Presupposition and Accommodation: Understanding the Stalnakerian picture[*]

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Abstract

This paper offers a critical analysis of Stalnaker's work on presupposition (Stalnaker 1973, 1974, 1979, 1999 and forthcoming). The paper examines two definitions of speaker presupposition offered by Stalnaker—the familiar common ground view, and the earlier, less familiar, dispositional account—and how Stalnaker relates this notion to the linguistic phenomenon of presupposition. Special attention is paid to Stalnaker's view of accommodation. I argue that given Stalnaker's views, accommodation is not rightly seen as driven by the presuppositional requirements of utterances, but only by the interests of speakers in eliminating perceived differences among presuppositions. I also consider the revisions which are needed either to the definition of speaker presupposition or to the definition of sentence presupposition in light of the possibility of informative presupposition. In the concluding section, I discuss the ways in which some recent accounts of context and speaker presupposition depart from their Stalnakerian foundations.

0. Introduction

The goal of this paper is to try to get clear on the details of the Stalnakerian view of speaker presupposition, to clarify how this notion is related by Stalnaker to the linguistic phenomenon of presupposition, and to examine Stalnaker's view of the nature and role of accommodation. The outlines of the Stalnakerian picture are

familiar. Presupposition is primarily a property of speakers, not of sentences. A speaker's presuppositions are, roughly, those propositions which she believes to constitute the accepted background information for the conversation in which she is engaged. Presupposition as a property of sentences is a secondary notion: To say that a sentence has a presupposition p is to say — again, roughly — that the use of that sentence is appropriate only if the speaker's presuppositions entail p.

But this is just the rough and ready version of Stalnaker's view. In fact, the definition of speaker presupposition has undergone a number of revisions in the course of his work, and the relation between speaker and sentence presupposition is not straightforward. This simplified version of the view is, though, the one which has made its way into the recent literature on presupposition which has grown out of Stalnaker's work. My goal here is to provide an exegetic overview of the Stalnakerian foundations of this literature.

My discussion will be focused around one particular complication with which the Stalnakerian view has contended from the first. This is the well known fact that a speaker need not actually believe that the presuppositions of the sentences she utters are part of the accepted background information at the time of utterance. It is quite common and natural for speakers to use presupposing sentences to inform their hearers that the presuppositions are true (or at least, that they believe so, or intend their hearers to believe so). This is particularly unproblematic when the presupposition is uncontroversial information which is secondary to a speaker's main point. These cases of *informative presupposition* seem to be in direct conflict with the claim just made, that appropriate utterance of a presupposing sentence requires that the presupposition be entailed by the speaker's presuppositions.

Stalnaker himself has been well aware of this complication throughout. He raises the issue in his very first paper on presupposition (*Presuppositions*, 1973). There, and in subsequent papers, he suggests that informative presuppositions involve a type of Gricean exploitation of an established conversational requirement. Currently, he and others treat informative presupposition using Lewis's (1979) notion of

accommodation, a process whereby the relevant aspect of the conversational record adjusts to satisfy the requirements of an incoming utterance. (Presumably, accommodation is to have Gricean underpinnings, to be justifiable in terms of general conversational principles.) But Stalnaker's understanding of accommodation departs from Lewis's original conception, and from the version of this notion assumed in recent dynamic semantic treatments of presupposition. In what follows, I will try to spell out how, in Stalnaker's view, speaker presupposition, sentence presupposition and accommodation are supposed to interrelate, and how this view differs from other conceptions.

In my discussion, I will frequently invoke definitions of sentence presupposition. This requires some justification, as Stalnaker himself has been leery of defining any such notion directly. *Presupposition* (1973) is the only place in which he does so. In *Pragmatic Presuppositions* (1974), Stalnaker declines to commit to any definition. He writes:

> It is true that the linguistic facts to be explained by a theory of presupposition are for the most part relations between linguistic items, or between a linguistic expression and a proposition ... But I think all the facts can be stated and explained directly in terms of the underlying notion of speaker presupposition, and without introducing an intermediate notion of presupposition as a relation holding between sentences (or statements) and propositions. (200-201/50)[2]

More recently, in the Introduction to *Context and Content*, Stalnaker has clarified why he resists the formulation of an explicit notion of sentence presupposition:

> I suggested that one might define a notion of presupposition *requirement* in something like the following way: Sentence S presupposes that *P* if and only if the use of S would be in appropriate in a context in which the speaker was not presupposing that *P* ... But ... such a notion of presupposition requirement is, at best, a concept for describing surface phenomena, and not a theoretical concept that

might be expected to play a role in the explanation of the phenomena. The reason for this is that the notion of *inappropriateness* is not a theoretical notion . . . No part of linguistic theory will include, in its repertoire of explanatory concepts, the concept of inappropriateness or oddity . . . Rather, the overall theory . . . if it is adequate, will yield explanations, for particular utterances that we find odd or deviant, of why they violate some rule, or are in some way ill-suited to serve the ends that (according to the theory) they are designed to serve. (8)

Despite this, the idea that certain sentences, or utterances of these sentences, are subject to presuppositional requirements is one that Stalnaker uses repeatedly throughout his papers on presupposition, in particular in discussing informative presuppositions. He assumes throughout that those sentences which are standardly called presuppositional impose conditions on the presuppositions of a speaker who utters them. Thus, in *Common Ground* (forthcoming), he considers the possibility that the presuppositionality of the sentence *I have to pick up my sister at the airport* renders it appropriate for use only by a speaker who presupposes that she has a sister. Thus, this characterization of sentence presupposition – at least, of what it means to say that a particular utterance is presupposing – is implicit in much of what Stalnaker writes. I merely make explicit what Stalnaker leaves implicit. I am not concerned by the fact that the definitions I consider may be merely descriptive. My interest is in seeing whether this description actually fits the facts that we hope to explain.

I begin my discussion (section 1) by setting out the two definitions of speaker presupposition which appear in Stalnaker's work. The more familiar definition identifies speaker presuppositions with the speaker's beliefs about common ground; the most recent version of this definition is presented in section 1.2. In section 1.1., I discuss Stalnaker's earlier characterization of speaker presupposition, in terms of a speaker's dispositions. Although this definition does not appear in Stalnaker's recent work, I think its examination nonetheless proves instructive.

In section 2 of the paper, I discuss the role of accommodation in the Stalnakerian theory. I point out that on Stalnaker's view, accommodation is not driven by the need

to satisfy the presuppositional requirements of utterances, but by the interest of discourse participants in resolving perceived discrepancies between their presuppositions. In section 3, I turn to the issue of informative presupposition, and consider the revisions which are needed either to the definition of speaker presupposition or of sentence presupposition in order to maintain the consistency of the view. Finally, in section 4, I consider some related views of context and speaker presupposition.

1. Two definitions of speaker presupposition

1.1.   The dispositional definition

In the opening section of *Pragmatics* (1973), Stalnaker introduces the notion of speaker presupposition in the familiar terms of background information:

> A person's presuppositions are the propositions whose truth he takes for granted . . .
> in a conversation . . . They are the background assumptions that may be used
> without being spoken. (447)

However, the explicit definition of the notion which he offers, and which he goes on to explicate in the course of the paper, presents speaker presupposition as a kind of disposition:[3]

> A speaker presupposes that P at a given moment in a conversation just in case he
> is disposed to act, in his linguistic behavior, as if he takes the truth of P for granted,
> and as if he assumes that his audience recognizes that he is doing so.[4] (448)

This dispositional characterization of speaker presupposition is ingenious, for it provides a solution to two problems which immediately arise for the simpler "background information" characterization of speaker presupposition. The relevant

disposition is a disposition to *act as if*: this is compatible with the observation that speakers need not themselves actually believe the presuppositions of their sentences; and it is also compatible with the fact that speakers need not really believe that these presuppositions are actually taken for granted, or are common beliefs among the participants in the discourse. In addition, by defining presupposition in terms of a *disposition* to act in a certain way rather than in terms of actual actions, Stalnaker is able to maintain that a speaker's presuppositions are not simply those reflected by actual utterances. As he says:

> I may be presupposing something, according to this definition, even if nothing I say or do indicates that I am. (449)

This consequence is desirable in light of the goal of reducing sentence presupposition to an epistemic, language-independent property.

Stalnaker then offers a natural extension of this definition of speaker presupposition to the notion of sentence presupposition.

> A sentence has a presupposition just in case the use of that sentence would *for some reason* normally be inappropriate unless the speaker presupposed a particular proposition. In such a case . . . a sentence *requires* a presupposition. This notion of presupposition *requirement* will be the explication of the linguists' notion of presupposition. (451; emphasis in original)

For the sake of clarity, it is worth spelling out this definition to incorporate the definition of speaker presupposition on which it is based:

> A sentence has a presupposition P just in case the use of that sentence would for some reason normally be inappropriate unless the speaker were disposed to act in his linguistic behavior as if he took the truth of P for granted and as if he assumed that his audience recognized that he was doing so.

Note that these characterizations of speaker presupposition and of presupposition requirements have the consequence that the appropriateness of an utterance, at least as far as its presuppositions are concerned, is determined only by the internal state of the speaker. The presuppositions of a sentence impose constraints on the speaker's dispositions. As long as the speaker has the relevant dispositions, those constraints are met. Sentence presuppositions, on this view, impose no constraints on the actual common ground, or even on the common dispositions of the speaker and her audience. This consequence will be shared by the characterization of speaker presupposition in terms of beliefs about common ground. Before considering the point further, then, I will set out the common ground view.

1.2.   The common ground definition

The basic common ground view of speaker presupposition is articulated in *Pragmatic Presuppositions* as follows[5]:

> A proposition P is a pragmatic presupposition of a speaker in a given context just in case the speaker assumes or believes that P, assumes or believes that his addressee assumes or believes that P, and assumes or believes that his addressee recognizes that he is making these assumptions or has these beliefs. (200/49)

In *Common Ground* (to appear), Stalnaker offers a more precise formulation of the basic view of presuppositions as propositions presumed to be common ground.[6] He begins with the simplifying assumption that common ground can be identified with common belief, for which he adopts a Schiffer-style formulation: P is common belief in a group G just in case, for every believer b in G, b believes P, b believes that every member of G believes P, b believes that every member of G believes that every member of G believes P, and so on ad infinitum. A speaker's presuppositions, then, are the propositions which she believes to be common belief in the group, i.e.:

(1)   "a presupposes p" $=_{\text{def}}$ $B_a(Cb_G(p))$

One undesirable consequence of this definition is that it entails that a speaker must believe whatever she presupposes. By the definition of common belief, if a is a member of G and a believes that p is common belief in G (i.e. a presupposes p) then a must believe p. This, however, is counter to the intuition that one need not in fact believe what one presupposes. (And thus, that a speaker can appropriately utter a presupposing sentence knowing that the presupposition is not true.) What is needed, then, is a more sophisticated notion of common ground. Stalnaker proposes that common ground be defined in terms of what he calls *acceptance*, which is:

> a category of propositional attitudes and methodological stances toward a proposition, a category that includes belief, but also some attitudes (presumption, assumption, acceptance for the purposes of argument or an inquiry) that contrast with belief and with each other. To accept a proposition is to treat it as true for some reason. (20-21)[7]

Common ground is then defined in terms of common belief about what is accepted, as follows:

(2) $CG_G(p) =_{\text{def}} (\forall x \in G: x \text{ accepts } p) \ \& \ (Cb_G[\forall x \in G: x \text{ accepts } p])$[8]

Speaker presupposition can still be defined just as before: A speaker's presuppositions are the propositions which she believes to be common ground. Thus, for a speaker to presuppose p is for her to believe that she accepts p (which presumably reduces to simply accepting p) and to believe that it is common belief that everyone accepts p. No-one at all need actually believe p.

We now have in place a characterization of speaker presupposition in terms of common ground, the latter characterized in terms of acceptance, not belief. Can we formulate a corresponding notion of sentence presupposition? Stalnaker himself

follows here his post-*Presuppositions* practice of not offering any explicit definition of sentence presupposition. It is nonetheless clear, though, that he maintains the view that sentence presuppositions are indications of speaker presuppositions, and that appropriate utterance of presupposing sentences imposes constraints of some kind on speaker presuppositions.[9] Thus, introducing the discussion of informative presupposition, he says:

> suppose that the sentence 'I have to pick up my sister at the airport' is appropriate only if the speaker is presupposing that she has a sister. (11)

This view provides the desired reduction of the linguistic phenomenon to the speaker's epistemic state: presuppositional requirements are satisfied solely by virtue of the speaker's internal state. As long as the speaker has the necessary beliefs, presuppositional requirements are satisfied.

2. Satisfying presuppositional constraints: no accommodation required

2.1. No accommodation required

Speakers may have false beliefs about the common ground, and so come to presuppose propositions which they should not. Suppose that Ann believes—as a matter of fact incorrectly—that it is common ground between her and her interlocutor Bud that she has a Rottweiler. Then, according to the common ground account, she presupposes that she has a Rottweiler. The same mistaken belief would also no doubt dispose her to act in her linguistic behavior as if she took this proposition for granted (etc.), and thus on the dispositional account too, she presupposes that she has a Rottweiler. Given this presupposition, she might be led to say to Bud:

(3)   I have to take my Rottweiler to the vet.

As we have already observed, the presuppositional requirements of this utterance are met: Ann has the required presupposition. But nonetheless there is a well-documented intuition that something has gone a little bit wrong here: the utterance of a sentence licensed by *mistaken* presuppositions requires some redressive action on the part of the addressee. In examples such as this, what has gone wrong is very slight. The redressive action required is easy to take, and the surface of an ongoing conversation in which such an adjustment is made may be unperturbed by it. Nonetheless, it would be unsatisfactory if the account of presupposition had nothing to say about this adjustment.

But Stalnaker does have something to say on this point. In *Assertion* (Stalnaker 1979) he introduces the distinction between defective and non-defective contexts. He emphasizes here that each participant in a discourse has his own set of presuppositions, that is, his own beliefs about which propositions are in the common ground.[10] But he adds that:

> it is part of the concept of presupposition that a speaker assumes that the members
> of his audience presuppose everything that he presupposes. (322/85)

In the ideal situation, this assumption will be correct: the presuppositions of all discourse participants will match. This situation, Stalnaker calls a *nondefective context*. Stalnaker argues further that when discourse participants discover that the context is *defective*, they will try to eliminate observed discrepancies among their presupposition sets. The argument for this is based on communicative efficiency:

> Because hearers will interpret the purposes and content of what is said in terms of
> their own presuppositions, any unnoticed discrepancies between the presuppositions
> of speaker and addressees is likely to lead to a failure of communication. Since
> communication is the point of the enterprise, everyone will have a motive to try to

keep the presuppositions the same. And because in the course of a conversation many clues are dropped about what is presupposed, participants will normally be able to tell that divergences exist if they do. (322/85)

So, returning to our example, the picture we now have is this: When Ann utters sentence (3), the presuppositional requirements of the sentence are satisfied. Ann genuinely presupposes that she has a Rottweiler, and that is all that is required. But her utterance provides Bud with evidence that Ann has this presupposition, revealing to him a discrepancy between Ann's presuppositions and his own, that is, revealing that the context is defective.

Now, depending upon how reliable Bud considers Ann with respect to her revealed presupposition, he might do one of several things. He might not be prepared to accept that Ann has a Rottweiler, and might want to let Ann know this. (Perhaps he has seen Ann's dog, and knows that it is a poodle.) This is the kind of case one might characterize as presupposition failure, where the addressee is most likely to respond with an explicit rejection of the presupposition. On the other hand, if Bud considers Ann reliable on this point, he might well add the proposition that Ann has a Rottweiler to his set of beliefs, and also to the set of propositions that he believes to be common ground. In other words, he will come to presuppose that Ann has a Rottweiler.[11] If Bud considers Ann unreliable with respect to this proposition but doesn't have any interest in challenging its truth, he might merely decide to go along with her presupposition. That is, although he will not change his beliefs with respect to this proposition, he will still presuppose it, i.e. accept it and believe it to be commonly accepted by himself and Ann.[12] (This nicely illustrates the possibility of divergence between a person's presuppositions, as defined here, and his beliefs.)

This entire process is driven only indirectly by the presupposition requirements of the sentence uttered. The addressee's knowledge of these requirements (resulting presumably from his knowledge of the language, combined with his knowledge of any general conversational principles involved) leads him to believe that the speaker

has a certain presupposition. If he does not share that presupposition, then a general interest in eliminating defectiveness in the context (presumably driven by a desire for general communicative efficiency) leads him to do one of two things: to try to get the speaker to change her presuppositions; or to change his own. Crucially, though, these changes are not required in order to satisfy the presuppositional requirements of the original utterance. These requirements are satisfied by the speaker's internal state.

This means that the process envisaged by Stalnaker is somewhat different from Lewis's view of accommodation. Lewis was explicitly concerned with a process that rescues an utterance from inappropriateness by providing a "required presupposition." In this process, the conversational score—which is a property of the conversation, not of each individual speaker—undergoes a change to ensure the appropriateness of the utterance. But as envisaged by Stalnaker, accommodation is not a process of "context-fixing" driven by the presuppositional requirements of utterances. It is rather a matter of discourse participants cooperatively trying to match their presuppositions to the presuppositions of others. In *Common Ground*, Stalnaker indeed urges just this point: "[accommodation] does involve adjusting a context, but need not involve repairing it; the adjustment is the normal adjustment that must take place as events take place, and people become aware that they have" (13).

These observations raise a general point about the place of any notion of accommodation in a theory of presupposition. If presupposition is defined in such a way that the satisfaction of presuppositional constraints depends solely upon the internal state of the speaker, there is no need for any notion of accommodation as "context-fixing", because we don't get the kind of potential violations that accommodation was invoked to eliminate. What we have been calling accommodation can only be a matter of a hearer resolving discrepancies between her own beliefs or presuppositions and those of the speaker, as revealed by the speaker's utterances. To put this the other way around: any theory of presupposition which invokes a notion of accommodation to resolve discrepancies between presupposition requirements and context must assume that the context on which presuppositions

impose constraints is determined by something other than the internal state of the speaker.

2.2. *Common ground change without common ground constraints*

Let us pause here to take a closer look at the process of accommodation, as Stalnaker understands it. The clearest exposition of this process is presented in *Common Ground*, where the idea that accommodation is the result of simple belief change is emphasized. Stalnaker illustrates the process with respect to the sentence *I have to pick my sister up at the airport*. Let us assume, for the sake of simplicity, that the speaker, Alice, genuinely presupposes that she has a sister (i.e. believes this proposition to be commonly accepted) at the time of utterance. Now we want to consider what will happen if the addressee, Bob, does not initially share this presupposition.

The process is supposed to proceed as follows. Alice, by her utterance, reveals that she believes that it is common ground she has a sister.[13] Bob thus comes to believe that Alice has this belief. Now, by the logic of common belief, if x believes that p is common belief then also x believes p. So Bob infers that Alice believes that she has a sister. Moreover, Bob believes that Alice knows whether or not she has a sister; and thus, having discovered that Alice believes that she has a sister, is willing to believe it too. So, letting p stand in for the proposition that Alice has a sister, we have that:

   (i)   Alice believes p.
   (ii)   Alice believes $Cb(p)$.
   (iii)   Bob believes that Alice believes $Cb(p)$.
   (iv)   Bob believes p.

Given the logic of common belief, it follows from these premises that p is in fact common belief between Alice and her hearer.[14] Thus, Alice's use of a presupposing sentence has the result that the presupposition becomes part of the common ground,

and is believed by each speaker to be so. This is how the process of accommodation proceeds.[15]

Notice that it is a crucial step in this derivation that the hearer comes to believe (accept) p. Moreover, he comes to believe (accept) p through the recognition that the speaker believes (accepts) p. On the story given, the hearer comes to believe that the speaker believes p via the recognition that the speaker believes that p is a *common* belief.

But this last step seems redundant. Suppose that the utterance is adequate just to indicate that the speaker believes (accepts) p. Then, if the hearer is willing to take on this particular belief of the speaker, he will come to believe p. Now the hearer believes p, and believes that the speaker believes p. Moreover, as the speaker knows that her utterance indicates that she believes p, she believes that the hearer believes that she believes it. So we have:

    i.   Speaker believes p.
    ii. Speaker believes hearer believes p.
    iii. Hearer believes p.
    iv. Hearer believes that speaker believes p.

Now, I am not sure whether this sequence of events is sufficient to generate the infinite hierarchy of beliefs necessary for common belief. But even if not, it surely gets us far enough up the hierarchy for the speaker and hearer to go on and treat p as common belief for the purposes of ordinary communication. This is achieved *without* the assumption that the appropriateness of the original utterance required p to be common ground, or to be believed to be common ground, but only that it indicates to the addressee that the speaker believes p.

As the beliefs of discourse participants change, their common beliefs inevitably change too. Stalnaker takes it that the explanation of assertion and presupposition crucially requires reference to common belief (or common ground): specifically, to

speakers' beliefs about common ground, and changes to it. But perhaps these explanations can be given in terms of speakers' beliefs (simpliciter), and beliefs about their interlocutors' beliefs. Beliefs about, and changes to, common belief are perhaps merely epiphenomenal.

2.3.   *Presupposing vs. making a presupposition*

In *Presuppositions*, where the dispositional account of presupposition is first presented, Stalnaker points out an important interaction between sentence presupposition and speaker presupposition: to utter a presupposing sentence *is* to presuppose its presupposition:

> It should be noted that if, in a normal context, a speaker uses a sentence which requires a presupposition...then, by that very act, he does make the required presupposition . . . He does *act as if* he takes the truth of the proposition for granted, and as if he assumes that his audience recognizes that he is doing so (451; emphasis in original).

We need to do a little bit of work here to clarify the relationship between *making* a presupposition and plain presupposing. Presupposing, on the view being examined here, is a matter of having a particular disposition, and thus has to do with an individual's internal state. But Stalnaker says that *making* a presupposition is "**not a mental act which can be separated by an act of will from overt linguistic behavior**" (451; my emphasis). The passage cited above indicates that *making* a presupposition is not about having or acquiring a disposition, but about *acting* in a particular way.

How, then, is making a presupposition related to plain presupposing? One way to connect actions to dispositions is to suppose that to act in a certain way is to reveal one's dispositions. There is no necessary connection between actions and dispositions, for sometimes one acts contrary to one's dispositions: I might be disposed to preserve all life, but accidentally tread on a spider. However, producing

utterances is an intentional action. One doesn't, except in rare circumstances, produce particular complete utterances by mistake. So in this case, it is perhaps justified to take the step from action to disposition: a speaker who *acts as if* she takes the truth of *p* for granted etc. is presumably disposed to do so.

But Stalnaker seems here to be claiming something more than that one's linguistic actions reveal one's presuppositions. The idea seems to be that the utterance of a presupposing sentence brings the (speaker) presupposition into being. Whether or not the speaker has the relevant disposition in advance of her utterance, the utterance itself somehow forms it. But even when we are dealing with intentional acts, we would not normally want to say that performance of an action of type A necessarily brings about or constitutes a disposition to perform acts of that type. Stalnaker wants — I think quite correctly — to say that whatever it is to presuppose, it is something that you inescapably do by uttering a presupposing sentence. But the dispositional account of speaker presupposition does not, it seems to me, quite allow us to say that.[16]

What about the common ground view? What would it be, on this view, for a speaker to *make* a presupposition by uttering a presupposing sentence? On this view, to presuppose *p* is to believe *p* to be in the common ground; so one might *make* a presupposition by acting in such a way as to bring it about that one believes that *p* is in the common ground. Indeed, in *Common Ground* Stalnaker argues that under certain circumstances—the case of informative presuppositions—a speaker's utterance of a presupposing sentence is the very thing that will give her grounds to presuppose it. It is to the details of this view that I turn in the next section.

3. Informative presuppositions

I began the previous section by noting that speakers can have mistaken beliefs about the common ground, and thus can inadvertently utter a sentence whose presuppositions are not shared by their addressees. But the more difficult case is the

one in which a speaker utters a presupposing sentence knowing full well that the presuppositions of the sentence are not in the common ground. As Stalnaker has observed from the first, such utterances may be entirely appropriate, and may lead to a perfectly natural process of accommodation. Such uses of presupposing sentences, we will call *informative presuppositions*.

Stalnaker sees no conflict between the dispositional characterization of presupposition in *Presuppositions* and the possibility of informative presupposition. He writes:

> The speaker need not *really* be assuming that his audience recognizes in advance that he is taking something for granted. In some cases, the central purpose of making a statement may be to communicate a presupposition which is required by that statement . . . In these cases, the speaker represents himself as assuming that certain propositions are part of the background of common knowledge. The representation is . . . a transparent pretense, but it is nevertheless by means of the representation that communication is accomplished. (449)

Indeed, informative presuppositions don't seem to present any difficulties for the dispositional account of presupposition, coupled with accommodation as understood here. The story still goes through all right. To return to our earlier example: Suppose Ann knows full well that Bud does not know that she has a Rottweiler, but also knows that he will be willing to accept without argument that she does. Consequently, she is disposed to act in her linguistic behavior as if she took the truth of this proposition for granted (etc.). And indeed she does so act, by telling Bud *I have to take my Rottweiler to the vet*. Bud, being a competent user of English, will recognize that Ann's utterance counts as her making the presupposition that she has a Rottweiler. There is no problem with satisfaction of the presuppositional requirements of the utterance: Ann has the right disposition. But now, having noted that Ann is acting as if she took the truth of the Rottweiler proposition for granted, Bud can conclude one of the following: either she really does take its truth for

granted, or she is trying to get it accepted as something which she is allowed to treat in this manner. Bud still has the same set of options as he had before: explicitly reject the proposition; acquire the disposition to act as if he takes the proposition for granted etc., while still not believing that it is true; or acquire both the disposition and the belief.

This is the easy case. The difficulty arises when we turn to the common ground account of speaker presupposition. For even on the refined version of this account, where common ground is characterized in terms of acceptance and not belief, speaker presuppositions are identified with the propositions which the speaker believes are in the common ground. Thus, we are faced with a conflict in those cases where a speaker appropriately utters a presupposing sentence, while knowing that the required presupposition is *not* in the common ground. On the one hand, it seems that in such cases, the sentence can be appropriately uttered in the absence of a speaker presupposition. On the other hand, as we have seen, Stalnaker insists 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. (*Pragmatic Presuppositions*, p.202/52)

The question, then, is how to resolve this apparent paradox. In both *Presuppositions* (p.451) and *Pragmatic Presuppositions* (p.202/52), Stalnaker says that where speakers intentionally make informative uses of presupposing sentences, their (speaker) presuppositions simply do not fit the definition of presupposition as beliefs about the common ground. But in *Representation of Context* and *Common Ground*, Stalnaker has suggested that the problem can be solved by focusing on the dynamics of context, the way in which context changes in response to what a speaker has said. Let's look at the details of this proposal.

As noted above, Stalnaker begins by supposing that the sentence *I have to pick up my sister at the airport* is appropriately uttered "only if the speaker is

presupposing that she has a sister." Now, suppose that Alice says this to Bob, although she knows that Bob has no idea, prior to her utterance, that she has a sister. Suppose, moreover, that it is a standing common belief between Alice and Bob that both are competent speakers of English, and that each expects the other to speak appropriately. Stalnaker argues that Alice's utterance can be appropriate, and its presuppositional requirement satisfied, for the following reason:

> Since the utterance was a manifest event, it will follow from these background common beliefs . . . that it becomes common belief that Alice believes that it is common belief that she has a sister. (Common belief when? Not before the occurrence of the manifest event, the making of the assertion, but after it had occurred.) (pp.11-12)

Stalnaker goes on to say that Alice's use of the sentence will be appropriate as long as she can reasonably believe that Bob considers her an authority as to whether or not she has a sister, and so, upon discovering that she presupposes it, will come to believe it, and thus to presuppose it, himself.[17] The reasonableness of Alice's belief:

> suffices to make it reasonable for Alice to believe that it will be common belief, at the appropriate point in the conversation, that she has a sister.

So — what was it that actually rendered Alice's utterance appropriate? Not that she believed at the time of utterance that it was common ground that she had a sister; she did not believe this. But she (justifiably) believed that this proposition *would be* common ground *following* her utterance. And this apparently suffices.

This is perfectly plausible. As Stalnaker has pointed out in both *Common Ground* and in *Representation of Context*, it is common for the pragmatic requirements of an utterance to be met only by virtue of the fact that the utterance has been made. For example, a speaker who says *I went to the movies last night* knows that to interpret

her utterance, the audience must know who the speaker is. But of course the audience does not know that until the speaker makes her remark.

However, we also want to be able to say that Alice is *presupposing* that she has a sister at the time of her utterance. (Cf. the quote above from *Pragmatic Presuppositions*.) Thus (as Stalnaker had originally said) we cannot identify her presuppositions at time t with the propositions which she believes to be common ground at time t. The characterization of speaker presupposition which emerges from the exposition above is this:

(SpP) A speaker presupposes p in uttering U only if she believes that p will be common ground following her utterance.[18]

But notice that this is not a characterization of presupposition *simpliciter*, but of *presupposing in uttering*. This characterization allows us to say that the speaker presupposes whatever her utterance presupposes even when she knows that the proposition is not common ground prior to her utterance; but only by relativizing speaker presupposition to utterances. But the idea about speaker presupposition, I think, is that it was supposed to be an utterance *independent* notion, a notion characterizable solely in terms of the speaker's epistemic state. We were supposed to be able to characterize speaker presupposition in such a way as to allow a speaker to have presuppositions which are not revealed by anything she actually says. The solution proposed here for the treatment of informative presupposition closes off that possibility.

Stalnaker tries to solve the problem in a different way. In a footnote, he raises what he calls the "delicate matter" of just when Alice must have the relevant beliefs in order to be speaking appropriately. He says:

The relevant time is a (perhaps somewhat idealized) point after the utterance event has taken place, but before it has been accepted or rejected.

So to say that a sentence S presupposes p is not to say that its appropriate utterance requires the speaker to presuppose p *at the time of utterance*, but to presuppose p *at the idealized post-utterance point*. This moves the nuance out of the characterization of speaker presupposition and into the characterization of sentence presupposition – which Stalnaker anyway thinks is not a notion to be defined in the theory. On this view, sentence presupposition *can* be reduced to the simple notion of speaker presupposition, as long as we are willing to admit the idealized point that Stalnaker refers to.[19]

In fact, in the case of complex sentences, we might have to admit multiple idealized points. Consider the conditional in (4), whose constituent clauses have the potential presuppositions listed in (5):

(4)   If Jane's dog has fleas, his fleas will bite my cat.

(5) a. Presupposition of antecedent: Jane has a dog.
    b. Presuppositions of consequent:
        (i) Jane's dog has fleas.
        (ii) Speaker has a cat.

Presupposition (i) of the consequent does not project, that is, it is not a presupposition of the conditional as a whole. The non-projection of this presupposition is standardly explained in dynamic frameworks by claiming that the consequent is added to a context which has already been updated with the content of the antecedent. As the antecedent entails the first presupposition of the consequent, this presupposition is automatically satisfied, regardless of the starting context. Putting this in more strictly Stalnakerian terms, we can say that the speaker of (4) is licensed to assume that if his addressees accept the antecedent then, by the time he utters the consequent, the proposition that Jane's dog has fleas will be common ground.[20] Thus, he need not assume that this presupposition is common ground prior

to his utterance. (Stalnaker sketches such an account of the projection properties of conditionals in *Pragmatic Presuppositions,* p.211/60.)

However, both the antecedent and the consequent of this conditional give rise to additional presuppositions which *do* project. Suppose that these presuppositions are not antecedently satisfied, that is, that the speaker cannot assume that it is common ground prior to his utterance either that Jane has a dog or that he (the speaker) has a cat. At what point, then, must he believe that these propositions are common ground, in order for his presuppositions to justify utterance of the sentence? If we want to maintain the explanation given above for the non-projection of the presupposition of the consequent, we must admit two distinct "idealized points" at which the speaker must come to have new beliefs about the common ground. According to that account, the antecedent must become common ground – that is, must in some sense be "accepted" – before the evaluation of the consequent. Hence, the speaker must believe that it is common ground that Jane has a dog *after* utterance of the antecedent but before *its* evaluation – which must in turn precede evaluation of the consequent. But the speaker cannot believe that it is common ground that he has a cat (the second presupposition of the consequent) until *after* the evaluation of the antecedent – although still at some point prior to evaluation of the consequent.

Thus complex sentences show that the issue of just when a speaker must have the relevant beliefs to render utterance of a presuppositional sentence appropriate is a very delicate matter indeed.

An alternative would be to abandon the account of presupposition projection in terms of the dynamics of context update, and revert to a global calculation of presuppositions. If presuppositions can be assigned "all at once," on the basis of the entire content expressed, then a speaker need only believe that the presuppositions required for interpretation of the sentence as a whole will be common ground subsequent to utterance, but prior to evaluation.

4. Some additional construals of context

I think it is clear that for Stalnaker, the notion of context relevant for the treatment of presupposition has been, and remains, a notion characterizable in terms of an individual speaker's internal state: specifically, the speaker's beliefs about the common ground. But others who have adopted aspects of Stalnaker's view have construed context in at least two other ways. In this concluding section, I want to look briefly at these other construals.

4.1. *Contexts as actual common ground*

Some authors equate the contexts for presupposition with the *actual* common ground of the discourse participants. This is a variant on Stalnaker's own common ground view, and is perhaps a more "traditional" one, going back at least to Grice 1967.[21] But the view is also maintained by some advocates of the dynamic semantic treatment of presupposition.

Von Fintel 2000 adopts this version of the common ground view in his response to Gauker's critique of Stalnaker. Here is how Von Fintel treats the interaction of speaker and sentence presupposition with respect to an informative use by a speaker, Phoebe, of the sentence:

(6)   I have to take my cat to the vet.

Von Fintel writes:

   We have:
   (i)   that [(6)] 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 [(6)] presupposes that she has a cat, i.e. that she assumes that the common ground that [(6)] is to be added to entails that she has a cat.

Step (i) clarifies the view of sentence presupposition which Von Fintel assumes. Generalizing, we have:

(SenP) Sentence S presupposes $p =_{def}$

p must be entailed by the common ground relative to which S is evaluated.

Now, this definition of sentence presupposition does not make any direct reference to speaker presupposition, and thus differs from the view of sentence presupposition implicit in Stalnaker's work. However, sentence presupposition is still tied to speaker presupposition via the logic of common ground (whether common ground is taken to be common belief, or is defined in terms of acceptance). The logic of common ground requires that for p to be common ground, every discourse participant must believe that it is common ground. (If a participant a does not believe that p is common ground, then p is *not* common ground.) Consequently, a cooperative speaker can only utter a presupposing sentence if she expects to believe that p is common ground at the point at which her utterance is evaluated. Or, to put it more simply, if she believes that p will be common ground at that point. And to believe p to be common ground is to presuppose p in Stalnaker's sense.

But we want to say that a speaker who appropriately utters a presupposing sentence has the presuppositions which she appears to have. We can do this by characterizing speaker presupposition relative to an utterance, just as we did above. This, in fact, is precisely what Von Fintel does in step (ii). The intended general notion seems to be something like this:

(SpP1)   Speaker presupposes p in uttering U $=_{def}$

Speaker believes that p will be entailed by the common ground relative to which U is evaluated.[22]

Thus, Von Fintel seems to assume precisely that presupposing is not simply a propositional attitude, but an attitude a speaker holds relative to an utterance.

Again, we could shift back to a non-relativized characterization by modifying our claims about the required relation between sentence presupposition and speaker presupposition. On this version, we could maintain Von Fintel's characterization of sentence presupposition, (SenP), and add that what is required of the speaker of a presupposing sentence is that she presuppose the relevant propositions at the post-utterance, pre-evaluation time.[23] If we adopt this view, step (ii) should read:

(ii')   that Phoebe immediately subsequent to asserting [(6)] presupposes that she has a cat, i.e. that she assumes at the relevant time (the "idealized point") that the common ground entails that she has a cat.

Here again, we will run into additional complications with complex sentences. Consider again:

(7)   If Jane's dog has fleas, his fleas will bite my cat.

Suppose that we want to say that the speaker of (7) presupposes that Jane has a dog and that she has a cat, although she knows that neither of these propositions is common ground prior to her utterance. Then we must say, I think, that her having the relevant presuppositions consists in her assuming that each is common ground at different points in time.

If presuppositions are constraints on the actual common ground, what is the nature of accommodation? It must now be thought of as a process driven by appropriateness requirements, which can no longer be satisfied by the speaker's internal state. The entity required to satisfy presuppositional constraints is not, however, directly acted upon by the accommodation process. Rather, accommodation must be construed as belief shift undertaken by each discourse participant

individually, but with the same goal: that of bringing the actual common ground in line with the presuppositional requirements of utterances.

4.2.   Context as interpreter's information state

Much of the empirical work now being done on presupposition is being carried out in one version or another of dynamic semantics. This work itself falls into two main areas: work in Discourse Representation Theory (Kamp 1981, Kamp and Reyle 1993), and work in Update Semantics, ultimately derived from Heim 1983. The assumptions of DRT are clearly different from Stalnaker's, so I will not discuss them here. I want to focus instead on the treatment of context and presupposition in Update Semantics.

In this framework, it seems standard to construe context simply as an information state, presumably a representation of the addressee's (interpreter's) information.[24] Once again, it is this one context which is understood as both the thing which is updated in response to incoming utterances, and which is required to meet the constraints imposed by presuppositional expressions. In update semantics, though, sentence presuppositions impose "hard" constraints: if a context fails to satisfy the presuppositional requirements of an incoming sentence, the sentence is undefined relative to the context, and update cannot proceed.

This is a view that moves very far from the Stalnakerian foundations. Presuppositions are neither constraints on the actual common ground, nor on a speaker's beliefs about the common ground. Rather, sentence presuppositions become part of the information which an addressee uses to construct the intended interpretation of an incoming utterance. Of course, this view still provides an obvious connection between the use of presupposing sentences and speaker beliefs about *hearers*: a cooperative speaker should utter a presupposing sentence only if she believes that her addressees have, or can construct, an information state updatable by the utterance. The view does not rule out the possibility that speakers

have presuppositions, in the Stalnakerian sense, that is, that they have beliefs about the common ground. But such beliefs are not in any way essential in the characterization or explanation of sentence presupposition in this framework.

Accommodation, of course, plays a crucial role in the treatment of presupposition in Update Semantics. In this framework, accommodation is driven by presuppositional requirements: although these have gone from being *appropriateness* requirements to—essentially—semantic requirements, conditions which must be met in order for interpretation to proceed. In Update Semantics, accommodation is clearly something a hearer does, and is indeed an integral part of the interpretation process. However, it cannot be driven by the kind of mechanism that Stalnaker lays out in *Common Ground*: accommodation on this view is not driven by a hearer's recognition of the presuppositions of the speaker, but by the requirements of interpretation.

Update Semantics (and indeed dynamic semantics in all of its variants) has inherited from Stalnaker the crucial idea that the treatment of presupposition requires context to be viewed as a dynamic entity. But it has significantly departed from Stalnaker in giving up on a reduction of sentence presupposition to any more fundamental, speaker-oriented, property. Indeed, the dynamic semantic accounts of presupposition are not pragmatic theories of presupposition in Stalnaker's sense, but semantic theories. Traditional semantic theories of presupposition claimed that presupposition failure results in lack of truth value. Dynamic theories of presupposition claim that presupposition failure results in undefinedness of the context update function — the dynamic correlate of truth valuelessness.[25] Dynamic semantics does not attempt to understand presupposition and presuppositional constraints in terms of the speaker's beliefs and intentions, or to root presuppositional constraints in terms of the broad goals of communicators. Rather, this framework reverts to the view that presuppositions are properties of sentences, which constrain the information states which can be updated by them. Indeed, Zeevat (1992) notes approvingly of Heim (1983) and Van der Sandt (1989) that their frameworks "restore

the insights of Frege and Strawson in the study of presupposition" (p.380). Stalnaker's view, I think, is that these "insights" are in fact an obstacle to correct understanding of presuppositional phenomena.

5. Conclusion

My aim, as I said at starting, was to tease out the details of Stalnaker's view, and in particular to use the phenomenon of informative presupposition to illuminate the interaction between sentence presupposition, speaker presupposition and accommodation. In conclusion, let me try to step away from some of the details and put the big picture back on the canvass. Here are what I now take to be the crucial elements in the Stalnakerian view:

1. Speaker presuppositions are aspects of a speaker's internal state: in particular, in the most recent view, beliefs about the common ground.

2. Speaker presuppositions are both the thing acted upon by incoming utterances and the thing which is required to satisfy the appropriateness conditions of presuppositional utterances. Thus, sentence presuppositions impose constraints on a speaker-internal entity. As long as a speaker is in the required internal state, presuppositional requirements are met. Thus, changes which hearers make in their beliefs are driven not by presuppositional requirements, but by general considerations of cooperation.

3. To maintain the assumption that speakers really do have the presuppositions they appear to have when they utter presuppositional sentences, even in the case of informative presuppositions, we are required to say one of the following two things:

   (a) Speaker presupposition is an utterance relative notion: to presuppose p in uttering U is to believe that p will be part of the common ground relative to which U is evaluated.

(b) Appropriate utterance of a presupposing sentence requires only that the speaker believes the relevant proposition to be part of the common ground at an idealized moment subsequent to utterance, but prior to acceptance or rejection of the utterance.

One aspect of the Stalnakerian view which I have not discussed here at all is its Gricean underpinnings, the assumption that presuppositional constraints are ultimately to be understood in terms of the intentions and goals of cooperative interlocutors. As noted above, the framework of dynamic semantics, which appears to be an immediate descendent of Stalnaker's work on presupposition, is really only a rather distant cousin, having 'semanticized' the notions of context, context change and presupposition. Oddly, the closer relative of Stalnaker's approach is the view which seems to roundly reject his — the view of Neo-Griceans who advocate the reduction of presupposition to familiar types of conversational inferences. It is, I think, unfortunate, that these two aspects of Stalnaker's thought have been pulled apart. But of course, there is always the option of trying to put them back together.

Endnotes

*. A version of this paper was read at the University of Cincinnati Philosophy Colloquium in November 2001. I would like to thank the participants of the colloquium, in particular Chris Gauker, Mitch Green, Michael Glanzburg, Jeff King, Jason Stanley, and Zoltán Gendler-Szabó for their comments and suggestions. I am particularly indebted to Jeff King for impressing upon me the importance of the notion of defective contexts for this discussion. But none of those named are in any way responsible for the views articulated here.

2.A note on citations: The papers *Pragmatic Presuppositions* and *Assertion* have been reprinted in the 1999 collection, *Context and Content.* Where I cite those

papers, I give page numbers from the original publications, followed by page numbers from the reprint.

3. As with all of the definitions of presupposition in the early papers, this definition is offered only as "rough and tentative" (448).

4. Stalnaker unfortunately does not say exactly what he means by "taking the truth of P for granted." From his use of that terminology here and in *Pragmatic Presuppositions*, I understand him to mean something like "taking P to be common belief" rather than simply "taking P to be certainly true." For example, he writes in the latter paper:

> I will not say things that are already *taken for granted*, since that would be redundant.(199/49)

Here, Stalnaker apparently has in mind propositions that are commonly believed.

5. Stalnaker does not intend this to be taken as "a definition or analysis," but as a first approximation of the notion. (200/49)

6. This move towards a more precise formulation is begun in *Representation of Context*.

7. This notion of acceptance is first introduced in Stalnaker 1984.

8. A *Philosophical Studies* reviewer points out that the first conjunct of this definition is redundant: If it is common belief among the members of G that they all accept p, then every member of G believes that she herself accepts p. Assuming such beliefs cannot be mistaken, every member of G does in fact accept p. I am following Stalnaker's formulation here.

9. In fact, at one point in the text Stalnaker suggests an alternative view, that sentence presuppositions impose constraints on the actual common ground. This is suggested by the comment: "Suppose that a speaker says something using a sentence that, for whatever reason, is appropriately used only in a context in which a certain proposition is common ground." However, everything else Stalnaker says in the

paper about the constraints imposed by presupposing sentences is consistent with the view he has declared elsewhere. I will consider the alternative view, adopted explicitly by other authors, below.

10. In this paper, Stalnaker makes use of both the dispositional and the common ground definitions of speaker presupposition. He also makes considerable use here of the notion of the *context set*, the set of possible worlds compatible with what an individual presupposes. So what Stalnaker actually says is that "each participant in a conversation has his own context set" (p.322/85). As the context set formulation is not critical for the analysis offered here, I have set it aside.

11. Or, putting this in terms of the dispositional account, in addition to believing that Ann has a Rottweiler he may become disposed himself to act as if he takes the truth of this proposition for granted etc.

12. Alternatively: he will become disposed to act as if he took the truth of p for granted etc. for the purposes of his conversation with Ann.

13. This will have to be revised when we consider the issue of the timing of such beliefs in the next section.

14. This follows given the further assumption, which Stalnaker adopts explicitly in *Common Ground*, that a believer's beliefs are transparent to him, i.e. if x believes that p, then x believes that he believes that p.

15. In his discussion of this point, Stalnaker adopts the simplifying assumption that common ground can be identified with common belief, so I to have reverted to this assumption in my presentation. But the argument still goes through when common ground is defined in terms of acceptance. By the latter definition of common ground, if Alice believes that p is common ground, then Alice accepts p, and believes that p is commonly accepted. If the hearer is willing to go along with Alice's acceptance that she has a sister, then we will have:

   (i) $B_h(B_a (CG(p)))$
   (ii) $Acc_h (p)$

which together give us that *p* becomes common ground.

16. If there were some process that ensured that a speaker who uttered a presupposing sentence had the necessary disposition, then it is to this that Lewis's term *accommodation* should rightly be applied. This would be a process whereby "[a] presupposition springs into existence, making what you said acceptable after all" (Lewis 1979: 339).

17. The process whereby this shift in common belief is supposed to take place was discussed in section 2.2 above.

18. I use "only if" and not "iff" advisedly: obviously, a speaker believes that all kinds of things which we would not normally call presuppositions will be common belief following her utterance. One might try to fix this by adding to (SpP) the proviso that p is neither an entailment nor an implicature of U. But this fix would work only if we were willing to say that what is entailed is not presupposed, and thus that the sentence *I'm picking up my sister at the airport* does not presuppose either that the speaker has a sister or that there is an airport; although the sentence *I might be picking up my sister at the airport* does. This is in fact what is assumed by advocates of the "entailment + implicature" view of presupposition: see e.g. Kempson (1975), Wilson (1975), Atlas and Levinson (1981).

19. Note also that we could use the idea of the idealized post-utterance point to refine (SpP) above, as follows:

> A speaker presupposes p in uttering U only if she believes that p will be common ground subsequent to her utterance but prior to its acceptance.

We will see essentially this idea adopted by Von Fintel (2000), to be discussed in section 4.1.

20. Or at least will be entailed by a temporary, suppositional common ground. I set aside here the details of the treatment of conditionals.

21. Gauker 1998 observes, however, "a considerable vacillation" in the literature between this view and the strictly Stalnakerian view.

22. This characterization of an utterance-relative notion of speaker presupposition succeeds in distinguishing presuppositions from entailments and implicatures, as a speaker should presumably believe that entailments and implicatures will become part of the common ground only after U is evaluated.

23. Indeed, Von Fintel seems to invoke such a point a few steps later in the discussion, which continues as follows:

> (iii) Phoebe does not assume that the hearers presuppose that she has a cat before her utterance ;
>
> (iv) she trusts that the hearers will change their assumptions in time for [(6)] to be added to the common ground;

"In time" presumably means after the utterance, but before its evaluation.

24. This characterization is given explicitly in Heim 1992, Beaver 1995 and Zeevat 1992, which represent some of the seminal work in this area. Groenendijk, Stokhof and Veltman 1996 suggest that in treating presupposition, the relevant notion of context is the information which speakers have about each other's information.

25. Cf. Heim 1983, p.118: Suppose c is true (in w) and c admits S. Then S is true (in w) w.r.t. c iff c+S is true (in w). Informally: to be a true sentence is to keep the context true. If c+S is undefined, then S is neither true nor false w.r.t. c.

References

Atlas, J. D. and S. C. Levinson (1981), "*It*-clefts, Informativeness and Logical Form: Radical Pragmatics (Revised Standard Version), in Peter Cole, (ed.), *Radical Pragmatics*, NY:Academic Press.

Beaver, D. (1995), "Presupposition and Assertion in Dynamic Semantics," Ph.D. dissertation, University of Edinburgh.

Gauker, C. (1998), "What is a context of utterance?" *Philosophical Studies* 91: 149-172.

Grice, H. P. (1989), *Studies in the Way of Words*, Cambridge, Mass.: Harvard University Press.

Groenendijk, J., Stokhof, M. and Veltman, F. (1996). "Coreference and Modality." In Shalom Lapin (ed.), *The Handbook of Contemporary Semantic Theory.* Cambridge, Mass.: Blackwell.

Heim, I. (1983), "On the Projection Problem for Presuppositions," *WCCFL* 2.

Heim, I. (1992), "Presupposition Projection and the Semantics of Attitude Verbs," *Journal of Semantics* 9: 183-221.

Kamp, H. (1981), "A Theory of Truth and Semantic Representation," in J. Groenendijk, T. Janssen and Martin Stokhof (eds.), *Truth, Representation and Information* (=GRASS Series No.2), Dordrecht.

Kamp, H. and U. Reyle (1993), *From Discourse to Logic*, Boston: Kluwer Academic Publishers.

Kempson, R. (1975), *Presupposition and the Delimitation of Semantics*, Cambridge, England: Cambridge University Press.

Lewis, D. (1979), "Scorekeeping in a Language Game," in R. Bäuerle et al. (eds.) *Semantics from Different Points of View*, Berlin: Springer, 172-187. Also in *Journal of Philosophical Logic* **8**: 339-359.

Stalnaker, R. (1973), "Presuppositions," *Journal of Philosophical Logic* 2: 447-457.

Stalnaker, R. (1974), "Pragmatic Presuppositions," in Milton K. Munitz and Peter K. Unger (eds.), *Semantics and Philosophy*, New York: New York University Press.

Stalnaker, R. (1974), *Inquiry*. Cambridge: MIT Press.

Stalnaker, R. (1978), "Assertion," in P. Cole (ed.) *Syntax and Semantics* Vol. 9: *Pragmatics*, NY: Academic Press.

Stalnaker, R. (1999), *Context and Content*, New York: Oxford University Press.

Stalnaker, R. (to appear), "Common Ground," *Linguistics and Philosophy*.

Von Fintel, Kai (2000), "What is Presupposition Accommodation?" Ms., MIT.

Wilson, D. (1975), *Presuppositions and non-truth conditional semantics*, NY: Academic Press.

Zeevat, H. (1992), "Presupposition and Accommodation in Update Semantics," *Journal of Semantics* 9: 379-412

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