What is Presupposition Accommodation, Again?

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Introduction

Presupposition accommodation is the process by which the context is adjusted quietly and without fuss to accept the utterance of a sentence that imposes certain requirements on the context in which it is processed.

In this paper, I explore some questions about accommodation that are still often asked. There are complaints that the putative process involves mysterious magic and that it is posited only to save a superfluous or wrong theory of presupposition. I argue that these complaints are mistaken: accommodation is not magic and is needed.

The paper has two parts: 1. Sections 1–4 explain the common ground theory of presupposition and defend the need for and the propriety of accommodation. 2. Sections 5–7 address some further questions about accommodation and are somewhat more speculative.

* This paper was originally written as a contribution to the Ohio State Workshop on Presupposition Accommodation in October 2006. This final version is the product of a (light) revision prepared in the aftermath of the workshop, in particular in response to David Beaver & Henk Zeevat and Zoltán Gendler Szabó, who commented on the paper at the workshop. The first four sections of this paper are almost entirely based on my 2000 manuscript "What is Presupposition Accommodation?" (von Fintel 2000), which — in spite of being unpublished, because of neglect by its author — has been discussed in several more recent papers on presupposition. Much of this material has been developed over the years while teaching the annual MIT pragmatics course. I would like to thank my colleagues and students for their help. Thanks also to Barbara Abbott, Konstantine Arkoudas, Josh Dever, Chris Gauker, Thony Gillies, and Mandy Simons for their comments and questions.

Part 1: The Need for and the Propriety of Accommodation

1 The Ointment and the Fly

1.1 The Common Ground Theory of Presuppositions

Here is a stylized version of information-gathering discourse, based on classic proposals by Stalnaker[1]: The common ground of a conversation at any given time is the set of propositions that the participants in that conversation at that time mutually assume to be taken for granted and not subject to (further) discussion. The common ground describes a set of worlds, the context set, which are those worlds in which all of the propositions in the common ground are true. The context set is the set of worlds that for all that is currently assumed to be taken for granted, could be the actual world.

When uttered assertively, sentences are meant to update the common ground. If the sentence is accepted by the participants, the proposition it expresses is added to the common ground. The context set is updated by removing the worlds in which this proposition is false and by keeping the worlds in which the proposition is true. From then on, the truth of the sentence is part of the common ground, is mutually assumed to be taken for granted and not subject to further discussion.[2]

Sentences can have pragmatic presuppositions in the sense of imposing certain requirements on the common ground. For example, one might want to say that

(1) It was Margaret who broke the keyboard.

presupposes that someone broke the keyboard (and then asserts that Margaret broke the keyboard). If this is a pragmatic presupposition of the sentence, then what is required is that the common ground include the proposition that someone broke the keyboard, in other words, that the context set only include worlds where someone broke the keyboard. That means that the sentence requires that it is taken for granted and not subject to

1 Stalnaker (1970, 1974, 1998, 2002). Other important work in this tradition includes Karttunen (1974), Lewis (1979), Heim (1982, 1983, 1990, 1992), and Thomason (1990). I also have profited from the fine expository work of Soames (1989), Beaver (1997), Beaver & Zeevat (2007), and Simons (2003).

2 Some of the ways in which this picture is idealized should be obvious: real conversation is free to revisit earlier conclusions, etc.

(further) discussion that someone broke the keyboard. A speaker who sincerely asserts the sentence would have to assume that its requirements are satisfied; that is, such a speaker would have to assume that it is common ground that someone broke the keyboard. This is what we mean when we say that the speaker presupposes (in asserting the sentence) that someone broke the keyboard.

1.1.1 The Source(s) of Pragmatic Presuppositions

How do pragmatic presupposition arise? Why do certain sentences impose requirements on the common ground of the conversation they are asserted in? Stalnaker himself is non-committal and pluralistic on this question. I will take a more definite stance.

Stalnaker holds out some hope that pragmatic presuppositions do not need to be traced back to hardwired encoding in the sentence meaning of natural language sentences. The vision is that they might rather be derivable from presupposition-free sentence meanings together with simple pragmatic principles. Stalnaker sketches such an account for the factive presupposition of *know*. Other people have tried to sketch similar stories. I am very skeptical that any such story can succeed, but will not argue the point here.[3]

So, I assume that there is a presuppositional component of meaning hardwired in the semantics of particular expressions. I am agnostic of the particular kind of wiring involved. Two[4] standard ways of doing this are: (i) a partial or three-valued semantics: sentences express partial or three-valued propositions, which for worlds in which the presuppositions are not satisfied fail to deliver a truth-value or deliver a stigmatized third truth-value; (ii) a semantics based directly on context-change potentials (ccps): sentences express partial functions from contexts to contexts, where the presuppositional component is given as the definedness condition that determines whether the ccp can be applied to a given context.

3 See Soames' demolition in his dissertation (1976) of Wilson's early attempt (1975) at a pragmatic derivation of presuppositions.

4 Interesting variants are proposed by Cresswell (2002) and van Rooij (2005). Another type of account that hardwires presuppositionality is the representational avenue taken by DRT-based approaches and Schlenker's recent work.

Once the semantics is all set, it's time to talk pragmatics. The main principle I propose is this:

(2) *Common Ground Target*

Sentences asserted in a conversation are meant to update the common ground of that conversation.

This principle helps connect the semantics to the Stalnaker-type pragmatics I sketched earlier. If we are working with a ccp-based semantics, this immediately results in the fact that the body of information that needs to satisfy the presuppositions of an asserted sentence is the common ground. If we are working with a partial or three-valued semantics, we need to stipulate an additional connective principle:

(3) *Stalnaker's Bridge*[5]

Partial or three-valued propositions can only be used to update a body of information if all worlds compatible with that body of information are such that the proposition gives a (non-stigmatized) truth-value to them.

Stalnaker presented this as a conceptually natural principle. Soames (1989) shows that it cannot be seen as a natural consequence of general pragmatic considerations. My view is that it is a irreducible property of natural language pragmatics.

There we are then: the semantics specifies presuppositions; assertion is a proposal to update the common ground with the meaning of the sentence asserted; this can only happen if the common ground satisfies the presuppositions encoded in the semantics.

5 Here are two relevant quotes from Stalnaker setting up the bridge principle:

"Since the whole point of expressing a proposition is to divide the relevant set of alternative possible situations — [the context set] — into two parts, to distinguish those in which the proposition is true from those in which the proposition is false, it would obviously be inappropriate to use a sentence which failed to do this. Thus, that a proposition is presupposed by a sentence in the technical semantic sense provides a reason for requiring that it be presupposed in the pragmatic sense whenever the sentence is used." (Stalnaker 1973: 452).

"[T]he point of an assertion is to reduce the context set in a certain determinate way. But if the proposition [expressed by the assertion] is not true or false at some possible world, then it would be unclear whether that possible world is to be included in the reduced set or not. So the intentions of the speaker will be unclear." (Stalnaker 1978).

Perhaps, there is the need for further clarification. Gauker (2008) misunderstands the proposal that presuppositions are preconditions that need to be satisfied before the common ground can be updated. He writes: "As we have seen, Heim understands a presupposition as a condition that a context must meet in order for a sentence to effect an update. But what happens in real life if the condition is not met? Does the speaker's utterance simply have no effect whatsoever on the conversation? That just does not seem very realistic." This is an error: clearly, actions (including the attempt to update the common ground inherent in an assertive speech act) always have effects even if their intended effect is thwarted. So, assertively uttering a sentence whose associated presupposition is not satisfied by the common ground will not have the effect of updating the common ground in the intended way (that is, to add the proposition expressed by the sentence to the common ground), but it will have plenty of other effects on the conversation and even on the common ground: for example, it will be common ground that the speaker uttered the sentence and plausibly, that the speaker's intentions were thwarted, etc.

1.1.2 Speaker's Presuppositions vs. The Common Ground

It should be duly noted that the picture I present here differs from what is found in most (but not all) of Stalnaker's writing on presupposition. For him, pragmatic presuppositions of sentences are requirements on the *speaker's presuppositions*, not on the common ground. I beg to differ from this. I find it much easier to think of the presuppositional component of the meaning of a sentence as being a requirement on the information state it is used to update. Since the information state a sentence is used to update in the ideal case is the common ground, the presuppositional requirements are imposed on the common ground.

Of course, there are speaker-oriented norms in the vicinity: what a careful speaker should do is to reflect on his/her conception of the common ground and to make sure that the presuppositional requirements of the sentence to be asserted are satisfied, as far as s/he knows, by the common ground.

1.2 Informative Presuppositions: A Fatal Problem?

Now, we come to the fly in the ointment. There appear to be clear counterexamples to this view of presuppositions:

(4) I am sorry that I am late. I had to take my daughter to the doctor.

We may well want to say that the second sentence in this sequence presupposes that the speaker has a daughter, perhaps even exactly one daughter. Furthermore, we also may want to say that the speaker in saying the sentence is presupposing that he has a daughter.

On the other hand, it is clear that this sentence can quite appropriately and successfully be uttered in a context where it is not already part of the common ground that the speaker has a daughter. It is also not necessary that the speaker assumes (falsely) that it is already part of the common ground that he has a daughter.

We appear to have a problem. There is intuitively a presupposition here but the common ground theory does not seem to give the right description of what is going on. Some people, including Burton-Roberts (1989) and Gauker (1998), have thought that this is indeed a fatal problem for the common ground theory. Burton-Roberts writes that a theory of presupposition framed 'in terms of assumption-sharing between speaker and hearer' is 'quite simply wrong':

> If I were to say to you, 'My sister is coming to lunch tomorrow', I do presuppose that I have a sister but in presupposing it I do not necessarily assume that you have a prior assumption or belief that I have a sister. (Burton-Roberts 1989: 26)

Gauker in his paper "What is a Context of Utterance?" (1998) discusses the problem in detail and concludes that the common ground theory cannot be maintained. My explorations in this paper were originally motivated by Gauker's concerns.

Others, in fact unsuprisingly most of the people advocating the common ground theory, do not see this as a fatal problem but just as a phenomenon that requires an additional story. But what that story is has actually evolved somewhat over the years and is still often misunderstood. The main purpose of this article is to elucidate it.

1.3 Accommodation

Proponents of something like the picture sketched above have reacted to the troublesome cases in the following way: yes, there is a prima facie problem

here, we can in fact with impunity use sentences that impose certain requirements on the common ground in situations where it is crystal clear that the common ground does not satisfy those requirements. But we need to admit into the picture a process by which the participants in a conversation quietly and without fuss adjust the common ground so as to satisfy the requirements of a sentence that was asserted by a participant in good standing. Of course, they will only acquiesce in this way if the adjustment does not in any way concern controversial claims that should have been put on the open agenda instead.

Karttunen (1974) describes the phenomenon as follows:

> [O]rdinary conversation does not always proceed in the ideal orderly fashion described earlier. People do make leaps and shortcuts by using sentences whose presuppositions are not satisfied in the conversational context. ... I think we can maintain that a sentence is always taken to be an increment to a context that satisfies its presuppositions. If the current conversational context does not suffice, the listener is entitled and expected to extend it as required. He must determine for himself what context he is supposed to be in on the basis of what was said and, if he is willing to go along with it, make the same tacit extension that his interlocutor appears to have made. This is one way in which we communicate indirectly, convey matters without discussing them.

Lewis in his score-keeping paper named the phenomenon "accommodation":

> *The Rule of Accommodation for Presupposition*
>
> If at time t something is said that requires presupposition P to be acceptable, and if P is not presupposed just before t, then — ceteris paribus and within certain limits — presupposition P comes into existence at t. (Lewis 1979)

For Lewis, presupposition accommodation was a special case of other adjustments to the context that are done quietly and without fuss when required. But we will continue to focus on the case of presupposition in most of what follows.

So, when I say "I had to take my daughter to the doctor" to an audience that I fully know is completely clueless as to whether I have a daughter, I am

using a sentence that requires the common ground to include the proposition that I have a daughter — prima facie, there is an incompatibility. But, in the right circumstances, my addressees will accommodate me and tacitly add to their beliefs and thus to the common ground the proposition that I have a daughter. From then on, the conversation can proceed without a hitch.

1.4 Complaints

As I mentioned, the resulting picture is often seen as problematic, as both mysterious and superfluous. Let me use Barbara Abbott's contribution to the Ohio State workshop (Abbott 2006) as an example. She writes that "the main problem with the common ground + accommodation view of presupposition is that there are many cases where presuppositions are not part of the common ground, and where accommodation would have to be invoked." That is, accommodation must be used so often that maybe the view that made the appeal to accommodation necessary is missing the point. She continues: "More generally, the statement of accommodation [by Lewis] makes it appear as a somewhat magical process". Lewis' formulation indeed makes accommodation seem rather magical. Lastly, Abbott remarks: "Stalnaker (2002), which contains a formal analysis of the notion of common belief, also defends Stalnaker's common ground view of presupposition and the invocation of accommodation to handle troublesome examples .... I have to confess that the sections of the paper that are devoted to this project (sections 3 and 4) are among the most difficult and puzzling that I have ever read, so that what I say here by way of response may be totally off base. Nevertheless, I plunge on." Similarly, Gauker (2008) charges that the accommodation approach to informative presuppositions is an "empty evasion".

I will try to help. Clearly, there's work to be done in explicating and defending the common ground + accommodation view of presupposition. I will ask and attempt to answer the following questions: Is accommodation mysterious? Is it magic? Is it needed? How hard is it? Where does it happen? What gets accommodated? First things first: is it mysterious?

2 Is It Mysterious? or: The Right Time

Soames (1982: Fn. 5) claimed that the phenomenon of informative presuppositions "undermines all definitions which make the presence of presupposed

propositions in the conversational context prior to an utterance a necessary condition for the appropriateness of the utterance".

Let me draw attention to the phrase "prior to an utterance". The relevant examples are clearly cases where the presupposed proposition is not in the common ground *prior to the utterance*. But note that this in fact is not what the common ground theory of presupposition says, at least not once we look very closely at what it tries to do. We saw that sentence presuppositions are requirements that the common ground needs to be a certain way for the sentence to do its intended job, namely updating the common ground. Thus, the common ground must satisfy the presuppositional requirements before the update can be performed, not actually before the utterance occurs.

Thus, when we say that a speaker is assuming that the common ground satisfies the necessary presuppositional requirements, we actually mean that the speaker is assuming that the common ground will satisfy the requirements by the time that the update is to be performed. The speaker need not at all assume the common ground prior to the utterance already has the right properties. This will work out fine if the speaker can assume that the fact he made an utterance which imposes certain requirements on the common ground will lead to hearers to make the necessary adjustments to the common ground. We see thus that an utterance will affect the common ground in two steps: (i) first, the fact that the utterance was made becomes common ground (and the participants may immediately draw inferences based on that fact, and perhaps adjust the common ground accordingly), (ii) then, assuming that the proper (implicit) negotiation has occurred, the asserted proposition is added to the common ground. Presupposition accommodation occurs in step (i) and is thus similar to the kind of common ground adjustment based on manifestly obvious facts that everyone in the conversation observes, such as Stalnaker's famous goat walking in the room.[6]

This perspective on the time-dependent nature of presuppositional assumptions is made clear by Stalnaker in his more recent work on context dynamics (Stalnaker 1998), emphases added by me:

6 This was already clearly stated in Stalnaker's "Assertion" paper (Stalnaker 1978):

> the context on which an assertion has its *essential* effect is not defined by what is presupposed before the speaker begins to speak, but will include any information which the speaker assumes his audience can infer from the performance of his speech act.

> If certain information is necessary to determine the content of some speech act, then appropriate speech requires that the information be shared information at the time at which that speech act is to be interpreted. But exactly what time is that? The context — what is presupposed in it — is constantly changing as things are said. The point of a speech act — an assertion, for example — is to change the context, and since the way the speech act is supposed to change the context depends on its content, interpretation must be done in the prior context — the context as it is before the assertion is accepted, and its content added to what is presupposed. But *the prior context cannot be the context as it was before the speaker began to speak*. Suppose Phoebe says *I saw an interesting movie last night*. To determine the content of her remark, one needs to know who is speaking, and so Phoebe, if she is speaking appropriately, must be presuming that the information that she is speaking is available to her audience — that is shared information. But she need not presume that this information was available before she began to speak. *The prior context that is relevant to the interpretation of a speech act is the context as it is changed by the fact that the speech act was made, but prior to the acceptance or rejection of the speech act.*

I would urge people who have doubts[7] about the legitimacy of accommodation to ponder Stalnaker's example: the first person singular pronoun "I" needs to be interpreted with respect to the context — surely, nobody would deny this. But, clearly, what counts cannot possibly be the context prior to the utterance, since there is no speaker to serve as the denotation of "I". So, the relevant context is the context of the utterance, the context "as it is changed by the fact that the speech act was made".

Having been admonished to pay attention to timing, let us walk through an example of informative presupposition given by Stalnaker (1998) (here, I merely spell out a denser passage in that article). Phoebe says

7 I would include here Thomason, Stone, and DeVault, who write in their contribution to the OSU workshop (Thomason et al. 2006): "we know of no independent way of motivating multi-stage updates directly from considerations having to do with pragmatic reasoning. Without motivation of that kind, it looks very much like an *ad hoc* solution, whose only purpose is to save an account of speaker presupposition that requires presuppositions to belong to the common ground".

(5) I can't come to the meeting — I have to pick up my cat at the veterinarian.

Let us suppose, as is reasonable, that (5) is associated with the pragmatic sentence presupposition that Phoebe owns a cat. The proposition expressed by (5) can only be added to the common ground if that common ground entails that Phoebe owns a cat. Assuming that Phoebe sincerely intends her assertion to be successful, we can infer that she must be assuming that the common ground to which (5) is to be added does satisfy this condition. Now, let us assume that prior to her utterance the common ground did not in fact satisfy this condition because her listeners did not assume that she owns a cat. Let us also assume that Phoebe was quite aware of her listeners' ignorance on this matter. Nevertheless, there is no miscommunication here, no conversational hiccup. Her listeners infer that Phoebe assumes the common ground to which (5) is to be added to entail that she owns a cat. The only obstacle to that being the case is that the listeners do not yet assume that Phoebe owns a cat. But if they do start making that assumption, the common ground will entail that Phoebe owns a cat. So, if Phoebe's listeners are accommodating, they will start making that assumption. In that case, (5) can be added to the common ground.

Thus, we have (i) that (5) presupposes that Phoebe has a cat, i.e. it requires that the common ground it is to be added to entails that Phoebe has a cat; (ii) that Phoebe in asserting (5) presupposes that she has a cat, i.e. that she assumes that the common ground that (5) is to be added to entails that she has a cat; (iii) that Phoebe does not assume that the hearers already before her utterance presuppose that she has a cat; (iv) that she trusts that the hearers will change their assumptions in time for (5) to be added to the common ground; (v) that the hearers can figure out that (i)-(iv) hold and will accommodate Phoebe if they are willing.

One more time, it is crucial to pay attention: the relevant common ground is "the common ground to which (5) is to be added". This need not be the common ground as it was before the utterance of (5). The common ground is changed by the mere utterance of (5) and attending inferences by attentive hearers, even before the truth-conditional content of (5) is added to the common ground.

Note certain properties of this process. The common ground will only come to satisfy the presupposition of the sentence if the listeners change their assumptions. Why would they do that? Why wouldn't they insist on

the relevant information being proffered as an assertion which is subject to discussion? Informative use of presupposition may be successful in two particular kinds of circumstances: (i) the listeners may be genuinely agnostic as to the truth of the relevant proposition, assume that the speaker knows about its truth, and trust the speaker not to speak inappropriately or falsely; (ii) the listeners may not want to challenge the speaker about the presupposed proposition, because it is irrelevant to their concerns and because the smoothness of the conversation is important enough to them to warrant a little leeway.[8]

So, no: accommodation is not mysterious. If presupposition is correctly analyzed as involving requirements that the common ground needs to fulfill in order for the sentence to do its job, then it's no wonder if the common ground can get adjusted to let the sentence do its work.

3 Is It Magic?

But isn't accommodation still black magic? After all, in the relevant cases it is plainly and obviously not common ground that the presupposition is true. So, how can it suddenly become common ground that it is true?

The picture that this process conjures up for me is this: imagine a (rather curious) screw, its head appears kind of blurry when you look at it, you want to turn it but you don't know what kind of screwdriver to use, so you just pick the most convenient one, a phillips head say, you approach the screw with the screwdriver, and here's what happens: the screw accommodatingly changes its head to a phillips head so that the screwdriver can do its job. That does sound like magic — although maybe it is just a next generation screw: one has to keep in mind Arthur C. Clarke's quip that "any sufficiently advanced technology is indistinguishable from magic."

What magic there is in accommodation lies in the fact that the common ground is an object that is constituted entirely by the beliefs of the participants in a conversation, and since people can change their beliefs at least to some extent in response to other people's actions, the common ground is

8 Thony Gillies (pc) pointed out to me that accommodation can even occur when the hearer(s) antecedently believe the negation of the presupposition. I'm talking to Henk, and everyone knows he's up on all matter of Dutch Royalty. I antecedently think Queen Beatrice is tall (since she's Dutch, and Dutch folk are generally tall). But then Henk says "When Paul realized Queen Trixie is so short, he knew she wouldn't play center on the All Monarchy basketball team". In this kind of case, presupposition accommodation would have to trigger belief revision.

more easily changed than a physical object, and can thus, in the right circumstances be adjusted quiety and without fuss.[9] The following passage from Thomason (1990) makes this aspect of the phenomenon of accommodation very clear and so maybe I can be excused for citing it at length (Thomason 1990: 342–344):

> Acting as if we don't have a flat tire won't repair the flat; acting as if we know the way to our destination won't get us there. Unless we believe in magic, the inanimate world is not accommodating. But people can be accommodating, and in fact there are many social situations in which the best way to get what we want is to act as if we already had it. Leadership in an informal group is a good case. Here is an all-too-typical situation: you are at an academic convention, and the time comes for dinner. You find yourself a member of a group of eight people who, like you, have no special plans. No one wants to eat in the hotel, so the group moves out the door and into the street. At this point a group decision has to be made. There is a moment of indecision and then someone takes charge, asks for suggestions about restaurants, decides on one, and asks someone to get two cabs while she calls to make reservations. When no one objects to this arrangement, she became the group leader, and obtained a certain authority. She did this by acting as if she had the authority; and the presence of a rule saying that those without authority should not assume it is shown by the fact that assuming authority involved a certain risk. Someone could have objected, saying *Who do you think you are, deciding where to go for us?* And the objection would have had a certain force.
>
> Another familiar case, involving even more painful risks, is establishing intimacy, as in beginning to use a familiar pronoun to someone in a language like French or German. Here the problem is that there is a rule that forbids us to act intimate

9 In the first draft of this article, I called the common ground "a public object under the mental control of the participants in a conversation". Mandy Simons (pc) convinced me that this characterization was inaccurate. The common ground as a whole is neither on public display nor constructed as a whole in public. What happens publicly are interactions that (i) depend on the common ground being a certain way, which can lead to inferences about what the common ground must be, and that (ii) build new common ground.

> unless we are on intimate terms; and yet there are situations in which we want to become intimate, and in which it is vital to do it spontaneously, rather than by explicit agreement. If I find myself in such a situation, my only way out is to accept the risk, overcome my shyness, and simply act as if you and I are intimate, in the hope that you will act in the same way. If my hopes are fulfilled, we thereby will have become intimate, and it will be as if no social rule has been violated. A process of accommodation will have come to the rescue.[10]
>
> Opening the door for someone is a form of obstacle elimination. So is adding p to the presumptions when someone says something that presupposes p. The difference between the two has mainly to do with the social nature of the conversational record [which includes Stalnaker's common ground, KvF]. In the case of the door we simply don't have the practical option of acting as if the door were already open. In the case of the conversational record, to act as if the previous state of the record already involved the presumption p is to reset the record. The fact that changes in the conversational record can be made so effortlessly accounts in large part for the extensive role that is played by accommodation in conversation — at least in informal and noncompetitive conversation. The principle behind accommodation, then, is this:
>
> > Adjust the conversational record to eliminate obstacles to the detected plans of your interlocutor.

(Admittedly, Thomason is presupposing something like an "acting as if" account rather than the timing account proposed in the previous section. But we'll let that slide for now.)

No magic is involved in accommodation. Just the kind of advanced mental technology that our minds are masters at.

10 KvF: As we will see, using accommodation to move to a familiar relationship does indeed involve "more painful risks": it can be seen as one of the cases where presupposition accommodation is "hard".

4 Is It Needed?

So, perhaps it can be granted that there is nothing mysterious or magical about presupposition accommodation. But, still, do we really need it? In fact, shouldn't we want something else? After all, the reason we seem to need to appeal to accommodation all over the place might be that our initial theory is simply wrong, too strong. In this section, we will go over some attempts to not use the process we explicated above. Some of those attempts in fact originate with Stalnaker.

4.1 Pretense

Since in the problematic examples, the speaker is clearly not actually assuming that the presupposed proposition is already part of the common ground, Stalnaker (1973, 1974) proposes to see such examples as a kind of pretense. The speaker is pretending to make this assumption, he is acting as if he is making the assumption.

> [A] speaker may act as if certain propositions are part of the common background when he knows that they are not. He may want to communicate a proposition indirectly, and do this by presupposing it in such a way that the auditor will be able to infer that it is presupposed. In such a case, a speaker tells his auditor something in part by pretending that his auditor already knows it. The pretense need not be an attempt at deception. It might be tacitly recognized by everyone concerned that this is what is going on, and recognized that everyone else recognizes it. In some cases, it is just that it would be indiscreet, or insulting, or tedious, or unnecessarily blunt, or rhetorically less effective to assert openly a proposition that one wants to communicate.
>
> Where a conversation involves this kind of pretense, the speaker's presuppositions, in the sense of the term I shall use, will not fit the definition sketched above [to presuppose something is to assume that it is mutually assumed to be true]. That is why the definition is only an approximation. I shall say that one actually does make the presuppositions that one seems to make even when one is only pretending to have the beliefs that one normally has when one makes presuppositions.

> Presupposing is thus not a mental attitude like believing, but it is rather a linguistic disposition — a disposition to behave in one's use of language as if one had certain beliefs, or were making certain assumptions. (Stalnaker 1974)

In "Assertion" (1978), Stalnaker follows his own recommendation and defines presupposition in the terms suggested in the earlier article:

> A proposition is presupposed if the speaker is disposed to act as if he assumes or believes that the proposition is true, and as if he assumes or believes that his audience assumes or believes that it is true as well.

With this definition, Stalnaker has made space for the intuition that the speaker of our examples is actually making a presupposition even though he does not take the presupposed proposition to be common ground material. Presupposing is simply pretending that or acting as if the presupposed proposition is common ground.

One immediate concern one might have with this pretense-theory of our examples is that it doesn't explain the sense in which the sentence presupposes the presupposed proposition. Since the sentence can be quite appropriate and successful even if the common ground doesn't contain the proposition in question, we seem forced to give up the common ground-oriented definition of sentence presupposition.

So one might want to retreat to the speaker-oriented definition: a sentence presupposes p iff it is only appropriately uttered if the speaker presupposes (in the pretense sense) that p. But this gives up on the nice theoretical explanation for why sentences put certain requirements on the common ground, which had to do with the job of assertion.

Another response is to rethink what "common ground" means. If people's presuppositions are those propositions p such that they are disposed to act as if p is mutually assumed to be true, then the common ground might naturally be the set of propositions that everyone in the conversation is disposed to act as if they are mutually assumed to be true. In this sense of common ground, one might say that the hearers of our examples are actually presupposing the relevant propositions as well. Of course, they are not (yet) assuming that they are true. But, in the right circumstances, they may well be disposed to act as if they are true.

But of course, there remain problems:

1. First of all, it is not our intuition that the hearers in such examples are already presupposing the relevant proposition, even if they are disposed to act as if the proposition is true as soon as the speaker utters a sentence that presupposes it.

2. Secondly, the hearers in such cases are often both disposed to act as if it is taken for granted that the speaker has a daughter, for example, and disposed to act as if it is taken for granted that the speaker does not have a daughter, depending on what the facts are and on what the speaker reveals. So, which of those propositions is in the common ground?

3. Further, even on the speaker's part there is no air of pretense in run-of-the-mill examples, as Stalnaker admits in his 1974 article:[11]

> I am asked by someone who I have just met, "Are you going to lunch?" I reply, "No, I've got to pick up my sister." Here I seem to presuppose that I have a sister, even though I do not assume that the addressee knows this. Yet the statement is clearly acceptable, and it does not seem right to explain this in

11 This is not to say that presuppositions cannot be involved in pretense or that in fact in many conversations we don't act as if the common ground is some way that it actually isn't. Participants may well (secretly or not) fail to actually believe the propositions that they are assuming as common ground. The common ground is made up of propositions that are assumed to be true for the current purposes of the conversation. Those purposes may make it expedient to assume something false to be true or to assume something to be true about which one still has doubts. Thanks to Konstantine Arkoudas (pc) to raising this issue with me.

An example from Donnellan (1966: 290f) might be a case in point:

> Suppose the throne is occupied by a man I firmly believe to be not the king, but a usurper. Imagine also that his followers as firmly believe that he is the king. Suppose I wish to see this man. I might say to his minions, "Is the king in his countinghouse?" I succeed in referring to the man I wish to refer to without myself believing that he fits the description. It is not even necessary, moreover, to suppose that his followers believe him to be the king. If they are cynical about the whole thing, know he is not the king, I may still succeed in referring to the man I wish to refer to. Similarly, neither I nor the people I speak to may suppose that anyone is the king and, finally, each party may know that the other does not so suppose and yet the reference may go through.

Donnellan of course analyses this as a case of a "referential definite description" where the descriptive predicate does not need to fit the intended referent. But why not see this as a case where the common ground ascribes the predicate *king* to the person in question, while the interlocutors do not actually believe this assumption?

> terms of pretense, or exploitation. . . . [To analyze this example in terms of exploitation is] to stretch the notion of exploitation, first because the example lacks the flavor of innuendo or diplomatic indirection which characterizes the clearest cases of communication by pretense, and second because in the best cases of exploitation, it is the main point of the speech act to communicate what is only implied, whereas in this example, the indirectly communicated material is at best only a minor piece of required background information. (Stalnaker 1974)

4. Lastly, there is the worry that pretense is in fact also not quite right for true cases of exploitation. This is articulated by Gauker, who talks about an example of informative presupposition found by Karttunen (1974):

   (6) We regret that children cannot accompany their parents to commencement exercises.

   Gauker (1998) writes:

   > If I pretend that something is the case, then I act as one might expect I would act if that thing were in fact the case (though not perhaps just as I would in fact act). If I pretend not to notice your embarrassing remark, I continue talking just as one might have expected me to do if in fact I had not noticed. So if I were pretending or acting as if everyone already knew that children cannot accompany their parents to the commencement exercises, I would not announce that we regret that that is the case. I might make such an announcement if our regret per se were actually something that needed to be communicated, but in the usual sort of case the regret per se would not really be an issue. The point is to inform the parents that the children cannot come, and I put it that way in order to acknowledge that this news may be disappointing to some.

4.2 Soames Changes the Rules

Stalnaker reports in Fn. 2 of the 1974 article that Sadock, who had pointed out to him the sister example, suggested to define presuppositions as involving the speaker's assumption "that the addressee has no reason to doubt that P."

Stalnaker immediately detected a problem with defining presupposition that way: It would mean that anything that the speaker assumes to be uncontroversial for the addressee is thereby a presupposition of the speaker. But then, Stalnaker notes, it would be impossible to formulate important pragmatic principles such as his rule "Do not assert what you already presuppose". If what you presuppose is what you assume your addressee has no reason to doubt, then you would be prohibited from asserting many things. Stalnaker asks us to "consider a routine lecture or briefing by an acknowledged expert. It may be that everything he says is something that the audience has no reason to doubt, but this does not make it inappropriate for him to speak" (Stalnaker 1974: Fn. 2).

Soames (1982) is convinced by Stalnaker's objection to Sadock's proposal. Furthermore, he does not adopt Stalnaker's pretense-definition of speaker's presupposition but retains the simpler assuming-to-be-common-ground notion. His trick is to say that in the crucial cases, "a speaker's utterance presupposes a proposition, even though the speaker himself does not presuppose it in the sense I have defined". He defines a notion of utterance presupposition which does involve the concept of a proposition being uncontroversial:

(7) *Utterance Presupposition* (Soames 1982)

An utterance U presupposes P (at t) iff one can reasonably infer from U that the speaker S accepts P and regards it as uncontroversial, either because

a. S thinks that it is already part of the conversational context at t, or because
b. S thinks that the audience is prepared to add it, without objection, to the context against which U is evaluated.

Sentence presupposition is then defined as follows: "A sentence S presupposes P iff normal utterances of S presuppose P."

We can now maintain that the utterance (and the sentence uttered) has the presupposition we thought it had. We can't say that the speaker presupposes what we thought he presupposed. But Soames offers a further notion that would give us a close substitute:

(8) *Taking P to be Uncontroversial*

A speaker S takes a proposition P to be uncontroversial at t (or, equiv-

alently, takes P for granted at t) iff at t, S accepts P and thinks

a. that P is already part of the conversational context at t; or
b. that the other members of the conversation are prepared to add P to the context without objection.

Now, we can at least say that the speaker in our examples is taking the relevant proposition to be uncontroversial.

I think that Soames' definitional acrobatics do not help us much in understanding the phenomenon. It is left open *why* one would be able to reasonably that infer that the speaker thinks that the audience is prepared to add the presupposed proposition P, without objection, to the context against which U is evaluated. We can't say that that is because the sentence presupposes P, since sentence presupposition is defined in terms of utterance presupposition. Somehow, the semantics of the sentence would have to directly stipulate the fact that it gives rise to utterance presuppositions.

In fact, I think that what plausibility Soames' definitions have is based on a confusion between semantics and pragmatics. The picture I am advocating distinguishes between what a sentence requires of the context it is meant to update and what rules the speaker of the sentence should follow. On my view, the sentence plainly requires the context or common ground to be such that its presuppositions are satisfied. No ifs or buts about it. But since there is the possibility of accommodation, the norms for the speaker are more subtle. A speaker should not assert a sentence unless either its presuppositions are already satisfied by the context as it was before the utterance or the context can be adjusted quietly and without fuss to satisfy the presuppositions before the proposition expressed by the sentence is added to the context. In other words, the speaker should take the presuppositions of the sentence to be uncontroversial, in Soames' sense. But the reason behind this is that sentences have hardwired semantic presuppositions, that the common ground is the target of assertion, and that there is the possibility of accommodation in the right circumstances.

Let me say this again:[12] In the system I advocate, there are two levels of "rules". At the semantic, grammatical level, a sentence has presuppositions: for some reason or other, the sentence can be used to update information states only if they entail the presupposed propositions. Since declarative sentences are used to update the common ground, these presuppositional

12 This is meant as a partial response to the discussion by Thomason et al. (2006: section 5.2.3, pp. 36-37).

requirements are imposed on the common ground as it is being updated. At the pragmatic level, speakers need to consider what it takes for an assertion of such a sentence to be successful. What it takes is that the context be such that it already satisfies the requirements of the sentence or that it can be adjusted quietly and without fuss.

It should be clear that in the resulting picture, accommodation is not something that undermines the system. There is no "appeal to a rule that is then [routinely and normally] undermined by the accommodating practice" (as Thomason, Stone, and DeVault characterize the situation).

4.3 Multitudes of Contexts

Even proponents of the common ground theory might explore other approaches. For example, Beaver (2001) develops a much more complicated picture of discourse than the one we adopted from Stalnaker. Beaver assumes that there is never such a thing as *the* common ground of a conversation. Participants are constantly uncertain about what other participants take the common ground to be. He proposes a system where a participant's model of a conversation is associated with a set of common ground candidates, ordered in terms of how plausible it is that a particular common ground candidate is in fact the common ground assumed or intended by the speaker. Now when a sentence with a presuppositional condition on the input common ground is asserted, the set of candidate common grounds is winnowed down to those candidates which satisfy the condition. Each of the candidate common grounds is then updated with the asserted proposition. Beaver's proposal would say this about Stalnaker's example with Phoebe's cat. The set of candidate common grounds includes some where it is presupposed that Phoebe has a cat and some where it is not. Phoebe's assertion requires the common ground to be one where it is presupposed that she has a cat. So, only those candidates that satisfy this condition survive. Each one of them is then updated by adding the asserted proposition (that Phoebe had to take her cat to the vet).

Here's my take on this proposal: it is either confused or an interesting elaboration of the picture I proposed. Which one of those disjuncts obtains depends on what the candidate common grounds are precisely meant to be.

On the confused view, the candidate common grounds are those that for all it is known might be the actual common ground. But in the cases we are considering, there is in fact no relevant uncertainty about the common

ground. It is quite obviously common ground in these cases that it is an open question, not settled yet, whether I have a daughter or Phoebe has a cat. So, in *none* of the candidate common grounds is it settled that I have a daughter etc. So, accommodation could not proceed by selecting among the candidate common grounds the ones where it is settled that I have a daughter. The confusion is that on Beaver's view there is uncertainty about the common ground, whereas in this particular case, there is in fact no relevant uncertainty about the common ground and in particular there is certainty that it is common ground that it is not settled whether I have a daughter etc.[13,14]

But there is a way of interpreting the proposal that I can make sense of. What there is uncertainty about pre-utterance is whether it *will be* common ground that I have a daughter. In some candidate common grounds, I reveal that I have a daughter and it becomes common ground that I do, and in others I reveal that I do not have a daughter and it becomes common ground that I do not. Now, the utterance can select one subset of the candidate common grounds. The crucial point is that to make sense of accommodation as context selection, what is in the contexts needs to be time-sensitive assumptions — precisely, the point that I argued for earlier based on Stalnaker's discussion.

In conclusion: we have seen no viable alternative to the common ground + accommodation view explicated earlier. So, yes, it is needed.

13 I read Thomason et al. (2006: section 5.1, p. 32) as having the same worry.

14 In general, one might ask whether it is in fact possible for participants in a conversation to be uncertain about the common ground at all. It is of course always possible that a discourse participant is *wrong* about the common ground: I might incorrectly believe that it is common ground between us that I have a daughter. But that is not uncertainty. We might think that I am actually uncertain whether it is common ground that I have a daughter, when, for example, I don't know whether you know that I know that you know that I have a daughter. But in such case, it thereby *ipso facto* is not common ground that I have a daughter, because for it to be common ground I would have to know that you know that I know that you know that I have a daughter. And since, I presumably know that I don't know that you know that I know that you know that I have a daughter, I am not uncertain about what is common ground and in fact I know that it is not common ground that I have a daughter. Thanks to Mandy Simons for conversations on this point, when she challenged my rash assertion in an earlier version that there can't be uncertainty about the common ground. Upon reflection, I stand by that claim. Note that as soon as we move to the situation where someone is not actually part of a conversation, they can be genuinely uncertain about the common ground of that conversation, because their uncertainty will not have an effect on what is common ground in that conversation. So, Beaver's model seems entirely appropriate to those kinds of situations.

Part 2: Further Questions

5 How Hard Is It?

We have already seen that accommodation is limited by the natural requirement that participants will only adjust the context quietly and without fuss if the accommodated claim is not one that they would wish to debate, either because they trust the speaker or because they do not care. As a corollary, when a presupposition is actually taken to be false in the common ground, i.e. when everybody takes it to be false and believes everyone else to do so as well etc., then accommodation is unlikely to occur.

There are other cases where accommodation is hard, which may fall under the same generalization. As already quote above, Thomason (1990) mentions the case of familiar pronouns (or (im)politeness markers in general): "Another familiar case, involving even more painful risks, is establishing intimacy, as in beginning to use a familiar pronoun to someone in a language like French or German. Here the problem is that there is a rule that forbids us to act intimate unless we are on intimate terms; and yet there are situations in which we want to become intimate, and in which it is vital to do it spontaneously, rather than by explicit agreement. If I find myself in such a situation, my only way out is to accept the risk, overcome my shyness, and simply act as if you and I are intimate, in the hope that you will act in the same way. If my hopes are fulfilled, we thereby will have become intimate, and it will be as if no social rule has been violated. A process of accommodation will have come to the rescue." We should note that there are indeed "painful risks". Using a familiar pronoun when your addressee is not ready to move to that level is an incredible faux pas.[15] In fact, Beaver & Zeevat (2007) cite this case as a case where accommodation does not occur: "it would be incorrect to say that speakers just repair when confronted with a special form: they may feel quite unhappy when respect and unfamiliarity is not recognized or perhaps even worse when distance is created by the use of an inappropriate polite form. Thus, while languages and cultures vary in the rigidity of their politeness and honorific systems, it is standardly the case that use of a certain form will not in and of itself produce accommodation by interlocutors to ensure that the

15 I remember a time in my childhood when I avoided forms of direct address with the parents of my best friend because I was not sure whether to use the polite or the familiar form, thinking that either might offend them. Talking to these folks on an extended basis without using second person pronouns at all was quite a feat of verbal acrobatics.

form is in fact socially appropriate."

Another kind of case where accommodation is hard is perhaps expected under the view that I have explicated here. Accommodation occurs when all it takes to admit the assertion of a sentence is for everyone to start believing (or at least, accepting) the information that the sentence presupposes to be part of the common ground. Again, this is only possible if there is no prior obstacle to accepting that information. When it is already common ground that the information does not obtain, there can be no accommodation. Consider:

(9) Since we all know that I have a daughter, you should pay attention to my opinion.

Here, the sentence "we all know that I have a daughter" is given presupposed status by the item *since*. But in a situation very much like the standard one (where my addressees have no idea whether I have a daughter or not), there can be no accommodation. (9) will be felt as truly weird. Why? Shouldn't the hearers just start accepting that I have a daughter, in which case it will be true that we all know that I have a daughter? No, that won't be enough. What is required is that at the time of utterance (because of the present tense), we all know that I have a daughter. And that is simply not so. The fact that somewhat later we might all know that I have a daughter doesn't satisfy the presupposition.[16]

16 Zoltán Gendler Szabó in his comments at the OSU Workshop and in email exchanges afterwards raised a potential worry about this story. In Stalnaker's point about the indexical pronoun *I*, discussed above in Section 2, it was clear that the relevant time for the evaluation of indexicals is not the context prior to the utterance but the context *of* the utterance. This context was glossed as "the context as aa it is changed by the fact that the speech act was made". So, the worry goes, why don't we here see the indexical present tense as referring to the time after the hearers have processed the fact that the speech act was made, by which time they can have accommodated the fact that I have a daughter? The response is that we have to be very careful: we need to distinguish (i) the context before the utterance, (ii) the context *of* the utterance, and (iii) the context to which the assertion made by the utterance is applied. Accommodation happens in the transition between (ii) and (iii). Indexicals take their values relative to the context in (ii), even though the determination by the hearers of what the context of utterance is happens again after (ii). So, *I* refers to whoever is speaking at the time of (ii), the present tense refers to the time of (ii). Determining these facts happens in the hearer's minds as the utterance is being produced and/or slightly after. After the proposition expressed has been determined, it is applied to the context in (iii). In the step between (ii) and (iii), accommodation can occur. What goes wrong in (9) is that the present tense refers to a time that is too early for accommodation to have happened.

More generally, there cannot be accommodation with presuppositions that do not just target what is in the common ground but concern facts in the world that no manner of mental adjustment can bring into being. A particular case of that is the actual history of the conversation (the conversational record), as Beaver and Zeevat suggest. Consider Kripke's famous example (Kripke 1990):

(10) Tonight, John is having dinner in New York, too.

In a context in which nobody else is salient who is having dinner in New York tonight, (10) is unacceptable and accommodation cannot come to the rescue. Why not? Whether or not the conversation has made someone salient who is having dinner in New York tonight is part of the common ground. If the conversation hasn't made such a person salient, then it is common ground that there is no such person. And so, accommodation cannot help.

It should be noted here that even cases like (10) are absolutely unremarkable as first sentences of a story or novel.[17] What can we say about that? My sense is that this is where Beaver's idea of an uncertain common ground would come in most handy. These are circumstances where the hearer is not in fact really part of the fictional conversation. It is as if the hearer is joining a conversation that is already in progress. In such cases, one option is to ask to be caught up on what has happened, the other option is to just join in and reconstruct bit by bit what has happened. Here, one can work with hypotheses about what the common ground and the conversational record might be and let subsequent utterances eliminate more and more of the candidates.

Let me end with another case of interpretation outside the bounds of normal conversation, which also goes beyond ordinary accommodation and becomes true abductive reasoning. I saw a bumper sticker this morning on my new neighbor's car: "Save America. Defeat Bush in 2004!". Now, this

17 This is also noted by Thomason et al. (2006: 34). Long ago in my dissertation (von Fintel 1994: 2.4.2, pp. 70ff.), in the section on "specific presuppositions", those that are hard to accommodate, I had written in a footnote: "Barbara Partee (pc) points out to me that there is a type of accommodation that can occur even with such specific presuppositions. If a hearer joins an ongoing conversation, she may not challenge the speaker but try to reconstruct the previous discourse to establish an appropriate antecedent. This same strategy is also triggered by *in medias res* openings of fictional discourses, for reasons of "vividness" and reader-involvement. I suspect that the effortless occurrences of accommodation discussed above are qualitatively different from the *in medias res* kind, but this point merits further thought."

is clearly an "inappropriate" utterance, since imperatives must be future-oriented and 2004 is not in fact in the future anymore. No amount of ordinary accommodation would rescue the utterance. But that doesn't mean that I couldn't draw a bunch of inferences. In 2004, my neighbor voted against Bush and urged others to do so as well. He continues to display the bumper sticker and so he probably maintains that his position had been the correct one. Clearly, there is a lot of meaning to be extracted from inappropriate utterances. But I would maintain that this process is not the one at work in ordinary cases of presupposition accommodation (although they may of course be related and perhaps share computational resources).

We should not mix up the run-of-the-mill kind of accommodation and the desperate (and occasionally pleasurable, in the case of fiction) reconstruction of the conversational record of a conversation that we are not fully privileged participants in.

6 Where Does It Happen?

The next question I want to address is the place where accommodation happens. What could that possibly mean? As I have sketched it, accommodation happens in the heads of the participants of a conversation in response to the utterance of a sentence that requires the common ground of the conversation to satisfy certain conditions. Where else could accommodation happen?

Of course, what I am alluding to is the notion of "local (or intermediate) accommodation", introduced by Heim (1983). In this section, I will look at that notion with a critical eye.

6.1 Presupposition Cancellation via Local Accommodation

Consider a case like this one:

(11) There is no King of France. Therefore, the King of France is not hiding in this room.

After the successful utterance of the first sentence (and perhaps before, if it was meant as a reminder), it will be common ground that there is no King of France. The second sentence, via the usual projection principles, should presuppose that there is a King of France. But that would create a conflict with the common ground as updated by the first sentence. No amount of accommodation would be able to alleviate that conflict. Nevertheless, the

sequence is perfectly acceptable. What is going on?

Heim tells the following story. First, we need to get clear on how the usual projection occurs. The way that we compute how negated sentences update the context is in two steps: (i) first, the embedded sentence is used to update the input context, (ii) then, the resulting context (the one that would have resulted from asserting the embedded sentence) is subtracted from the input context. In pleasing symbolism:

(12) $c + (\text{not } \phi) = c - (c + \phi)$

The trick now is that since in this computation the embedded sentence is in fact used to update the input context (although overall of course, it is not the embedded sentence but its negation that is asserted in the input context), accommodation can occur "locally", adjusting the context c as it is used in the computation in such a way as to admit the sentence. At the "global" level, no accommodation occurs, and couldn't occur because it is common ground that there is no King of France.

It is interesting to note that there is some tension in Heim's framework here. She states that in her system, sentences, simple ones and complex ones, are compositionally associated with context change potentials. So, (12) is to be interpreted as saying that *not* ϕ has as its semantic value a function from contexts to contexts that maps any context c into the context that results from subtracting from c the result of applying the context change potential of ϕ to c. But the option of local accommodation throws a wrench into that machinery. There is no result of applying the context change potential of ϕ to c in a case where c doesn't satisfy the presuppositions of ϕ. So, in fact, we expect the context change potential of *not* ϕ to impose the same requirements on c as ϕ would. This is of course the right prediction in the normal case but then, how does local accommodation occur to rescue (11)?

It appears to me inescapable that to make space for local accommodation, we would have to give up the idea that context change potentials are computed compositionally in the way Heim indicated. Rather, we need to read the definition in (12) as an instruction for what procedures need to occur in sequence. Rather than computing a context change potential for the complex sentence and applying it to the input context, what needs to be happening is to compute a context change potential for the simple embedded sentence, apply that to the input context, let accommodation occur to make that even possible, and then, the resulting context is subtracted from the input context. This is a procedural semantics, not a "declarative" one — contra the stated

characterization by Heim.

Now, whether or not one is comfortable with a procedural semantics (and I am sure that there are plenty of people who would be), there is another worry. In the local accommodation story about (11), accommodation is said to alleviate the conflict between the presuppositions of the embedded sentence (*The King of France is hiding in this room*) and the input context. But, notice that the input context is one in which it is common ground that there is no King of France. The sentence *The King of France is hiding in this room* cannot be used to update that kind of context — no amount of accommodation would help.

What Heim suggests is that we add to the input context the proposition that there is a King of France. That will of course lead to a contradiction and thus to an empty context set, which when subtracted from the input context would return the input context untouched. In other words, with "local accommodation", the second sentence does not add any information to the context as created by the first sentence. Presumably, that's what underlies the presence of the item *therefore* in (11).

So, the kind of "local accommodation" appealed to here is not really the same kind of accommodation that we have discussed before. For one thing, it is not subject to the same condition of compatibility with the input context.

I would recommend not confusing the two processes. In fact, what I think we have happening in (11) is a process by which the semantics of the negated sentence is adjusted to make it fit in the context. This is quite the opposite of what happens in typical cases of accommodation, where the context is adjusted to fit the semantics of the sentence uttered. Calling the semantic/grammatical process "accommodation" is a stretch. We could use Soames' terms (Soames 1989): "de iure" accommodation for the semantic/syntactic operation and "de facto" accommodation for the quiet belief change — however, I always found the terms somewhat confusing. (I will leave it open how exactly the grammatical process is to be analyzed: there are a number of proposals on the market, such as the syntactic manipulations in DRT approaches or the lexical insertion of an A-operator proposed by Beaver & Krahmer (2001).)

To be provocative, let me state that there is no local accommodation. We should not confuse accommodation with grammatical processes that modify or cancel the presuppositions that a sentence triggers.[18]

18 To forestall possible confusion: I don't mean that there are no empirical phenomena corresponding to what has been called local accommodation. What I mean is that whatever

6.2 Intermediate Accommodation?

Natural language quantifiers are context-dependent.[19] Their domain is contextually restricted. One implementation option is to posit a free variable C in the representation of a quantificational structure:

(13) Every$_C$ man sneezed.

There is a familiarity presupposition associated with the C variable. For our sentence in (13), this means that there must be a familiar set of individuals supplied by the context on which the quantifier then operates. The assertion of (13) is then that the intersection of C with the set of men is a subset of the sneezers.

What happens when there is a presupposition trigger in the nuclear scope of determiner-quantified sentences? I will assume a strong claim about presupposition projection in this case: all of the elements in the quantifier domain have to satisfy the presupposition. The strength of the claim is immediately tempered by the presence of implicit restrictions.

(14) Every man loves his wife.

The logical form for this sentence will be something like (15).

(15) [every$_C$ man] λ_1 (t_1 loves his$_1$ wife)

There are two presuppositions triggered, the familiarity of C and the universal presupposition of having a wife:

(16) Presuppositions of (16):
  (i) C is familiar
  (ii) $\forall x \in (C \cap \text{ man}) : x$ has a wife

There are three obvious ways that the second presupposition can turn out to be satisfied:

(i) C may not play a role because all men simpliciter are married.

process explains those phenomena (in a dynamic semantics, in DRT, or in whatever system of presuppositional *semantics* one adopts) is different *in kind* from "global" ("*de facto*") presupposition accommodation.

19 This section is substantially based on material from my dissertation (von Fintel 1994) and my comments on a paper by David Beaver (von Fintel 2004a).

(ii) *C* may consist wholly of married people and thus the intersection of C with the set of men will yield a set of married men.

(iii) *C* contains among other things some men and all of them are married, thus the intersection of C with the set of men will yield a set of married men.

Now since *C* is presupposed to be familiar, the hearer is supposed to be able to just look at which one of these options turns out to be correct. If none are correct, the sentence (14) will suffer from presupposition failure. But, that of course is often unrealistic. The hearer is engaged in mind reading and one of the things she will be trying to figure out is which domain *C* the speaker has in mind. So, instead of checking whether the presupposition is satisfied, the hearer will take for granted that it is satisfied. Her task instead is to choose between the three ways in which the presupposition can be satisified. In other words, she has to choose between three kinds of accommodation. The first option corresponds to what has been called global accommodation. The second and third options are different flavors of so-called local accommodation.

But it is crucial to realize that there is really no local accommodation here. The assumption that is added if we take for example the option (ii) is this: the domain *C* (presupposed to be familiar in the global discourse context) contains only married people. This kind of global accommodation is similar to a case discussed by Zeevat (1992):

(17) [A man]$_i$ died in a car crash yesterday evening.
[The Amsterdam father of four]$_i$ was found to have been drinking.

Zeevat writes: "This is not accommodation proper, which would also create the antecedents themselves. ... Global accommodation ... can be seen as the further determination of an object that is not completely explicit from the ongoing discourse".

The picture we have started to develop then is that quantifiers are relativized to an implicit domain restriction, which is presupposed to be familiar in the discourse. Presupposition triggers in the nuclear scope impose strong restrictions on what the context has to be like, thus indirectly on the identity of the implicit domain.

This perspective is very different from the claim that the presuppositions of the nuclear scope become part of the restriction, which was sometimes called "local accommodation" but is now more usually termed "intermediate

accommodation". A particularly straightforward formulation of this view was proposed by Berman (1991):

(18) Presuppositions of the nuclear scope are accommodated into the restricted term.

What is meant here is a kind of automatic copying operation transforming the logical form of sentences with quantifiers. Beaver (2004) and I argue that there is no such process. There is no local accommodation in an example like (14), repeated here:

(14) Every man loves his wife.

The sentence does presuppose that the domain quantified over consists entirely of married men, but that is a presupposition and not part of the assertion. When marriedhood becomes overtly part of the assertion, we get a sentence with a different meaning:

(19) Every man who has a wife loves his wife.

The sentence in (19) lacks a presupposition that (14) had.

Here are two pieces of evidence for this story. First, when there is little chance that C plays a role in the interpretation, there is no accommodation of information about C:

(20) Every man in this room loves his wife.

It is harder to imagine a context in which an implicit domain plays a role if the domain is already as explicit as "men in this room". Here, we prefer the "global accommodation": (20) is naturally read as presupposing that every man in this room has a wife.

Secondly, consider:

(21) a. Not every player on the team is married. #But everyone loves their spouse.
b. Not every player on the team is married. But everyone who IS married loves their spouse.

The domain C for everyone in (21a) is the set of players on the team (no other domains are salient). We project the presupposition that every member of C is married, which contradicts the assertion of the first sentence. If local

accommodation of presuppositions of the nuclear scope into the restrictive clause existed, we would expect (21a) to be just as coherent as (21b), contrary to fact. There is no local accommodation, just presupposition projection plus possible global accommodation of information about C.

So, both subsections here have concluded that there is no local accommodation in the true sense of accommodation as a pragmatic process in response to unsatisfied presuppositions of an asserted sentence. What we do have is either grammatical processes that modify or cancel the presuppositions that a complex sentence is associated with, or global accommodation of information about contextual domains of quantification.

As Beaver and Zeevat note, the topic of local/intermediate accommodation has considerable parallels to the ongoing debate about whether there are "embedded implicatures". I might add that there as well, several accounts sharply distinguish between grammaticalized exhaustification operators present in the compositional syntax/semantics and the kind of Gricean reasoning that applies to asserted (simple or complex) sentences. That's the kind of picture I would want to put my bets on.

7 What Gets Accommodated?

The last question I wish to address is what exactly gets accommodated. In my initial characterization, I said that "presupposition accommodation is the process by which the context is adjusted quietly and without fuss to accept the utterance of a sentence that puts certain requirements on the context in which it is processed." But *what* adjustment is made? As Thomason (1990: 334) writes: "In general, there will be many different ways to adjust the context to make an utterance appropriate; how do we choose the right one?" There is a nice overview on this question in Beaver and Zeevat's survey article (Beaver & Zeevat 2007: section 1.2), and there is crucial discussion in Geurts (1996) and also in Asher & Lascarides (1998).

Let us look at one of Geurts' examples:

(22) If Theo hates sonnets, so does his wife.

The Stalnaker-Karttunen-Heim style approach to presupposition predicts that the requirement that (22) imposes on the common ground is this: it must be common ground that if Theo hates sonnets, he has a wife. Is that prediction correct? On the one hand, the prediction seems rather safe in the sense that it is hard to find counter-examples: it appears to be impossible to conjure

up a common ground where the assumption (that if Theo hates sonnets, he has a wife) does not hold and the sentence is still acceptable. On the other hand, one might be puzzled by the weakness of the claimed presupposition: hearing (22), any reasonable person would conclude that the speaker takes it for granted that Theo has a wife — simpliciter, not just on the condition that he hates sonnets.

So, the question is this: why exactly upon hearing (22) do we feel coerced to accommodate that Theo has a wife? After all, the theory of presupposition we are assuming says that the requirement that the common ground actually has to satisfy is the strictly weaker condition that if Theo hates sonnets, he has a wife. Geurts calls this the "Proviso Problem"; his recommendation is to give up on theories of presupposition that predict these weak conditional presuppositions.

The reaction from the view I have been working with is that we need to continue to distinguish the semantics of presupposition from the pragmatics of assertion and accommodation. The idea is that (22) has as its semantically calculated presupposition that Theo has a wife if he hates sonnets, while in a normal context where that presupposition is not already satisfied, the hearer will naturally accommodate the stronger proposition that Theo has a wife. If that story is right, then one simple idea about what gets accommodated is wrong: it is not so that hearers add to the common ground the weakest proposition that will ensure that the adjusted common ground is one the sentence can apply to. But then the crucial question is: what other considerations could determine what gets accommodated and can we derive the right prediction for (22) from those considerations?

Many people are tempted by the following line of thought. Accommodation should involve assumptions that are uncontroversial, highly plausible, and not subject to debate. So, isn't it more plausible that Theo has a wife than that he has a wife *if* he hates sonnets? Actually, no. The trickiness with this kind of example stems from the semantic fact that there is a strictly unilateral entailment: Theo's having a wife asymmetrically entails that if he hates sonnets, he has a wife. So, it cannot possibly be more plausible that Theo has a wife than that he has a wife if he hates sonnets.[20] What probably

20 If one thinks about this at the level of the context set (the set of worlds compatible with the common ground), the options seem to be to remove from the context set all worlds where Theo doesn't have a wife or merely all the ones where he hates sonnets but doesn't have a wife. The latter is the more minimal subtraction, which therefore makes it more likely that the resulting context set still contains the actual world. So, again, why is that not what we

lies behind the initial intuition that Theo's having a wife is more plausible than that he has a wife if he hates sonnets is that one reads the conditional "if he hates sonnets, he has a wife" as signaling that it is not unconditionally the case that he has a wife. But that is an implicature of the natural language conditional, which is irrelevant to the question of what proposition should be accommodated to rescue (22).

Here is a point where it becomes crucial that the target of the reasoning is the common ground (and not any particular person's belief state). What I propose is that we are not evaluating the plausibility of the candidate rescue propositions that might be added to the common ground, but we are evaluating candidates for the new common ground as to how plausible it is that the speaker intends the hearers to move to that new common ground to satisfy the presuppositions of the asserted sentence. So, we are evaluating how plausible it is that given the current common ground the speaker intends such-and-such a new common ground to be moved to quietly and without fuss before updating with the asserted sentence. I will lay out the reasoning step-by-step:

(i) Let's be clear about what the initial common ground was. Before the utterance, by hypothesis, it was not common ground that Theo has a wife, nor was it common ground that he doesn't have a wife (because then (22) would simply fail without hope of accommodation). In other words, as far as the common ground was concerned, *it was an open question whether Theo has a wife.*

(ii) Now, (22) is asserted, which can only be used to update the common ground if it isn't considered possible that Theo hates sonnets but doesn't have a wife. So, the hearers are being asked to adjust the common ground so that it rules out that possibility. They will then try to figure out which particular adjustment is more likely the one that the speaker intended: (i) should they continue to keep open the question of whether Theo has a wife but take it for granted that if he hates sonnets, he has a wife, leaving it open that if he doesn't hate sonnets, he might not have a wife, or (ii) should they close the question of whether Theo has a wife and from now on take it for granted that he has a wife?

(iii) Since accommodation depends on the hearers trusting that the speaker knows whereof she is speaking, the reasoning would continue as follows:

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do upon hearing (22)?

what is more likely, that the speaker knows that Theo has a wife, or that the speaker doesn't know whether Theo has a wife (and hence wants to keep that question as an open issue in the common ground) but at the same time knows that it is not the case that Theo hates sonnets and doesn't have a wife? Simple logic will not answer this question, but common sense would indicate that the former scenario is more likely.

(iv) Hence, we accommodate that Theo has a wife.

So, what gets accommodated depends on the best guess of the hearers about what the speaker might have intended as the adjustment to the common ground that would admit the asserted sentence.[21]

Conclusion

I have argued that accommodation is a natural component of the dynamics of discourse. Presuppositions are encoded in the semantics of natural language sentences. Since sentences are used to update the common ground of the conversation they are asserted in, their presuppositions need to be satisfied by the common ground before it can be updated. As long as the conditions are right, hearers will accommodate a speaker who is using a sentence whose presuppositions are not yet satisfied by the common ground. The common ground will be adjusted quietly and without fuss to a new common ground that satisfies the presupposition, in a way that is most plausibly the one the speaker intended.

I have urged that we need to distinguish accommodation proper from two other processes: (i) the semantics-internal mechanics of computing the presuppositions of a complex sentence: these involve syntactic or semantic adjustments that might modify or even cancel presuppositions of embedded constituents; this is not the same as adjusting the context to fit a sentence's presuppositions; (ii) the general purpose reasoning capabilities that can be applied the task of finding our bearings in a conversation that we are not fully privileged participants of.

21 There are at least two worries about this kind of story: (i) Geurts (1996) asks why in the case of *John knows that if Theo hates sonnets, he has a wife*, which should like (22) carry the semantic presupposition that if Theo hates sonnets, he has a wife, we don't accommodate the proposition that Theo has a wife; (ii) one wonders why in my story we only compare two possible target common grounds: shouldn't there be more possibilities, which might disrupt the reasoning, and shouldn't there be a mechanism that constrains the search space? These questions are being addressed in recent work, for example by Singh (2008).

I was commissioned to write a paper on accommodation as a semanticist. What I have done is to clarify what part of the job is to be done by semantics and what part by various parts of pragmatics or general purpose reasoning. The semanticist can now get back to the task of solving the projection problem.[22]

Not so fast

I have argued that as soon as we have a theory of presupposition that encodes presuppositionality in the syntax/semantics of sentences, that has a bridging principle that turns those semantic presuppositions into prerequirements imposed on the context to be updated by the sentence, and that has sentences target the common ground of a conversation, the phenomenon of accommodation is unsurprising. But there is a foundational problem that any theory that distinguishes presupposition from assertion has to address and that as far as I know, has not been addressed satisfactorily:[23] A speaker now has a choice if they want to convey a piece of new information: they can presuppose it and rely on the hearers' willingness and ability to accommodate the presupposition, or they can assert it and thereby propose to the hearers to update the common ground accordingly. What governs this choice has been said many times: accommodation should only be used if the information is uncontroversial. And this is true, one should not presuppose something that is properly put forward as a debatable assertion. In my earlier manuscript on accommodation, I gave the example of the daughter who tells her father *O Dad, I forgot to tell you that my fiancé and I are moving to Seattle next week*, something she shouldn't say if the father didn't even know that she was engaged. Zoltán Gendler Szabó (pc) provides the following minimal pair:

(23) A: Don't lie to me, I know for a fact that you don't have a sister.
B: But I do. In fact, I have to pick up her up at the airport.
B': #I have to pick her up at the airport.

22 Thus, this paper is similar in intent to my paper on the role of truth-value judgments in the theory of presuppositions: "Would You Believe It? The King of France is Back!" (von Fintel 2004b). There I argue that the primary problem for semantics to solve is the projection problem, while the mapping between semantics and truth-value judgments is far too indirect to serve as empirical bedrock for a theory of presupposition.

23 Credit goes to Zoltán Gendler Szabó, who raised this worry in his comments on my paper at the OSU Workshop.

In a context like A's outburst in (23a) where it is clear that it is controversial whether B has a sister, presupposing it is out of bounds despite the existence of presupposition accommodation.

So, empirically, we know what governs the choice between presupposing and asserting a piece of new information: only presuppose it if it is uncontroversial. The problem is in explaining this principle: nothing in the framework we have in place derives the principle. As Szabó (2006) puts it:

> I don't see anything in the framework that can do the job. At one point, Stalnaker (1998) suggests otherwise — he points out that the hearer may not be willing to accommodate a presupposition simply on the grounds of recognizing that this is what the speaker expects. True enough. But the hearer may also not be willing to accept an assertion simply on the grounds of recognizing that this is what the speaker expects. So I don't think there is an asymmetry here.
>
> One might be tempted to fall back on Lewis's notion of accommodation at this point. If accommodation is repair strategy it should perhaps not be surprising that it takes more cognitive effort than normal update. But I don't think this would do any useful explanatory work either. If we assume that accommodation takes more effort than assertion, we should expect a general preference for the latter – at least when the competing forms of expression are roughly the same length and complexity. But this is not what we find: there is no real difference in acceptability between (24) and (25):
>
> (24) I couldn't be at the funeral yesterday and I deeply regret it.
>
> (25) I regret that I could not be at the funeral yesterday.
>
> Something is amiss from the framework, something that would explain our preference for assertion over accommodation when it comes to surprising or controversial information, and lack of preference when it comes to unsurprising and uncontroversial information.

I will leave this a challenge for future work.

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