Presupposition and Cooperation Mandy Simons Carnegie Mellon University August 2007

1. Introduction

Since linguists began extensive work on presupposition in the 1970's, a long and heterogeneous list has been compiled of expressions, expression types and constructions that give rise to presuppositions. In the current literature, the principal (but by no means sole) diagnostic for presupposition typically appealed to is the tendency of the particular element of meaning to project, i.e. to escape the scope of operators such as negation, the question operator, or modals. An important intuition also routinely appealed to is that the element of meaning is in some sense backgrounded, or treated by the speaker as taken for granted.

There seems little doubt that there are interesting and theoretically relevant distinctions to be made between different types of presuppositions within this heterogeneous set. But the study of these distinctions is of interest primarily in light of the intuition that the members of this set share some common feature: that there is some singular phenomenon of presupposition to be described and explained. This paper is concerned with what presuppositions have in common, and offers an alternative to the current standard view.

On the view currently prevalent in the linguistic literature, presuppositions constitute constraints on the common ground, or on an interlocutor's "take" on the common ground, at the point at which the presupposing utterance is interpreted.¹ I do not intend to offer here a detailed critique of this standard theory, but perhaps a few words of justification are in order.

The motivation for seeking a new account comes in part from the same considerations cited by Abbott 2000, in her critique of the standard view. Abbott's central point is that the driving idea behind the common ground view is that presuppositions are identified with "old" information, or information that the speaker is treating as "old." This idea, while perhaps helpful as an initial approximation, rapidly runs up against the observation that it is normal and commonplace for

¹ Note that the moment of interpretation is not the same as the moment of utterance. For details, see Stalnaker 1999, 2002, von Fintel 2000. It should be added that there are multiple versions of the common ground view which differ in their details: compare, for example, the works just cited, and the views of Lewis 1979, Heim 1983, 1992, Thomason 1990.

presuppositional information to be new to the addressee. Of course, advocates of the common ground theory have acknowledged this from the first (see Stalnaker 1974); and the phenomenon of informative presupposition can certainly be dealt with within the various formulations of common ground theory by invoking the notion of accommodation, a procedure whereby an interpreter updates (her take on) the common ground in response to the use by a speaker of a presuppositional expression. Abbott's point is that the view of presuppositions as constraints on the common ground treats informative presupposition as something in need of explanation, rather than treating it as a central feature of the phenomenon. Atlas (2004, 2005) makes the point even more directly: "Accommodation is not a peripheral notion of presupposition: it is the central notion of presupposition" (2005, p.148). The account to be given below takes this perspective.

A related but distinct motivation for the alternative proposal concerns the source of presupposition. As noted, common ground theorists deal with informative presupposition by invoking accommodation. Accommodation, in turn, is explicable given the assumption that presuppositional common ground constraints are conventional (i.e. lexically specified) properties of particular items. However, at least some presuppositions seem plausibly explained in terms of general conversational principles (see among others Atlas 1977, Atlas and Levinson 1981, Levinson 1983, Simons 2001). It is less than clear that a presuppositional inference generated via conversational principles could give rise to accommodation as required for the common ground theory. The view to be developed here, in contrast, is straightforwardly compatible with multiple sources of presupposition, including both conventional and conversational derivations.

Finally, it will become apparent that the general view of presupposition proposed here ultimately offers a simpler account of informative presupposition than the common ground view. If, as Atlas proposes, informative presupposition is the central phenomenon to be explained, there is perhaps reason to prefer a theory which accounts for this phenomenon more directly.

The proposal to be made here does not constitute an account of any particular case of presupposition. Like the proposals of Stalnaker 1974, Heim 1983, van der Sandt 1992, and Abbott 2000, it offers a framework within which to understand presuppositional phenomena and offer accounts of particular cases.

2. An alternative view of presupposition

2.1. Preliminaries

It is standardly acknowledged that whatever presuppositions are, the presuppositions of sentences/utterances constitute a constraint of some kind on the use of those sentences by a speaker. Presuppositions also constitute information for the hearer, but this information is conveyed in a way different from either assertion or standard cases of implicature. It is conveyed by virtue of the constraint imposed on the speaker.

The most general constraint to which speakers are subject is the requirement to be cooperative, in the sense of Grice 1967. Grice spelled out the Cooperative Principle in the four well-known maxims, and in much of the literature following this original work, there has been a tendency to take these maxims, or variants of them, as exhausting the requirements of cooperativity.² I want here to think about cooperativity in the broadest possible sense: being cooperative is doing whatever is required for conversation to be successful.

While it is the job of speakers to speak cooperatively, it is the job of interpreters to interpret cooperatively: that is, to find an interpretation for utterances which renders the speaker cooperative. Let us call this job "making sense" of an utterance. This "interpreter's corollary" of the Cooperative Principle has received relatively little attention, even though it is crucial to the account of implicature calculation; interpreters, after all, would have no reason to calculate implicatures were it not for their assumption that they should find a cooperative interpreters as well as speakers is made explicit in Levinson 2000, who formulates a Recipient's Corollary for each conversational principle which he proposes.

The process of making sense of an utterance involves not only determining the speaker's communicative intention, but also, at least in some cases, drawing conclusions about other aspects of the speaker's epistemic state. In particular, an interpreter may need to attribute to a speaker certain assumptions in the absence of which the utterance cannot be assigned a cooperative interpretation. Let's consider an example which demonstrates this:

² Thomason (1990: fn.20), recalling that the proposal in Grice 1967 was offered as a rather preliminary outline and with some tentativeness about details, writes: "On the whole, I believe that linguists and computer scientists have taken the details of Grice's theory more seriously than they perhaps should have."

Ann: Are we going to have a picnic? Bob: It's raining.

At first blush, this seems a straightforward example of a Relevance implicature, not involving presupposition: Bob has failed to give a directly relevant yes or no answer to Ann's yes/no question. The assumption that Bob intends to be relevant leads Ann to assume that his utterance can be interpreted as an answer. So, by some process of inference, she concludes that by telling her that it is raining, he means to convey that they should not have a picnic.

As has been pointed out elsewhere (Simons 2004), this description of the implicature is not complete. There is an additional inference which Ann must make in order to grasp Bob's communicative intention. In order to derive the implicature, Ann must also be able to recognize that Bob is assuming a particular relationship between picnics and rain: namely, that one does not picnic in the rain. It is *only* if Ann can identify this assumption that she can calculate the intended conversational implicature. As illustration, imagine that you were to overhear the following conversation:

- (2) Ann: Are we going to have a picnic?
 - Bob: There's a pear tree in my garden.

However certain you might be that Bob intends to speak cooperatively and relevantly, you will be able to understand his utterance as relevant only if you can identify some connection between picnics and the pear tree in his garden.

So, a more complete description of the derivation of the implicature in (1) would go as follows:

- (3) (i) Content of B's utterance does not directly answer question.
 - (ii) But I presume B intends to be relevant.
 - (iii) Suppose B assumes that one doesn't picnic in the rain.
 - (iv) Then B's response would imply that we are not having a picnic, which answers the question.

Conclusion:

Assume: B assumes one does not picnic in the rain.

Conclude: B intends to communicate that we are not picnicking.

Bob's utterance is comprehensible as a cooperative contribution to the discourse only when the relevant background assumption is attributed to him. Consequently, the utterance serves, among other things, to let Ann know that Bob is making this assumption. It would not normally be part of Bob's communicative intention to convey that one does not picnic in the rain, and for this reason, Grice himself would not call this an implicature.³ But clearly, the inferential process which allows this assumption to be identified makes use of the same machinery which generates true implicatures.

Other authors have noted that conversational inferences are sometimes about background assumptions of the speaker. Thomason (1990) makes a distinction between background implicatures and foreground implicatures. On his view, background implicatures arise where the hearer identifies a proposition which needs to be part of the current conversational record in order for the current utterance to be appropriate. As Thomason takes presuppositions to involve constraints on the conversational record, his notion of background implicatures includes at least all the standard cases of presupposition accommodation. And indeed, the only examples Thomason gives of background implicatures involve standard presupposition triggers (*regret* and *know*).⁴

Thomason's notion of background implicatures, which invokes something like a presumed common ground, differs from my understanding of a required background assumption. My idea is closer to Sperber and Wilson's (1986) notion of an implicated assumption: a proposition which the hearer adds to the context relative to which she interprets an utterance, in order to derive what Sperber and Wilson call a maximally relevant interpretation. For Sperber and Wilson, the context is simply the set of propositions which the interpreter uses as premises in inferences involving the literal content of the utterance. Sperber and Wilson's notion of a maximally relevant interpretation

³ This reservation noted by Zoltan Gendler Szabo, p.c.

⁴ On the other hand, Thomason offers a conversational/inferential account of the background implicature associated with know, at least as it occurs in cases where know is negated. So he does not seem to presume that background implicatures are triggered by a hearer's recognition of a conventional constraint on the conversational record.

I suspect that Thomason would posit that other cases unrelated to standard presupposition triggers might involve constraints on the conversational record, and thus could induce background implicatures. However, he does not discuss this.

corresponds to my notion of an utterance which is maximally cooperative.⁵ In example (1) above, the background assumption I suggest must be attributed to the speaker would count as an implicated assumption in Sperber and Wilson's framework.

As noted earlier, the required background assumption of example (1) is distinct from the standard kind of implicature in that it is not part of the speaker's communicative intention to convey this proposition. On the other hand, a little investigation shows that the required background assumption does have typical properties of presupposition. This too is an observation which has been made before, notably by Levinson 1983 and Kadmon 2001.⁶ To demonstrate the point, we will work through four central properties of standard presuppositions, and show that the conversationally generated inference to the required background assumption displays each of them.

Required background assumptions, like presuppositions, must be non-controversial; a controversial background implicature may induce a "presupposition denial" response.

It has been clearly established in the presupposition literature that a presupposition may be either old or new information; but if it is new information, then, if the conversation is to proceed entirely smoothly, it should be uncontroversial: information which the interpreter will accept *as* information, and will not be inclined to challenge.

The same is true of background assumptions. In the case of our picnic example, the proposition that one does not picnic in the rain might be something already established between Ann and Bob; or it might be introduced in this discourse. Ann might well be willing to go along with this assumption. But it's also imaginable that she would respond to Bob's utterance by saying:

⁵ In Simons 2004, I sketched an account of presupposition in a Relevance Theoretic framework, according to which the presuppositions of a sentence S are those propositions which a hearer must accept in order to assign S a relevant interpretation. The current account is a revision of that earlier one.

⁶ Levinson and Kadmon both observe that conversational implicatures can display standard presuppositional behavior. I believe that they do not distinguish between foreground and background implicatures. My claim here is thus somewhat more restricted: that background implicatures show presuppositional properties.

(4) We can have a picnic in the rain!

which denies, not the content of the assertion, but the background assumption.

Background assumptions, like presuppositions, have the appearance of being taken for granted (i.e. treated as non-controversial, common ground information) by the speaker.

This is demonstrated by the example. It seems likely that the reason the background assumption seems to be taken for granted is that the speaker intends the interpreter to rely on it in deriving the foreground implicature; in Sperber and Wilson's terms, it is an implicated premise in a reasoning process which the speaker expects the interpreter to follow. A person who presents a proposition as a premise in an argument is in some sense taking it for granted.

Background assumptions, like presuppositions, usually have the status of background information, and are not the main point of an utterance. In some cases, though, they can be.

It would not normally be part of the communicative intention of a speaker uttering U to communicate the presuppositions of U; these are just part of the required background. (We return to this issue in section 2.2.) Similarly, as noted, a speaker's background implicatures are not normally part of what she intends to convey. In both cases, the speaker's utterance of U simply provides evidence that the speaker assumes the presupposition or background implicature.

But there are cases where the main conversational point of an utterance resides in the communication of its presuppositions or background implicatures. Such cases tend to have an "exploitative" feel. Here is one example of this, involving presupposition:

(5) [Sam and Max driving down the highway]

Sam: Would you speed up, we're late!

Max: Would you like to explain that to the policeman driving behind us?

I don't think this requires further comment. Here is a parallel example involving a background implicature:

(6) Ann: Did George get in to a good school?Bob: His father is a very rich man.

The foreground implicature of Bob's utterance is that George got in to a good school; this is derivable only given the identification of the background assumption that a place at a good school can be bought. And one can imagine conversational circumstances in which the point of Bob's utterance would be to convey just this.

Background implicatures, like presuppositions, survive embedding under entailment cancelling operators.

This is the most surprising and perhaps the most significant of the observations, and requires some demonstration. Recall our basic picnic example, repeated here:

(7) Ann: Are we going to have a picnic?Bob: It's raining.

Now, suppose that Bob had instead said:

(8) Bob: It isn't raining.

The foreground implicature would in this case be different: Bob implicates something along the lines of "There's nothing to prevent us from having a picnic." To arrive at this implicature, though, Ann must still identify the same background implicature relating picnics and rain: that one does not picnic in the rain (or perhaps that one can picnic iff it is not raining).

Similarly, Bob might have responded with any of the following:

- (9) a. It might rain.
 - b. Is it raining?
 - c. If it rains, we could have lunch at the café.

In each case, in order for Ann to understand the relevance of the utterance, she needs to identify the same background assumption, simply because in each case, Bob has responded to her question about a picnic by "saying something about" rain.

Now, it does seem rather odd in this case to talk about the implicatures "surviving embedding." But the other way of characterizing basic projection behavior is to say that presuppositions are shared by what Chierchia and McConnell-Ginet (1990/2000) call a *family* of sentences, involving exactly the set of forms we have considered here. This characterization does seem perfectly appropriate to the case at hand.⁷

2.2. The basic proposal

I propose that required background assumptions of the sort just illustrated – assumptions which typically project, are backgrounded and are treated as given by the speaker – are the paradigmatic case for understanding presupposition in general. The background assumption, as we have seen, is a proposition which the interpreter must take the speaker to *accept* in order to make sense of his utterance. The notion of acceptance I have in mind is that introduced by Stalnaker (1984), who characterizes acceptance as:

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.

Here, then, is the first pass (to be revised below) at a general characterization of presupposition:

⁷ It must be added that standard cases of presupposition also show typical patterns of cancellation (or non-projection): for example, if the antecedent of a conditional entails the usual presupposition of its consequent, then this presupposition is suppressed. These facts just don't seem replicable with background implicatures; I take it that this has something to do with their particular conversational role.

Def 0: Utterance Presupposition

p is a presupposition of an utterance U iff the interpreter must take the speaker to accept p in order to make sense of U.

(The terms "accept" and "make sense of" are to be understood as explicated above.)

This definition is not yet adequate, for it fails to distinguish presuppositions from assertions and implicatures: a cooperative speaker must accept the content of these speech acts too. I turn now to the question of how to make this distinction.

If a speaker S asserts or implicates p, then the interpreter takes S to accept p because S has demonstrated a communicative intention with respect to p. That is, the interpreter recognizes that the speaker intends to assert that p, and via this recognition concludes that the speaker (presumed to be cooperative) accepts that p. For a cooperative speaker would not, under normal circumstances, assert something that she did not accept. Or, the interpreter works out that the speaker means by her utterance to implicate that p, and via that recognition concludes that the speaker accepts that p.

But in the case of what is presupposed, more (or at least, something different) is involved in the interpreter's attribution to the speaker of acceptance that p. The reason for the attribution is never merely that the speaker has demonstrated a communicative intention with respect to p. We can probably say something stronger: in many cases (but not necessarily all), it is the interpreter's recognition that the speaker intends to assert or implicate some proposition q that leads her to attribute to the speaker acceptance of the observed presupposition p.

Consider, for example, Stalnaker's explanation of the presupposition typically induced by an utterance of *x* doesn't know that *p* (sketched in Stalnaker 1974). The interpreter first recognizes that the speaker has asserted that x doesn't know that *p*. The interpreter recognizes further (via various assumptions) that the speaker, if cooperative, would make this assertion in this way only if she accepted that *p*.⁸ So, in this case, the recognition of what is asserted plays a role in the interpreter's determination that *p* is accepted; but it is not *p* itself which is asserted.

We can summarize as follows: In the case of assertion or implicature of p, the interpreter attributes acceptance of p to the speaker on the basis of her (prior) recognition that the speaker has

⁸ I don't intend here to endorse Stalnaker's account, although it seems quite plausible. Also, note that I have modified Stalnaker's claims: he says that a cooperative speaker should utter x doesn't know that p only if she believes that p is common ground.

a communicative intention with respect to p. What makes presupposing that p different is that the interpreter must take the speaker to accept p without necessarily taking her to have a communicative intention with respect to p.

On the basis of these observations, we are led to the following revision of the definition of utterance presupposition:

Def 1a: Utterance Presupposition (Revision version 1)

p is a presupposition of an utterance U iff

- (i) the interpreter must take the speaker to accept p in order to make sense of U and
- (ii) the reason for (i) is not merely that the speaker has demonstrated a communicative intention with respect to *p*.

Now in fact, in the most typical cases, speakers do not have communicative intentions with respect to the presuppositions of their utterances, even where they know that these presuppositions will be informative to the hearer. Consider for example the following familiar example of an informative presupposition:

(10) I can't come to the meeting, I have to take my cat to the vet.

The communicative intention of the speaker in uttering the second sentence of (10) is to bring the hearer to believe that she has to take her cat to the vet i.e. to communicate this proposition. This intention is itself presumably motivated by the social/conversational goal of explaining why she can't come to the meeting. The speaker, in uttering this second sentence, is of course aware that in doing so, she will also communicate to her hearer that she has a cat. But this is simply a by-product of the communication of the proposition she cares about. She cannot convey that proposition without also conveying that she has a cat. But it is not part of her communicative intention to do so; the communication of this proposition in fact has no role even in her broader conversational goals.

If we think about other simple cases of informative presupposition, the same observation seems to hold. Suppose I excuse my failure to call you by saying:

(11) My phone stopped working.

The presupposition that my phone had previously been working is neither here nor there; what I am trying to tell you is that my phone wasn't working when I was supposed to call you. Perhaps even more clearly, an utterance of the French sentence:

(12) Je vous remercie.

to a single addressee is assumed, at least by some, to presuppose a particular social relationship between speaker and addressee. But of course it would not normally be part of the communicative intention of the speaker to get the addressee to believe that this relationship is in place.

On the basis of examples such as (10)-(12), it might seem that we could distinguish presuppositions from assertions and implicatures simply on the basis of whether or not the speaker has a communicative intention with respect to the relevant proposition.⁹ This leads to the following alternative revision of the definition of utterance presupposition:

Def 1b: Utterance Presupposition (Revision version 2)

p is a presupposition of an utterance U iff

- (i) the interpreter must take the speaker to accept p in order to make sense of U and
- (ii) the speaker does not have a communicative intention with respect to *p*.

There is, though, a set of cases which pose a problem for this definition. Examples of these have already been introduced, in (5) and (6) above. (13) below is another:

- (13) A: I think I got out of there unobserved.
 - B: Too bad you were standing right under the surveillance camera.

In cases such as these, the main conversational point of the utterance is to convey what is presupposed. In example (5), for instance, Sam isn't going to take the question as seriously intended. He will take Max as intending to convey that there is a policeman driving behind them. And Sam, of course, expects this to happen. Sam indeed seems in this case to have a communicative intention with respect to the "exploited" presupposition. Thus, if we want to be able to say that Sam's

⁹ I made the distinction in this way in earlier versions of the paper.

utterance in (5) presupposes that there is a policeman driving behind them, Definition 1b will not do.

But the case does not pose a problem for Definition 1a: Max does not take Sam to accept that there is a policeman driving behind them merely by virtue of the recognition that Sam has a communicative intention with respect to this proposition. The interpretation of exploitation examples like (5) is complex. First, the interpreter recognizes that Sam's utterance expresses a particular question. This is a question which can only be asked if there is a referent for the definite contained in the utterance; so Max concludes that Sam accepts that there is a policeman driving behind them. But Max also recognizes that Sam knows the answer to the question he has asked, and therefore doesn't mean it seriously. By some further reasoning process, he concludes that Sam's intention is to tell him about the policeman. So, identification of the presupposition and recognition of it as bearing the main conversational point of the utterance are two separate steps, with identification coming first. The basic point is that Max attributes to Sam acceptance of the existence of the policeman for just the same reasons as he would in a non-exploitative use of the same sentence; so, the attribution of acceptance of p is not motivated by recognition of a communicative intention with respect to p. Hence, the conditions in Definition 1a are satisfied.

There are additional, non-exploitative cases where it is less clear exactly what counts as part of the communicative intention. Consider a conference participant who walks up to the registration desk and says:

(14) I may have forgotten to register for the conference.

The speaker's conversational goal is to ask the registrar to check whether she is registered. By using *forget*, she accomplishes this neatly, communicating both that she intended to register and that she doesn't know whether she did so. In the absence of any test, I don't think it can be resolved in this case whether or not the speaker has a communicative intention with respect to the presupposition.

I will thus take Definition 1a, repeated below, as my final formulation.

Def 1a: Utterance Presupposition

p is a presupposition of an utterance U iff

(i) the interpreter must take the speaker to accept p in order to make sense of U and

(ii) the reason for (i) is not merely that the speaker has demonstrated a communicative intention with respect to *p*.

On the proposed view, it is utterances rather than speakers or sentences which are the primary bearers of presupposition. But derivative notions of speaker presupposition and sentence presupposition can be defined.

Definition 2: Speaker presupposition

A speaker S presupposes a proposition p in uttering U iff S intends U to have an interpretation which is fully cooperative only given her acceptance of p.

Note that this definition of speaker presupposition is utterance-relative. We can of course talk about what a speaker presupposes in a more general sense, as the propositions that a speaker accepts, or even that she believes to be common ground. But the utterance-relative notion is the one which is relevant to the phenomenon whereby hearers gain information about their interlocutors' acceptances in a systematic fashion.

Definition 3: Sentence presupposition

A sentence S presupposes p iff p is standardly a presupposition of cooperative utterances of U.

This definition is hedged by "standardly" to allow for the fact that very few so-called presuppositional sentences are invariably so. I find myself uncertain that this definition is terribly helpful, as I have no idea how we should define "standardly." So, like Stalnaker (although with different motivations; see e.g. Stalnaker 1999, pp.7-8), I am disinclined to see the notion of sentence presupposition as a theoretically robust one. However, something along the lines of Definition 3 might allow us to say why, for instance, we want to say that in example (7) above, Bob's *utterance* presupposes that one doesn't picnic in the rain, even though the sentence uttered does not.

The proposal made here is close in spirit to Stalnaker's original discussions of presupposition, in taking presupposition to spring from the basic cooperative nature of linguistic interactions. I differ from Stalnaker in moving away from the idea that cooperation involves active attempts to coordinate a common ground. Cooperativity is also central to Thomason's (1990) discussion of accommodation.

He proposes that accommodation (in all its forms) is driven by a principle which requires interpreters "to eliminate obstacles to the detected plans of your interlocutor." On my view, presupposition accommodation does not involve eliminating obstacles. But it does involve recognizing the speaker's plan, in particular, the plan to perform a speech act with a certain content, and possibly certain implicatures; and then applying a version of the Principle of Charity, taking them to accept whatever they must accept in order for that plan to be reasonable, rational and cooperative.

Thomason, Stone and Devault (2006) propose an account of presupposition within a computational framework which is very similar to the proposal made here. They take interpretation to be a process of intention recognition (although they adopt a specialized notion of intention very similar to a plan). The presuppositions of an utterance are private commitments of the speaker which can be recognized by the interpreter (and which the speaker expects to be recognized) in the process of reconstructing the intention (or plan) underlying the utterance.

3. Explaining presuppositional properties

One thing we want our account of presupposition to do is to allow for straightforward explanations of the central properties of the phenomenon. In this section, I sketch such explanations.

Speaker commitment and hearer accommodation

Speakers are committed to acceptance of the presuppositions of their utterances. On the current account, the reason for this is definitional: presuppositions are propositions which a cooperative speaker *must* accept. The production of the utterance indeed counts as a commitment to acceptance of the required presuppositions: there is no other way for the interpreter to make sense of it.

Standardly, discourse participants come to accept the presuppositions of the utterances of others, even if they did not do so prior to the utterance. This is the process of accommodation. On my view, accommodation is the result of a general tendency of discourse participants to act cooperatively and to attempt to coordinate their beliefs (or acceptances).¹⁰ If your utterance indicates that you accept p, and I am willing to do the same, then I will. And if you are aware that your utterance indicates this acceptance, then you can assume that following your utterance, I will share it. So, indeed, the

¹⁰ I use the term "acceptances" to refer to accepted propositions. To quote Austin: "This is rather an ugly word, and a new word, but there seems to be no word already in existence to do the job." (Austin 1970, of the word "performative".)

presuppositions of a speaker's utterances may come to be mutually accepted – to be common ground, in Stalnaker's sense; but not by virtue of any initial common ground constraint.

Notice that this is essentially how Stalnaker himself understands accommodation. In his "Common Ground," (Stalnaker 2002), he offers a step-by-step account of how informative presuppositions result in a change in the common ground, taking as his example an utterance by Alice to Bob of the sentence *I have to pick up my sister at the airport*. On Stalnaker's account, Bob first observes that Alice has said something which is appropriate only if she believes that it is, or shortly will be, common ground that she has a sister. From this, Bob infers that Alice herself believes (or accepts) that she has a sister. As Bob takes Alice to be an authority with respect to this proposition, he himself takes on this belief. As this implicit exchange of beliefs is transparent, the fact of Alice's having a sister indeed does become common ground.

But note that the central step here was Bob's recognition of Alice having a (first order) belief about having a sister; the (second order) belief about the (potential) common ground has no direct role in the process of Bob's belief change. So we see that for Stalnaker, accommodation is a matter of discourse participants coordinating their first order beliefs. Changes to second order beliefs about the common ground are a consequence of this first order coordination.

Backgrounding

The proposed characterization of presuppositions explains the intuition that presuppositions are "backgrounded," or "non-main-point." They are by definition acceptances attributed to the speaker not merely on the grounds that the speaker has a communicative intention with respect to them. The propositions with respect to which the speaker has a communicative intention (or at least some of them) will constitute the main point of her utterance; so naturally presuppositions typically fail to have this status.

Noncontroversiality

Under the proposed thesis, presuppositions are not required to have common ground status. However, the thesis provides a straightforward explanation of why there would be a tendency on the part of speakers to produce utterances whose presuppositions are in fact shared information, or are at least highly non-controversial. Speakers are presumed to intend to be cooperative (in the broadest sense), and by definition presuppositions are propositions they must be presumed to accept in order for their utterance to be cooperative. Hence, speakers commit to acceptance of the presuppositions of their

utterances. If they know these presuppositions to be controversial, then they can expect challenges on propositions which do not (in the usual case) form part of their communicative intention. In other words, speakers know that if their utterances have controversial presuppositions, their conversational goals are likely to get side-tracked.

Defeasibilty

Another well known property of presuppositions is that they are often (although not always) defeasible. There are three fairly familiar sorts of situations in which this occurs.

- When presuppositions are explicitly denied
 Example: The King of France isn't bald there *is* no King of France!
- When a (normally) presupposing clause is embedded in certain linguistic environments. *Example*: Either there is no king of France, or the king of France is bald.
- When the normal presupposition of a clause or sentence is incompatible with conversational implicatures or other contextual assumptions.
 - Example: [Context: speaker and hearer both know that speaker does not know Maud's whereabouts, but knows that Harold is looking for her.]If Harold discovers that Maud is in New York, he'll be furious.

All of these types of cancellation are compatible with the view of presuppositions as required acceptances of the speaker. The basic idea in each case would be that the cooperativity of the utterance as a whole is incompatible with the potential presupposition. In the first case, the explicit denial makes clear that the speaker does not accept that there is a king of France. In the second case, the addressee cannot attribute to the speaker acceptance of the proposition that there is a king of France. If the speaker did accept this proposition, then she could not accept the content of the first disjunct; and it is infelicitous (by virtue of general conditions of cooperativity) to utter a disjunction any disjunct of which is already being treated as not true. In the third case, extra-linguistic factors – the addressee's knowledge about the speaker's background knowledge and about the goals of the discourse – again disallow attribution to her of acceptance of the proposition that Maud is in New

York. As the utterance has an acceptable interpretation in the absence of this commitment on the part of the speaker, this interpretation is adopted.¹¹

Finally, consider one additional type of cancellation. Suppose a researcher is conducting a study on the effects of quitting smoking. A potential subject says to her: "I'm sorry, I'm no use to you for this study. I haven't stopped smoking." In these circumstances the utterance is neutral as to whether the speaker has never smoked or is an unrepentant smoker. The presupposition is lacking, I suggest, because in this situation, the utterance is equally cooperative whichever is the case.

Variety of strength of presuppositions

Many authors, probably beginning with Stalnaker (1974:205), have observed that presuppositionality seems to come in different degrees. As Stalnaker observes:

Sometimes no sense at all can be made of a statement unless one assumes that the speaker is making a certain presupposition. In other cases, it is mildly suggested by a speech act that the speaker is taking a certain assumption for granted, but the suggestion is easily defeated by countervailing evidence.

Stalnaker claims for his pragmatic account the advantage that it predicts such variation. The pragmatic account suggested here has the same advantage. For there are different degrees of failures of cooperativity. The worse the consequences of the failure to be fully cooperative, the stronger will be the assumption on the part of the interpreter that the speaker accepts whatever proposition is required to avoid that failure.

Projection

The great accomplishment of accounts of presupposition in dynamic semantics has been to provide an account and successful model of the projection behavior of presupposition. At the core of these models is the presumption that presuppositions attach (conventionally) to atomic clauses; thus subordinate clauses can impose the same presuppositional requirements as independent ones.

¹¹ Beaver (2004) points out that intonation is crucial in the interpretation of utterances such as these. The locus of focal stress may determine whether or not this utterance gets a presuppositional or non-presuppositional reading.

The approach proposed here, though, characterizes presupposition in terms of requirements of whole utterances; so it is undoubtedly a challenge to account for the fact that the presuppositions of atomic sentences are shared, in many cases, by complex sentences which embed them. However, the picnic example in section 3.1. above shows that even when we are dealing with a presupposition clearly generated via conversational inference, this sharing of a presupposition by a family of sentences does occur.

I believe that the explanatory solution to the projection problem lies in this suggestion by Stalnaker (1974, p.205):

The propositions that P and that Q may be related to each other, and to common beliefs and intentions, in such a way that it is hard to think of a reason that anyone would raise the question whether P, or care about its answer, unless he already believed that Q^{12}

We can in many cases see a subordinate clause as "raising a question." If we think of raising a question as something like making a particular proposition available for discussion, all of the following are ways of raising the question of whether Jane has left.

- (15) Jane has left Pittsburgh.
- (16) Jane has not left Pittsburgh.
- (17) Has Jane left Pittsburgh?
- (18) If Jane has left Pittsburgh, she will call me later.
- (19) Jane might have left Pittsburgh.
- (20) Bill hopes that Jane has left Pittsburgh.

It is plausible that it is reasonable (and therefore conversationally cooperative) for a speaker to raise this question only if she believes (accepts) that Jane had previously been in Pittsburgh. And so this would provide an explanation of the fact that utterances of all of these sentences share that

¹² It is worth noting that Stalnaker himself here writes of the condition on appropriate utterance being the speaker's belief that p, not the speaker's belief that p is common ground.

presupposition.¹³ Of course, this approach can be evaluated only in light of a fully explicit account of particular cases.

5. Conclusion

The characterization of presupposition given here has very broad scope. It can easily be seen to include, not only the standard cases of presupposition such as those triggered by definites, factives and change of state predicates, but also information contributed by, for example, felicity conditions or politeness markers. The point of this proposal is to capture the intuition that there is something similar across all these cases, while leaving maximal room for making distinctions among types of presupposition. Some of the distinctions will come about because of different reasons for the attribution to a speaker of acceptance of a particular proposition. The proposal is compatible with the view that some utterance presuppositions are derived through purely inferential processes, while others may be the result of lexical encoding. The next stage required by this proposal is to offer detailed accounts of the sources of particular cases of presupposition.

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¹³ For further discussion along these lines, see Simons 2001.

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