same time, that a certain picture of the semantics-pragmatics interface will emerge from the discussion of phenomena and their analyses throughout the book. I will also include some points of discussion pertaining to the interaction between semantics and pragmatics. Following are a few preliminary remarks.

I do assume a distinction between semantics and pragmatics, despite the fact that it is not clear how this distinction is to be defined exactly (see Levinson 1983, ch. 1, for some discussion). I think there are linguistic phenomena that involve crucial and interesting interactions between different rule systems – rule systems that can be characterized as semantic vs. pragmatic, or conventional vs. conversational, etc. – and I am interested in these phenomena and these interactions.[1]

It may be worth mentioning that I think that some of the "is this semantics or pragmatics" sort of debate that can be found in the literature is terminological. So, it will often happen that I won't care much about whether a particular principle or treatment is **called** semantic or pragmatic. The parts of the "semantics vs. pragmatics" debate that are essential and interesting are those that genuinely deal with questions about what **type** of explanation to use for a given phenomenon and about the interaction and division of labor between different rule systems.

What do I have in mind, then, when I say that I assume a distinction between semantics and pragmatics? I can only give a very rough idea. I take it that semantics covers truth-conditional interpretation. I don't know if it covers things that can't be called truth conditional. At any rate, I think that roughly, semantics only covers "literal meaning." Pragmatics has to do with language use, and with "going beyond the literal meaning."

There is a separate distinction between "what's in the grammar" (linguistic knowledge) and "what's outside the grammar" (principles that may affect language use, but are not specific to language). (What's determined by the grammar is often referred to

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[1]   See for instance the problem of numeral determiners discussed in 3.1 below.

as "conventional," following Grice.) Note that there is no a priori reason to assume that semantics is in the grammar while pragmatics is not. Indeed, I would assume that the two distinctions do not coincide. Let us assume that the grammar contains a semantic component and a pragmatic component. In addition to these, there are certainly factors outside the grammar that affect meaning – probably both factors that affect semantics and factors that affect pragmatics.

Let me give some examples: The rules that compositionally interpret syntactic structures may be considered "semantics in the grammar." The semantic interpretation of conjunction or negation may be an instance of some general logical/cognitive principle that is not special to language, and hence is not in the grammar. The specification of what the expression *as for . . .* , means may be considered "pragmatics in the grammar" (some call it "linguistic pragmatics"). Grice's conversational maxims are instances of general rational principles that govern cooperative behavior – these principles affect "natural language pragmatics" from "outside the grammar." Finally, take Heim's Novelty–Familiarity condition, which says, roughly, that a definite NP must, while an indefinite NP must not, have an antecedent in the discourse. Whether you want to call it semantic or pragmatic, this condition belongs inside the grammar, as it encodes specifically linguistic knowledge about certain types of NP.

1.2   Conversational Implicatures

For convenience, let me follow the usage in Chierchia and McConnell-Ginet 1990 and use "A **implies** B" as a neutral term, which just means that A (or the fact that someone has uttered A) gives you some reason to conclude B. So, (1a) implies (1b), (2a) implies (2b), and (3a) implies (3b).

(1)   a.   Sue is walking slowly.
       b.   Sue is walking.
(2)   a.   I went into a house.
       b.   It wasn't the speaker's house.
(3)   a.   Sue's problem is that she hasn't stopped drinking.
       b.   Sue drank.

We talk about different varieties of implication relations, which include entailment, conversational implicature, and presupposition.

(1a) entails (= logically entails) (1b). This is clearly an implication with a semantic reason; (1b) is simply part of the semantic content of (1a).

(2a) doesn't entail (2b). Clearly, (2a) implies (2b) for pragmatic reasons. Following Grice (1967, 1975), we say that (2b) is a **conversational implicature** of (2a). Here is a very very quick review of Grice's idea. According to Grice, principles of rational behavior dictate to the participants in a conversation to cooperate in order to efficiently achieve the goal of their conversation, by following – ceteris paribus – four guidelines which he calls "conversational maxims":

(4)   **Grice's Cooperative Principle**
       The Maxim of <u>Quality</u> – Try to make your contribution true.

The Maxim of <u>Quantity</u> – Give no more and no less information than required.
The Maxim of <u>Relation</u> – Be relevant.
The Maxim of <u>Manner</u> – Be clear, unambiguous, brief, orderly.

Grice is interested in the question of how it is that uttering a sentence can imply more than "what is said" (more than the semantic content of the sentence). He proposes that many implications are derived by the hearer on the basis of the conversational maxims. They follow from the combination of the semantic content of the utterance, the conversational maxims, and further background assumptions. Such implications are called by Grice "conversational implicatures." To take just one example, (2b) is taken to be derived by an argument which goes roughly as follows. If it was her own house, the speaker would have known this and it would be relevant information. The speaker is being cooperative; therefore, by Quantity, she would not withhold relevant information. So if it was her own house, she would have said so. But she didn't. Hence, it was not her own house.

Grice's work on conversational implicatures opened up a whole big area of research. Grice gave us the basic notion of a conversational implicature, which may be summed up as in (5) below, and specified some important characteristics of conversational implicatures (among them "defeasibility," to be briefly discussed below).

(5) Principles that are rooted in cooperative behavior of the participants in conversation are responsible for the fact that an utterance may convey more than what is explicitly said.
The extra message derived on the basis of such principles is called a "conversational implicature."

In addition, Grice gave us a preliminary theory of how conversational implicatures are generated, by proposing his famous conversational maxims and sketching the way in which a hearer may calculate an implicature on the basis of those maxims. However, Grice's preliminary theory was only a first shot, with its problems and unanswered questions.

To take just one concrete example, it is not at all clear why it is that when we hear example (2a) above, the following Gricean argument does not seem to go through. If it was not her own house, the speaker would have known this and it would be relevant information. So if it was not her own house, she would have said so. But she didn't. Hence, it was her own house. (Cf. *I broke a leg*, which implicates that it was the speaker's own leg.) More detailed discussion of the shortcomings of Grice's preliminary account is given in Thomason 1990. Note also that implications that are originally based on pragmatic reasoning may become grammaticized or conventionalized to a lesser or greater degree. For instance, the fact that (6a) implies (6b) presumably has a pragmatic, conversational basis; at the same time, (6a) has become a standard formula for making the request, so much so that (7) is grammatical.

(6) a. Can you pass me the salt?
    b. I request that you pass me the salt.
(7) Can you pass me the salt please?

How do we represent the grammaticization of implicatures and how does it bear on the question of how (and when) conversational implicatures are generated?

Since Grice, a considerable body of research on conversational implicatures has been and continues to be developed. It aims to describe the mechanisms that generate conversational implicatures more fully and more explicitly, in a way that will make detailed predictions about which implicatures will arise in which contexts. Unfortunately, this body of research is beyond the scope of this book.

One promising program for developing a formal account of how conversational implicatures are generated is the one presented in Thomason 1990; it is based on the interlocutors' recognizing each other's specific plans (with respect to both non-linguistic goals and the intended organization of the discourse) and accommodating each other in their efforts to carry out these plans.[2] For a recent formal theory of conversational implicatures inspired by Thomason's approach, see Welker 1994. Welker 1994 also includes a useful overview of the literature. As for the relation between conversational implicatures and the grammar, Landman 1998 argues concerning the scalar implicatures of numerals (see chapter 3 below), that although they do arise from Gricean principles, their content has to be calculated by a mechanism that is part of the grammar, a view which seems to fit with the way scalar implicatures of numerals are viewed in e.g. Horn 1992.

I will content myself here with referring the reader to the works just mentioned and to works cited therein. In the remainder of this book, I will basically assume Grice's original characterization and account of conversational implicatures, and will not be concerned with the details of precisely how these implicatures are generated.

It is uncontroversial that conversational implicatures are **defeasible**. What "defeasible" means can be stated more or less as follows. Suppose S will "normally" or "often" imply B. If S sometimes nevertheless fails to imply B, or else this implication can be canceled, we say then that the implication B is defeasible. For example, the implicature in (2b) is defeasible. (8) shows that this implicature can be canceled: while (8) may sound surprising, it is not a contradiction. In (9) and (10), (2a) occurs in a context in which implicature (2b) does not arise.

(8)   I went into a house. It was my house.
(9)   I don't want to tell you whether it was my house or not, but it IS true that I went into a house yesterday.
(10)   I know that we were supposed to stay outside all day, but I went into a house once, because someone cut his hand and I had to (go home and) get some bandages.

Now let me say a few words about why conversational implicatures are defeasible. This is largely due to the fact that they are heavily context-dependent. The Gricean argument that derives (2b) depends on the assumption that the speaker obeys Quantity. But of course, in some contexts the hearers can make that assumption, while in other contexts (such as the one in (9)) they cannot make it. The argument also relies on the hearer's knowledge of what information Quantity would require the speaker to provide. But that, of course, differs from context to context too. In the

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[2]   See also the end of section 1.7.

context in (10), the house being the speaker's house would not be relevant information, and so Quantity would not require the speaker to provide it. As for why (2a) seems to implicate (2b) even when presented "out of the blue", that is presumably because contexts in which the implicature would arise are relatively common or "normal," and therefore we readily imagine that that is the kind of context in which (2a) is supposed to be considered.

An additional defeasibility-inducing factor is that we usually base our Gricean arguments (partly) on assumptions that seem plausible, rather than assumptions that are known to be true. (We may assume that the maxims are being obeyed and that the speaker is able to recognize her own house even if we can't know these things for sure.) This explains implicature-cancellation (as in (8) above). When we have inferred a conversational implicature, and this implicature gets denied, we readily conclude that one of the assumptions on which we based our Gricean argument was false, and drop the implicature.

Next, let me briefly introduce those Quantity conversational implicatures that are known as **scalar implicatures**. (These were first discussed in detail in Horn 1972.) In examples (11) and (12) below, (b) is considered a "scalar" implicature of (a).

(11) a.   Kim is competent at linguistics.
      b.   Kim is not more than competent.
(12) a.   It is a crime to hold left wing views in Colombia.
      b.   It is not a crime to hold other views in Colombia. (Kempson 1982)

The Gricean argument for (11b) goes roughly as follows. If the speaker was in a position to make a stronger, more informative, statement than the one she actually made, for example, that Kim is in fact very good at linguistics, the speaker would have done that, to obey Quantity. If we make the additional assumption that the speaker knows exactly how good Kim is at linguistics, we conclude that the speaker in fact knows that a stronger statement would be false. As usual, the implicature is highly context-dependent – if we fail to make one of the assumptions just noted, it does not arise.

Such implicatures are called "scalar implicatures" following Horn 1972, who discusses their relation to scales such as the following two,

...absolutely wonderful at, very good at, competent at, has some competence...

...to hold left-wing views, to hold political views, to hold views...

in which you proceed from stronger items to weaker ones. (Each item entails the weaker ones but is not entailed by them.) Horn 1972 suggests that we can formulate a general rule: for any scale of this sort, when we make a statement using a certain item on the scale, we create a scalar implicature that a statement with a stronger item would be false.

Note that when we accept that the "scalar" implications are indeed conversational implicatures, that means that we have taken a stand on the semantics of each item on the scale, namely, that each item is compatible with the stronger items. For example, we have decided that "competent" is literally compatible with "wonderful." We have made the theoretical decision that it is a (Gricean) pragmatic process rather than a semantic relation that makes "competent" imply "not wonderful."

1.3   Metalinguistic Negation

Horn 1985 argues convincingly that various operators, and in particular negation, can have – besides their standard use as logical operators – a metalinguistic use, conveying something about the use of the sentence they apply to. For example, in (13), the negation is obviously metalinguistic – it is used to reject the use of the sentence it applies to, because of an objection to the way the word *manage* is pronounced in it; the negation is certainly **not** used to deny the sentence it applies to: (13) is not a contradiction.

(13)   I didn't [mĭˑʸənɨ̆ʝ] to solve the problem – I [mǽnɨ̆d] to solve the problem. (Horn 1985, p. 132)

Metalinguistic negation can be used to reject a sentence on all sorts of grounds (objectionable connotations, pronunciation, word-formation, register, conversational implicatures, etc.). A characteristic intonation contour typically accompanies this use of negation.

Here is an example where metalinguistic negation is used to reject a sentence because of an objection to its conversational implicature:

(14)   She isn't competent at linguistics – She is masterly at the subject!

(from Kempson 1982)

On the assumption that "competent" does not entail "not masterly," (14) is not a contradiction. The negation doesn't deny the sentence it applies to, but rather rejects the use of this sentence on the grounds that "competent" implicates "not masterly."

1.4   Contexts and Common Grounds

We use the word *context* to mean a number of different things. I'll try to clarify some uses of this word. Consider the basic notions of **truth** or **verification** (= satisfaction) of a sentence or formula. Truth or verification are always relative to some **facts** or states of affairs. Those we call the "circumstances of evaluation" or the "context of evaluation." (A simple model for extensional logic represents a context of evaluation; a model containing possible worlds and/or times etc. represents a whole collection of contexts of evaluation.)

Besides that, we talk about the "context of utterance." Each utterance occurs in a context. This context includes all sorts of things. It includes previous utterances. It includes the speech situation, including the location, the speaker, addressees, various salient objects, and more. It includes various assumptions that the participants in the conversation make about the world in general and about the subject-matter of the conversation in particular. It includes assumptions that the interlocutors make about the beliefs and intentions of each other. And so on.

The notion of the context of utterance is crucial for the understanding of many phenomena of natural language use and interpretation. Many parameters that are crucial to the very interpretation of utterances (e.g. referents of indexicals, domains of quantification, modal bases, etc.) are contributed by the context of utterance. The felicity of

an utterance in terms of relevance and discourse coherence depends on the context of utterance. Conversational implicatures are generated based on the context of utterance. And so on and so forth. As we study various phenomena, we develop formal representations of the context of utterance. More precisely, we develop formal representations of different aspects of the context of utterance. We choose those aspects that are crucial for our current topic of investigation. Sometimes, we also refer to a theoretical construct that represents (the relevant aspects of) the context of utterance as a "context."

Stalnaker 1978 suggests that the central concept needed to characterize the context of utterance is what he calls the **common ground**, or the set of "speaker's presuppositions." This common ground Stalnaker describes as (roughly) the set of propositions whose truth is taken for granted as part of the background of the conversation.

Of course it is not in reality the case that all the participants in the conversation share the same beliefs or know exactly which beliefs they do share, but for purposes of communication we do behave as if there is a certain body of information which is "mutual knowledge," which is shared by the participants in the conversation. And this we call the common ground.

Stalnaker suggests that the essential effect of making an assertion is to extend the common ground. That is, when someone makes an assertion, the content of that assertion is added to the common ground. (Stalnaker adds that this happens provided that the other participants in the conversation do not object.)

Since a common ground is a set of propositions, it can be identified with a set of worlds: the set of worlds in which the propositions of the common ground are true. Stalnaker called this set of worlds the **context set**. The context set contains all the possible worlds which according to the information in our common ground are candidates for being the actual world. (They are the worlds compatible with all we know about the actual world.)

To add a proposition p to the common ground is equivalent to kicking out of the context set all the worlds that are not compatible with p (these worlds are no longer candidates for being the actual world). Thus, as the common ground grows, the context set shrinks.

We have seen then that a set of propositions or a set of possible worlds may be taken to represent a certain (limited, but central) aspect of the context of utterance. Sometimes we refer to the set of propositions or worlds itself as a "context." Other theoretical constructs that represent (certain aspects of) the context of utterance will be discussed below.

Note also that for certain purposes we might want to take into account the differences among the sets of background assumptions made by different participants in the same conversation. Then we may talk about each participant as having her own personal (representation of a) context "in her head." (We assume of course that when successful communication takes place, these individualized "contexts" have a lot in common.)

Finally, let me note that there are important connections between the context of evaluation and the context of utterance. (I think this is especially clear in the light of Stalnaker's view described above.) Sometimes we may think about the actual world as our context of evaluation. Of course, there is a lot that we don't know about the actual world. Which is perfectly consistent with the fact that we can't always tell whether a

proposition is true or false. But what we do know about the actual world is part of the context of utterance: it is part of the common ground. So, in as much as we evaluate propositions for being true or false **on the basis of the information available to us**, our context of evaluation and context of utterance converge.

1.5   Presuppositions

The notion of presupposition first appears in Frege's work on the nature of reference and referring expressions. His main claims may be summarized as follows.

Frege 1892:   Referring expressions (names, definite descriptions) carry the presupposition that they do in fact refer.
For a sentence to have a truth value, its presupposition must hold.
A presupposition of a sentence is also a presupposition of its negation.

For example, "Kepler died in misery" and "Kepler did not die in misery" both carry the presupposition that the name *Kepler* designates something. If this presupposition doesn't hold, the two sentences have no truth value.[3]

It is standard to say that in the following examples, the (b) sentence is a **presupposition** of the (a) sentence. In each of the (a) sentences, a **presupposition-trigger** can be identified – a lexical item or linguistic construction which is responsible for the presupposition.

(15) a. Sue stopped drinking.
      b. Sue drank.   **trigger**: the verb *stop*
(16) a. Sue's problem is that she hasn't stopped drinking.
      b. Sue drank.   **trigger**: the verb *stop*
(17) a. The king of France is bald.
      b. There is a king of France.   **trigger**: the definite NP
(18) a. The king of France is not bald.
      b. There is a king of France.   **trigger**: the definite NP
(19) a. JOHN drinks too.
      b. Somebody else besides John drinks. **trigger**: *too*
(20) a. Even JOHN drinks.
      b. John is the least likely to drink. **trigger**: *even*
(21) a. It was Fred who ate the beans.
      b. Somebody ate the beans.   **trigger**: the cleft construction

What is the basic linguistic intuition on which the notion of presupposition is based? I will follow the line taken in Chierchia and McConnell-Ginet 1990. Like them, I believe that the basic intuition about a presupposition is that it is **taken for granted**. We (speakers of the language) feel, roughly, that it doesn't make sense to utter the sentence unless one already assumes the presupposition. In the words of Chierchia and McConnell-Ginet:

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[3]   For further historical notes, see Levinson 1983 (ch. 4).

(22) "The hallmark of a presupposition is that it is taken for granted in the sense that its assumed truth is a precondition for felicitous utterance of the sentence and places a kind of constraint on discourse contexts that admit the sentence for interpretation." (p. 283)

From now on, and throughout the book, I will use "ps" as shorthand for "presupposition."

Traditionally, presuppositions are identified on the basis of the two intuitions pointed out by Frege – that for a sentence to have a truth value, its ps must hold, and that a ps "survives" under negation. I think that a judgment that a certain proposition B must hold for a given sentence S to have a truth value is indeed a very good indication that S presupposes B. That, I think, is directly related to pss being preconditions for felicitous use: a sentence that's faulty, that can't be interpreted properly, can't have a truth value. As for survival under negation – that will be considered in what follows.

The presuppositions of a sentence S survive not only when S is negated, but also when it is questioned, used as a hypothetical assumption, or placed under a possibility modal. For example, sentences (23)–(27) all presuppose that there is a unique king of France, and sentences (28)–(32) all presuppose that Joan used to drink wine for breakfast.

(23) The king of France is bald.
(24) The king of France isn't bald.
(25) Is the king of France bald?
(26) Perhaps the king of France is bald.
(27) If the king of France is bald, I will not wear a wig.

(28) Joan has stopped drinking wine for breakfast.
(29) Joan hasn't stopped drinking wine for breakfast.
(30) Has Joan stopped drinking wine for breakfast?
(31) Perhaps Joan has stopped drinking wine for breakfast.
(32) If Joan has stopped drinking wine for breakfast, she has probably begun to drink more at lunch.

Survival in this sort of "family of sentences" is often taken to be a crucial test – **the** test, even – for ps status. That is because in general, if a sentence implies something which is **not** presupposed, that implication does not survive in these environments. For example:

(33) Lee kissed Jenny.
         entails: Lee touched Jenny.
    This entailment doesn't survive in: Lee didn't kiss Jenny.
(34) It's cold in here.
         possible conversational implicature:
                           I request that you turn on the heater.
    This implicature doesn't survive in: It's not cold in here.

Levinson 1983 takes survival in the "family of sentences" to be a reliable test for ps status. This is directly related to his view of presuppositions as "background" information. Let me discuss these matters.

We can say that utterances divide into background and foreground parts, where what we mean by "foreground" is that the foreground part of the utterance is the main message. Only the foreground part calls for direct responses, such as *Yes, I agree*, *No, I don't think so*, *Is that so?*, *Perhaps*. Levinson 1983 holds that the basic intuition about presuppositions is that a ps is **backgrounded**.

It is certainly true that presuppositions are backgrounded. Since a ps is something which is taken for granted, of course it won't be the main point of the utterance. For example, if you respond to *the king of France is bald* with one of the utterances listed below, you are talking about the baldness, because that's the foreground part of (35). You are not talking about whether there is a king of France, because the ps that there is one is in the background.

(35)   The king of France is bald.
   –   Yes.
   –   Right.
   –   No, I don't think so.
   –   Is that so?
   –   Maybe.

Note that this is exactly the same phenomenon as the fact that presuppositions survive in the "family of sentences." When a sentence is negated, questioned, etc. it is the foreground part that's negated, questioned, etc. So in the negative sentences, the questions, etc., the ps, which is in the background, is unaffected, and it survives.[4]

Now let us examine the status of the information conveyed by the non-restrictive relative clause in (36) below, from Chierchia and McConnell-Ginet 1990.

(36)   Jill, who lost something on the flight from Ithaca to New York, likes to travel by train.

Clearly, the foreground message of (36) is that Jill likes to travel by train. If you respond to (36) with *I don't think so*, *Perhaps*, *Well, I wonder*, you will be taken to call into question the main point – Jill's liking trains. You will not be taken to be talking about whether Jill lost something on the flight. Also, compare the two responses in (37). Only the first one is a natural response to (36).

(37)   I don't think so, she doesn't like trains/large vehicles.
      # I don't think so, she didn't lose a thing/she never loses anything.

And now consider the "family of sentences" in (38)–(40) below. Sentences (38)–(40) do not imply that Jill likes to travel by train, but they do all imply that she lost something on the flight.

(38)   Jill, who lost something on the flight from Ithaca to New York, doesn't like to travel by train.

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[4]   Another test for backgroundedness, from K&P 1979, is *I noticed that S*. The noticing pertains to the foreground message, and not to the background message.

(39)   Does Jill, who lost something on the flight from Ithaca to New York, like to travel by train?

(40)   If Jill, who lost something on the flight from Ithaca to New York, likes to travel by train, she probably flies infrequently.

What have we just learned about the status of the proposition that Jill lost something on the flight from Ithaca to New York in example (36)? We just saw that this proposition passes the traditional test for ps status. Does that mean that it is to be considered a ps of (36)?

Levinson 1983 says that the "family of sentences" test shows that the relative clause in (36) is in the background. Since he thinks that the basic intuition about presuppositions is that they are backgrounded, Levinson concludes from this that the relative clause is presupposed. However, as argued in Chierchia and McConnell-Ginet 1990, this conclusion seems wrong. Chierchia and McConnell-Ginet point out that the proposition that Jill lost something on the flight is **not** taken for granted in (36). Rather, this proposition is new information in (36). Compare with (41), where it **is** taken for granted that Jill lost something on the flight. I think the contrast is clear.

(41)   What Jill lost on the flight from Ithaca to New York was her new flute.

I would definitely agree with Chierchia and McConnell-Ginet that the proposition that Jill lost something on the flight is presupposed in (41) but is not presupposed in (36). Therefore, I conclude that the "family of sentences" test is not a reliable test for ps status.

I do think, and I suppose you will agree with me, that the relative clause is not the foreground message. So let us agree that the "family of sentences" test is a test for foregroundedness – it distinguishes between what's in the foreground and what is not. However, this test does not distinguish between what's not presupposed and what is presupposed: if a proposition is not in the foreground, that doesn't show that it is presupposed.

The reason that I avoided the term "background" in the previous paragraph is that I am not sure whether or not the relative clause in (36) is backgrounded. You might claim that the relative clause is not in the background, but rather "on the side." If so, perhaps "backgrounded" is just another word for being presupposed or for being "taken for granted." In that case, the "family of sentences" test would not be a solid test for either backgroundedness or ps status. On the other hand, we might adopt Levinson's terminology and call the relative clause "backgrounded." In that case, the "family of sentences" test would be a solid test for backgroundedness, but not for ps status: backgroundedness would be a necessary but not a sufficient condition for ps status.

In conclusion, survival in the "family of sentences" is not a foolproof test for ps status. Still, it is a useful test. First of all, if an implied proposition is **not** implied by all the sentences in the "family," then it is definitely **not** a ps. Secondly, it's even fair to say that if a proposition is implied by all the sentences in the "family," that suggests that it may very well be a ps. That is because survival in the "family of sentences" is conspicuously different from the normal behavior of propositions entailed by a clause (i.e. of propositions that are simply part of the truth-conditional content of that clause). If an implied proposition does survive in the sentences of the "family," then we must

say something special about that proposition, in order to explain its special behavior. The explanation is not certain to be that our proposition is a ps; for example, the propositions conveyed by non-restrictive relative clauses seem to survive in the same environments for a different reason (because they are parenthetical). But if there is no alternative explanation we can point to, ps status may very well be the right explanation.

Because survival in the "family of sentences" is not a fully reliable test for ps status, our intuitions regarding "being taken for granted" remain an important and indispensable criterion for identifying presuppositions. There is no better proof that a sentence S presupposes a proposition B than our intuition that B is "taken for granted" and is a precondition for felicitous use of S. Directly related to that, we can try out S in contexts where B is already assumed vs. contexts where B is known not to hold, and see in which of these contexts S can be used felicitously.

The view that the hallmark of a ps is that it is taken for granted is the basis of the analysis of the notion of ps proposed in Stalnaker 1974 and Karttunen 1974 (independently). Stalnaker and Karttunen see presuppositions as **requirements on the context**. They take the defining characteristic of the notion of ps to be the following.[5]

(42)   B is a ps of S iff S can be appropriately (= felicitously) uttered only in contexts that contain/entail B.

Stalnaker and Karttunen's insight is incorporated in the most successful treatment of ps and ps projection available today, as will become clear in the chapters to come.

Finally, I must say a few words about the defeasibility of presuppositions. As noted in 1.2 above, conversational implicatures are defeasible. There is some disagreement in the literature concerning the question of whether presuppositions too are defeasible.

Some researchers hold that pss are defeasible, and that this defeasibility is in fact a central characteristic of pss. That is the view taken e.g. in Levinson 1983. The evidence given in the literature for ps defeasibility includes examples of ps cancellations, such as (43), as well as examples that seem to show that pss are context-dependent, such as (44).

(43)   The king of France isn't bald – there is no king of France!
(44)   a.   Sue cried before she finished her thesis.
         b.   Sue died before she finished her thesis.

One can say (43) without contradicting herself. This suggests that the existence ps of definite NPs can be canceled. In (44a), *before* seems to trigger the ps that its complement is true. Certainly, hearing (44a) out of the blue, the intuition that the completion of Sue's thesis is taken for granted is rather prominent. But (44b) definitely does not presuppose the completion of Sue's thesis. So we have here a ps that isn't always present.

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[5]   Karttunen 1974 defines: Context c *satisfies-the-presuppositions-of* (or *admits*) S iff c entails all of the presuppositions of S. Stalnaker 1974 defines (see p. 203): S presupposes B means that for S to be uttered appropriately, B must be part of the presumed background information.

Other researchers, however, think that certain presuppositions are not defeasible. Chierchia and McConnell-Ginet 1990 offer the view that there is a whole class of presuppositions that are not any more defeasible than entailments are. The class of pss in question is by no means marginal; indeed, it is the class of "hard-core" pss such as the pss of definite NPs, *stop*, *too*, clefts, etc. (In fact, this class includes everything that Karttunen and Peters 1979 (hereafter, K&P) would be willing to call a "presupposition".) On this view, *the king of France* in (43) above does not fail to presuppose that there is a king of France; rather, the negation in this example is metalinguistic, and is used to object to the use of the sentence *the king of France is bald* precisely on the grounds that the definite NP has an existence ps that is not satisfied.

I think that the defeasibility or non-defeasibility of pss is not a simple matter, and I will defer further discussion of it till later (see especially chapter 11).

1.6   Presuppositions and Context-Dependent Interpretation

Consider the fact that the very semantic interpretation of utterances often involves parameters that are not explicitly specified in the utterance itself. For example, think about the parameters listed in (45).

(45)   – Referents of indexicals;
       – Referent or antecedent for anaphora in the case of definite NPs;
       – Restrictions on quantification (sometimes referred to as "domain selection");
       – Modal bases   (for modal statements);
       – Standards of precision   (for vague predicates);
       – Reference point in time   (for tense and aspect);
       – Reference point in space   (for "come" and "go")

Such parameters may be specified explicitly, as in (46)–(49), for instance.

(46)   I, Ebenezer son of Zachariah, hereby declare that. . . .   (indexical)
(47)   Everybody in this room is hungry.   (restriction on quantification)
(48)   Loosely speaking, France is hexagonal.   (standard of precision)
(49)   Aunt Annie is going away from town.   (reference point in space)

But very often an explicit specification of these parameters is incomplete or entirely missing. And yet setting these parameters is crucial to the interpretation (to the truth conditions!) of utterances. So what do we do? I think it's fair to say that we make an educated guess. Of course, we use every clue we can get. Our clues may come from the utterance itself as well as from the context of utterance.

Note that the context may guide us in a variety of different ways. Here are a few. (i) What seems salient and relevant in the speech situation may guide us. For example, in interpreting *Everybody is hungry* as "everybody in this room is hungry." (ii) We may rely on general world knowledge, to tell us what value for a given parameter would be "normal" or "default" for the subject-matter. For example, if the subject-matter is black tulips, it would be normal to pick a standard of precision according to which very dark purple is black enough. (iii) We take into account the value of the parameter in

question as it was set in previous utterances – we often assume, in the absence of better clues, that we are supposed to use this parameter as it was set last. For example, in (50), we know where the soldiers and beggars ended up because we assume that the point of reference set in the first sentence (viz. "town") is also the point of reference for the following sentences. And in (51), I probably meant to quantify over the people in our department, just as you had done in the preceding utterance.

(50)   The beggars came to town. Later, the soldiers came. When the soldiers came, the beggars went.

<div align="right">(from Lewis 1979, p. 180)</div>

(51)   You: Everybody in our department plays chess.
         Me: But nobody plays bridge.

Now the question arises: are implicit parameters presupposed? Perhaps it makes sense, for instance, to say that in the following examples, the (a) sentence presupposes the (b) sentence. After all, we say that pss are requirements on the context; isn't the context of utterance required to supply the parameter which is not explicitly specified in the utterance itself?[6]

(52)   (a)   I must visit my grandmother.
         (b)   There is a particular modal base which we are supposed to use here. (There is a certain limited set of ('accessible') possible worlds currently under consideration.)
(53)   (a)   The dog is hungry.
         (b)   There is a particular dog which the NP is supposed to refer to.
(54)   (a)   Aunt Annie is coming.
         (b)   There is a particular reference point s.t. movement towards it is 'coming' and movement away from it is 'going.'

I find it difficult to answer this question. I am not sure we have very strong intuitions about whether non-specific statements such as these (b) sentences are "taken for granted," in the sense that they are requirements on the context of utterance.

One thing I do feel certain about is that the value for an implicit parameter is not always set by the context "in advance." The context obtaining immediately before a sentence is uttered need not, and usually does not, contain a "ready" modal base or reference point in space or standard of precision to be used by the coming utterance. It is true that sometimes we take the reference point in space or standard of precision (etc.) set for a preceding utterance and use it again for the current utterance, as noted above. However, as noted above also, that is only one out of a variety of guidelines that help us find the implicit parameter.

As always when a question is hard to answer pre-theoretically, the theory may decide for us. Perhaps we will discover that the best analysis that we can come up with for the treatment of some parameter X is an analysis that stipulates a well-defined requirement on the context obtaining immediately before the utterance. In that case, we would be

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[6] Roberts 1995 argues in detail for a presuppositional view of implicit parameters and their recovery.

claiming that that stipulated requirement is a ps. Our decision about whether a ps is involved (and which ps is involved) may differ from parameter to parameter.

1.7   Accommodation

Lewis 1979 notes that it is not as easy as one might think to say something which is judged unacceptable. For example, says Lewis, "say something that requires a missing presupposition, and straightway that presupposition springs into existence, making what you said acceptable after all." (p. 172) If you say (55) to me, for instance, I will have no trouble accepting it even if it is not already assumed in the context that you have a dog – I will "accommodate" the assumption that you have one.[7]

(55)   My dog is at the door.

Lewis emphasizes the fact that this process truly affects the context of utterance: if you said (55) and nobody objected, then from now on the assumption that you have a dog is truly part of the common ground of our conversation.

Lewis talks about accommodation not only as a way of avoiding ps-failure, but more generally as a way of adjusting what he calls the "conversational score" in various ways so as to ensure (ceteris paribus and within certain limits) that our fellow-speakers' utterances will come out "true, or otherwise acceptable." (p. 178) This includes adjustments not only of the common ground, but also of reference points for "come" and "go," of standards of precision, of modal bases, and more.

Usually, we credit our fellow speakers with an intention to say something which is an acceptable utterance: grammatical, interpretable, relevant (in terms of immediate discourse coherence), in agreement with various linguistic conventions, and – even – true (or at least possibly true). As I see it, this tendency of ours affects our assumptions about all of the following: the context of evaluation, the intended semantic interpretation of the utterances we hear, and the context of utterance. Following are some examples.

Suppose I say (56) to you, and then you open the closet, and in it you see just one thing: a black coat.

(56)   In the closet, you will find a blue coat.

You will probably think that I meant to say something true. You may think to yourself: oh, she didn't identify the color correctly, she meant the black coat. Alternatively, you may conclude that **you** didn't identify the color correctly, and that the coat is actually very dark blue. Note that the latter alternative involves a revision of your own assumptions about the facts (or, in other words, about the context of evaluation).

The way we disambiguate utterances is partly driven by our wish to accommodate our fellow speakers. For example, suppose I am known to be a poor and unsuccessful

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[7]   This phenomenon is referred to as "bridging" in the psychological literature. See e.g. Clark 1977 and Clark and Haviland 1977.

model, and I say (57) to you. (57) is structurally ambiguous between (58a) and (58b). But since (58a) is obviously false, you will conclude that I meant (58b).

(57)   Successful psychiatrists and models are always rich.
(58)   a.   [Successful psychiatrists] and models are always rich.
         b.   Successful [psychiatrists and models] are always rich.

Our wish to credit our fellow speakers with telling the truth also affects the way we guess at implicit parameters that are supposed to go into the semantic interpretation. Here are some examples.

(59)   You, me, and other people are in the room.
         You: Nobody in this room is tall.
         Me: But everybody is taller than me.
         Obviously, I don't mean 'everybody in this room,' but rather 'everybody in this room except me.' How do you know? Because you assume that I don't mean to say an obvious falsehood.
(60)   In the room are you, your brother, me, a stranger, and nobody else.
         (a)   You: We are brothers.
         I interpret: 'we'=you and your brother. (Otherwise you'd be lying.)
         (b)   You: We are four, so we can play bridge.
         I interpret: 'we'=all of us in the room. (Otherwise you'd be lying.)
(61)   You say: the sidewalk is flat.
         I would normally choose to assume a standard of precision loose enough to make your statement true.

Now consider (62). Our wish to credit our fellow speaker with correct use of the linguistic conventions for "come" and "go" will lead us to conclude that the relevant reference point in space in the first sentence is "town," and also that it shifts from "town" to "the shore" in the second sentence.

(62)   When the beggars came to town, the rich folk went to the shore. But soon the beggars came after them, so they went home. (Lewis 1979, p. 181)

Returning finally to pss, our wish to see our fellow speakers as saying something interpretable and felicitous will generally drive us to assume (ceteris paribus and within certain limits) that the pss of their utterances hold. Very often, this will involve adding information to our common ground. That is what happens in the example given at the beginning of this section: if I don't know whether you have a dog or not and you say to me *My dog is at the door*, I would normally add to the common ground the assumption that you have a dog. Similarly, if I don't know whether you smoke or not and you say *I haven't managed to quit smoking yet*, I would normally add to the common ground the assumption that you smoke. And so on. Sometimes, we are so willing to accommodate a ps that we would even revise our previous assumptions. If I believe that you don't have a dog, I may revise this assumption when I hear you say *My dog is at the door*, and start to believe that you do have a dog. (Of course our willingness to revise an assumption would depend on how certain we are of that assumption.)

I think that successful "referential" uses of a definite NP with the wrong description (as discussed in Donnellan 1971) may also be considered a type of accommodation. Suppose you open the closet and it contains just two things: a bright pink coat and a black coat. I say (63) to you.

(63)   Look in the pockets of the blue coat.

If you are very sure of your color vision, you may be unwilling to accommodate the ps that there is a blue coat in there. Still, you can accommodate me, by concluding that I meant to refer to the black coat, and looking in the pockets of that coat. Strictly speaking, you will find my utterance somewhat infelicitous, but you will behave as if it was fully felicitous.

I'd like to consider some more examples involving pss. Suppose you don't know anything about the animals I keep or don't keep at home. Suppose we are at my house, and we hear some scratching noises outside. Then I say one of the following.

(55)   My dog is at the door.
(64)   My giraffe is at the door.
(65)   I keep a giraffe here. The giraffe is at the door.
(66)   I keep a dog here. The dog is at the door.

I think you will agree that (64) sounds stranger than either (55) or (65). On the view taken here, the explanation is as follows. (65) is OK because it doesn't presuppose that I have a giraffe. (55) is OK because while it presupposes that I have a dog, this piece of information is very easy for you to accommodate (since it is plausible). (64) is strange because it presupposes that I have a giraffe, a piece of information that you would probably be reluctant to accommodate (since it is rather implausible). On this view, (55) does not directly tell you that I have a dog, but rather "sneaks in" this information, by forcing you to accommodate it. We very often convey information in this indirect manner. Indeed, to say (55) seems more natural than to bother to say the longer utterance in (66). Note that I might choose to say (64) anyway. This creates a special effect, because it is in a sense "unfair" to "sneak in" the implausible and surprising information that I have a giraffe.

Another example: suppose you are on trial for selling crack. Which of the following two questions seems more fair to you?

(67)   Did you sell crack?
(68)   When did you stop selling crack?

On the view taken here, (68) seems unfair because it presupposes that you sold crack. If the hearers didn't have the belief that you sold crack before, they may get tricked into accommodating it now. Certainly, I may choose to say (68) anyway, deliberately "sneaking in" the information that you sold crack; it's just that it would seem unfair.

The principles governing accommodation have been studied by researchers in a number of fields, including traditional grammar, semantics and pragmatics, cognitive psychology and artificial intelligence. It is clear that our tendency to accommodate other

speakers is only a tendency – as Lewis puts it, we accommodate "ceteris paribus and within certain limits." In other words, the process of accommodation is constrained. Let me mention here two of the central constraints on accommodation.

1. **Consistency** When we have firm beliefs about the context of evaluation or context of utterance, we are very reluctant to drop them. Therefore, we are usually unwilling or highly reluctant to accommodate assumptions that are inconsistent with what is already assumed. Further, we are reluctant to accommodate assumptions that seem implausible given what's already assumed, even if those assumptions don't actually contradict what's already assumed. Indeed, assumptions to be accommodated are usually supposed to be uncontroversial and unsurprising (as noted in e.g. Soames 1989 (p. 567) and Heim 1982 (ch. III, section 5.2)). Following are some examples.

Suppose I say (69) to you, and then you open the closet, and in it you see just one thing: a bright pink coat. You will probably **not** choose to revise your own assumption about the color of the coat just in order to be able to see my statement as true . . . So you will conclude that my utterance is false.

(69)   In the closet, you will find a blue coat.

Suppose we are sitting in a room with one door, which is clearly closed. If I say (70), you will not accommodate the assumption that the door is open. Rather, you will conclude that my utterance is infelicitous.

(70)   Close the door.

Suppose, in the real world, today, I suddenly say (71), out of the blue. Obviously, the Earth is not the intended reference point, or I would have said "go" rather than "come." But what's already in the common ground does not make it possible to take the planet Mars as our reference point. So my utterance will seem infelicitous.

(71)   You know what, next year my uncle will come to Mars!

If I say (72) below, you will probably not be willing to accommodate the required ps, viz. that France has a king. Hence, my utterance will seem infelicitous.

(72)   The present king of France is bald.

If I say (64), repeated below, you will probably be reluctant to accommodate the required ps, viz. that I have a giraffe. So you will probably be baffled.

(64)   My giraffe is at the door.

2. **"Bridging"** (Based on the psychological literature. See Heim 1982, ch. III, section 5.2, and references cited there.) There are constraints on accommodation which require that new material added to the common ground be related to material which is already in it. There has to be some crossreference or "bridge" between the newly added material and something which is already there.

For example, consider (73). (73) sounds perfectly felicitous even without contextual salience or previous mention of an author.[8] So the hearers accommodate the assumption that there is an author that the definite NP is supposed to refer to.

(73)   John read a book about Schubert and wrote to the author.

Note, however, that for the purposes of avoiding ps failure, it would be good enough to accommodate the assumption that some author or other exists and is being referred to. And yet, that is not what the hearers do. What the hearers do instead is accommodate the assumption that there is an author who wrote the book about Schubert that John read, and take the definite NP to refer to that author. This constitutes permissible accommodation, because we have linked the accommodated author to the previously mentioned book.

Accommodation will come up again in various places in this book, and we will have occasion to think again about where it occurs, how it works, and how it is constrained.

Finally, let me add that Thomason 1990 argues that accommodation plays a central role in creating conversational implicatures. Accepting Grice's idea that conversational implicatures are rooted in cooperative behavior, Thomason outlines a program for a new theory of how conversational implicatures are generated, in which the relevant cooperative behavior is that of accommodating one's fellow speakers. According to Thomason, the addressees, who recognize specific plans that the speaker is trying to carry out (concerning both non-linguistic goals and the intended organization of the discourse), seek to accommodate the speaker in his/her efforts to further these plans, and it is this accommodation that produces a conversational implicature. One of Thomason's examples is given in (74).

(74)   Husband to wife: I didn't tell you that I'll need the car this afternoon.
        Implicature: I'll need the car this afternoon.

The wife is able to recognize that telling her that he'll need the car would be part of the husband's plan to get her to agree to his using the car. She accommodates him in his effort to carry out the plan she has detected, by interpreting his utterance as telling her that he'll need the car (= by getting the implicature that he'll need the car).

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[8]   If you think that when one mentions a book the author always, automatically, becomes salient, then perhaps (assuming that horses don't always have riders) you will prefer the following example:

  (i)   John heard a horse and decided to get some water for the rider.