PRESUPPOSITION AND RELEVANCE
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1. Two types of Relevance Implicature

Recall Grice's well-worn example from *Logic and Conversation* about Smith, his girlfriend, and his trips to New York:

> (1)   A: Smith doesn't seem to have a girlfriend these days.
>   B: He has been paying a lot of visits to NY recently.

Grice says that in this dialogue, B implicates that Smith has, or may have, a girlfriend in New York. But in saying this, Grice under-describes his own example. For this proposition alone does not suffice to satisfy the requirements of Relation, the maxim presumed to be operative in this case.

Grice says that "[B] implicates that which he must be assumed to believe in order to preserve the assumption that he is observing the maxim of Relation." But the assumption that B thinks that Smith might have a girlfriend in NY is not in itself sufficient to render B's utterance relevant. An additional assumption is required, one which explicitly links the issue of having girlfriends to the issue of travel to NY: perhaps, the proposition that a person who has a girlfriend somewhere travels there frequently; or that many people have long-distance relationships, and these involve frequent trips to the same place. If A can work out that B is making *this* supposition, then she can immediately see the relevance of B's response to her remark. Without it, relevance cannot be established. So this general background assumption must be implicated by the utterance.

Now, this background assumption is not enough by *itself* to guarantee relevance. Suppose that B believes the background assumption, but does not believe that Smith might be traveling to NY to visit a girlfriend. Then his utterance is still in violation of Relation. B should invoke the background assumption only if it is relevant itself, that is, only if he believes that it might provide an explanation for Smith's trips to NY. So (at least) two propositions are implicated: some "background" proposition connecting girlfriends and travel; and the "foreground" proposition that Smith might have a girlfriend in New York. The "background" implicature is in some sense prior to the "foreground" implicature; the calculation of the latter requires the prior calculation of the former. The difference between these two types of implicature is made explicit in Sperber and Wilson's (1986) distinction between *implicated assumptions* and *implicated conclusions*. This paper will be concerned with implicated assumptions, and with the possibility that this notion has a central role in explicating the nature of presupposition.

2.   Implicated Assumptions and Presuppositions

Using the ordinary, non-technical sense of the term, we might be inclined to say that B, in saying what he says in the dialogue above, is presupposing a particular relation between girlfriends and travel. Moreover, this implicated assumption has certain properties in common with the kinds of things which, in technical parlance, we call presuppositions. The implicated assumption might come as new information to A, but probably not: probably she shares this assumption with B. Presuppositions, of course, may constitute new information but frequently don't. If A does not share B's assumption about the relation between travel and girlfriends, or doesn't think it applicable to Smith, then an appropriate response on her part to B's assertion would be to deny that implicature – to say *Smith only travels for business* or some such thing. Similarly, faced with a presupposing utterance the presupposition of which one does not accept, the appropriate response is to deny the presupposition. Also, of course, the implicated assumption is in some sense backgrounded; it is not the main point of B's utterance. However, an implicated assumption *may* be a main point. Consider the dialogue below:

(2)   Ann: Did George get in to a good school?
           Bud: His father is a very wealthy man.

Bud here implicates that a place at a good school can be bought. From this implicated assumption and the content of his assertion can be derived the implicated conclusion that George did get in to a good school. Although this is the ostensible main point, being the answer to Ann's question, it is plausible that Bud's real point has to do with the privileges of wealth. Similarly, the presuppositions of utterances are normally backgrounded, but may in some cases provide the real point of an utterance.

These observations raise a tantalizing possibility: perhaps the things which we call "presuppositions" are a kind of relevance implicature: propositions which a hearer must assume in order to find the utterance relevant. This is the thesis which I will pursue here. This proposal builds on that of Wilson and Sperber 1979, in which focal presuppositions are argued to be propositions necessary for establishing the relevance of the main point of the utterance. It also draws on Blakemore 1987, where it is argued that certain lexical items function to guide the addressee's process of establishing the relevance of an utterance. I will attempt here to extend these ideas into a broad characterization of presupposition.

3.   Desiderata for a theory of presupposition

I want to begin by clarifying the goals of this discussion. My proposal will constitute (a preliminary formulation of) a theory of presupposition. So let me say what I think a theory of presupposition is supposed to do. It is supposed to do two things: First,

it is supposed to provide a relevant *description* of the phenomenon as a whole. Second, it should provide an *explanation* for why things are as described. This paper aims to accomplish only the first of these two tasks. But the importance of this task, of getting the description right, should not be underestimated. The task of giving an explanation is enormously simplified when we have an appropriate characterization of the phenomenon we are trying to explain. It is not impossible that we would arrive at the correct explanation in the absence of a correct description, but it is not very likely.

Both the traditional semantic account of presupposition and the now widely-accepted pragmatic view proposed by Stalnaker offer *descriptive characterizations* of the phenomenon of presupposition.[1] (For a recent formulation and detailed discussion of the semantic account, see Burton-Roberts 1989; for Stalnaker's account, see in particular Stalnaker 1974, 1998 and forthcoming.) Stalnaker (forthcoming) makes very clear that his goal, in formulating his account of presupposition, was to offer a redescription or reinterpretation of the familiar data concerning presupposition, and not to offer a predictive or explanatory theory.

To reiterate: the importance of the descriptive characterization is that it tells us just what it is that we need to explain. According to the description offered by the semantic view, the presuppositions of a sentence are those propositions which must be true in order for the sentence to have a truth value. This description turned out to be problematic in a variety of ways. But if this were the correct description of presupposition, it is clear what an explanation of the phenomenon would have to look like: it would have to explain, for each of the variety of cases, why (presuppositional) sentence S would lack a truth value if proposition *p* were false. As we recognize that presuppositional phenomena are heterogenous, we admit that there might be a multiplicity of reasons why a given sentence would lack a truth value given falsity of its presupposition. But the description tells us what it is we are trying to explain.

Stalnaker's view takes the presuppositions of a sentence to be those propositions which must be presupposed by the *speaker* of the sentence in order for the sentence to be appropriately used. Again, this is not offered as an *explanation* of presuppositional phenomena. Rather, it is offered as the description which our further research should be oriented towards explaining. An explanatory theory of presupposition would have to tell us why utterance of particular sentences would turn out to be inappropriate unless some proposition *p* were presupposed by the speaker. (This theory requires also a description of speaker presupposition that meshes appropriately with the linguistic phenomena.)

Stalnaker's account points towards another measure of adequacy of a description of the phenomenon, namely, that explanations for some of the phenomena in question may fall out from the description. Thus, Stalnaker's description of presupposition

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1. The same is true of the various accounts of presupposition in the dynamic semantic literature. See e.g. Heim 1983, Van der Sandt 1992

provides an explanation for certain projection facts, even prior to a specific explanation of why the atomic sentences in question meet the description given.

My goal in this paper, then, is to offer a new redescription of the phenomenon of presupposition. I will not attempt here to justify the need for this redescription, but will try to offer some evidence in support of its plausibilty and of its potential to provide the foundation for an explanatory theory of presupposition.

4. The thesis and some initial support

4.1. The thesis

The redescription I propose is this: The presuppositions of an utterance are the propositions which the hearer must accept in order for the utterance to be relevant for her. The first consequence: on this view, it is utterances, rather than sentences or speakers, which are the primary bearers of presupposition. Sentences bear presuppositions in the following derivative sense: For a sentence S to have a presupposition p is for the relevance of an utterance of S usually to require the hearer to accept p. Speakers also have presuppositions in a derivative sense: For a speaker to presuppose p in uttering S is for the speaker to intend the addressee to assume p for the purpose of establishing the relevance of the utterance. We might thus think of presupposing as a kind of speech act, an act which accompanies acts of asserting, requesting, and so on.[2]

What is it for an utterance to be relevant, and what is it for a proposition to be required to establish relevance? To answer these questions, I will appeal to the Relevance Theoretic construal of relevance (Sperber and Wilson 1986 and forthcoming). An utterance is *relevant in a context* just in case it has some contextual effects in that context. A *context* is here construed as a set of propositions, a subset of an individual's assumptions.[3] This notion of context reflects an individual's epistemic state, not the common beliefs (or commonly accepted propositions) of a group of individuals. *Contextual effects* are any changes to the context, in particular, addition or elimination of propositions, or strengthening of the degree of belief in the

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2. This then raises the question of whether a speaker could perform the act of presupposing without performing any additional acts. This might be what is going on in cases where the presupposition is the main point of the utterance, and the speaker has no commitment to the remaining content. The following (a modification of the standard example) might be such a case.
    A: The new guy is very attractive.
    B: [sardonically] Well I'm sure his wife will be glad to hear that you think so.
I will say more below about cases where the presupposition is the main point.

3. I think it plausible that the context should include, in addition to a set of propositions, a domain of individuals. But this issue is not crucial for the current discussion.

proposition. Such effects are derived by deductions involving (a) the content of what is said and (b) any *contextual assumptions*, i.e. propositions in the context. An utterance is *relevant for an individual* at a given time just in case it is relevant in one or more of the contexts accessible to that individual at that time.[4] Finally, an utterance is *optimally relevant* for an individual just in case it produces adequate contextual effects for the processing effort required. Processing effort is presumed to be affected by the complexity of the utterance being processed; by the size of the context required to derive contextual effects; by the complexity of the deductions required to derive them; and by the relative accessibility of the required assumptions. What determines whether the contextual effects are *adequate* for the effort required? While there is no definitive answer to this question, it is clear that the adequacy of contextual effects is not just a matter of their number, but of their current usefulness. Sperber and Wilson 1995 suggest that the worth of a contextual effect is determined by its contribution to the individual's cognitive goals.[5] While these ideas eventually need to be spelled out in more detail, let us make do for now with this basic picture.

Given this framework, we can say what it is for a proposition to serve to establish the relevance of an utterance. The simplest case is where a proposition serves as a contextual assumption which, in conjunction with the utterance content, leads to the derivation of a (useful) contextual effect, an effect which justifies the required processing effort. So, in the Gricean example above, the background proposition connecting girlfriends and travel serves to establish the relevance of B's utterance about Smith's trips to New York.

There is a second way in which a proposition can serve to establish the relevance of an utterance. Consider an utterance U which has p and q as its only (non-contextual) entailments. Suppose that p is a member of the context currently most accessible to the addressee, and is moreover a strongly believed proposition. Then the addition of p to that context produces no contextual effects. But the presence of p in the context nonetheless contributes to how the relevance of U is assessed. For, as p clearly does not contribute to the relevance of the utterance, the speaker must intend that U be relevant by virtue of the entailment q. The presence of p in the context is thus a relevance establisher for U by virtue of pinpointing the source of its relevance: namely, the proposition q. To give an example: Suppose Ann and Bud have a cat named Harry. Ann says to Bud:

(3)   Harry is hungry.

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4. All of these notions are elaborated on in Sperber and Wilson 1986.

5. Sperber and Wilson 1995 introduce the term *positive cognitive effects* for those contextual effects which contribute to the achievement of cognitive goals. Since 1986, they have in general used the term *cognitive effects* for any contextual effects occurring in a cognitive system (e.g. an individual).

Among the entailments of (3) are:

(4)   Something exists.
(5)   Something named Harry exists.

Now, it is to be assumed that Ann's mention of Harry will incline Bud to evaluate the utterance in a context which contains information about Harry, and any such context will indubitably contain the propositions (4)-(5). The relevance of the utterance then is clearly not supposed to reside in the addition of *these* propositions to the context; and thus the relevance of the utterance must reside in the attribution of hunger to Harry. And here, perhaps, we have the first step towards an account of the existential presuppositions induced by proper names.

There is a second consideration which would lead the addressee of (3) to attribute the relevance of the utterance to the full proposition expressed, rather than to the entailments (4)-(5). This consideration is the presumption of relevance itself, which is inconsistent with the assumption that the entailments (4)-(5) provide the primary source of relevance for an utterance of (3). To see why this is the case, we must look a little more closely at the principle of relevance.[6]

(6)   *Communicative Principle of Relevance*
        Every utterance conveys a presumption of its own optimal relevance.

(7)   *Optimal Relevance*
        An utterance is optimally relevant to an audience iff:
        a. It produces adequate contextual effects to be worth the audience's processing effort.
        b. It is the most relevant utterance, compatible with the communicator's abilities and preferences, for the production of those contextual effects.

What is crucial here is clause (b) of the definition of optimal relevance. The point is simply this. A speaker who utters (3) does communicate the proposition in (5). But she also communicates additional propositions too. Now, these additional propositions cannot be communicated without also communicating (5), as they entail it; but (5) can be communicated without communicating the additional propositions. So, if the speaker considers that the relevance of her utterance resides in (5), then she should choose a form which communicates only this (or at least as little as possible beyond this) to save the addressee from worthless processing effort. If the principal contextual effects of an utterance of (3) are expected to arise from the communication of (5), then the utterance used is not the most relevant utterance for the production of these effects. But, by the Principle of Relevance, the very utterance of (3) conveys

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6. The following definitions are taken from the postface to the second edition of *Relevance* (1995). I have modified them slightly to eliminate some terminology not introduced here.

a presumption that it *is* optimally relevant. So the hearer of (3) would, under normal circumstances, assume that (5) is *not* the source of the principal contextual effects he is intended to derive.

Let us consider this point with respect to a standard presuppositional example:

(8)   Jane knows that Louise is in love.

The *know* sentence, of course, entails the content of its complement clause:

(9)   Louise is in love.

Because this is a non-maximal entailment[7], the addressee will assume that the primary relevance of the utterance does not reside in the communication of this proposition. But note further that if the addressee is not prepared to accept (9), then she also cannot accept the proposition which *is* supposed to carry the relevance of the utterance, i.e. the maximal entailment. In effect, an addressee who rejects (9) balks at a subordinate, or background, point. There is no reason, then, for her to continue processing, for the utterance cannot be relevant for her in the way apparently intended by the speaker. Hence, perhaps, the intuiton that an addressee who rejects this entailment will not normally be prepared even to evaluate (8) as true or false, but simply rejects the assertion.[8]

This feature of the principle of relevance leads to the expectation that in general, the strongest proposition communicated will be considered the main point of an utterance, that is, the primary source of its relevance. Non-maximal entailments of this proposition would generally be treated as secondary, or backgrounded. This seems plausible, at least for simple sentence structures. But it is also to be expected that various pragmatic considerations may over-ride this expectation. One such case will be discussed below, where we consider cases in which a presupposition acquires main point status.[9]

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7. Let us say that p is a non-maximal entailment of q iff q entails p and p does not entail q.

8. It is instructive to compare the *know* case with, for example, *believe*. Why does an utterance of:

         (i)   Jane believes that Louise is in love

not require that the addressee accept the content of the complement clause, or imply that the speaker believes it? The answer is that as (i) does not entail its complement, this proposition *cannot* be the intended source of the relevance of (i). If (i) is relevant, it must be because the maximal proposition communicated induces useful contextual effects. (Thanks to Chris Gauker, p.c., for insisting on the need for a way to distinguish these two cases.)

9. In addition, there may be conventional means for indicating that a non-maximal entailment is the primary bearer of relevance.

We have now seen three different ways in which a proposition contributes to the relevance of an utterance. A proposition may serve to establish the relevance of an utterance by virtue of being a contextual assumption which allows for the derivation of contextual effects. Or a proposition may be a contextual assumption which "neutralizes" the relevance of one (or more) entailments of the utterance, thereby identifying other entailments as the intended source of the relevance of the utterance. Finally a proposition *not* present in the initial context – some non-maximal entailment of an utterance – may be such that unless the interpreter is willing to accept it, the utterance as a whole cannot have relevance for the interpreter.

We can now formulate the claim about the nature of presuppositions more precisely: the presuppositions of an utterance are propositions whose acceptance by the interpreter is a necessary condition on the utterance's relevance for that interpreter.[10] Thus, presuppositions will either be required relevance establishers, or non-maximal entailments which must be accepted in order for the utterance to be relevant. Let us call propositions required for either of these reasons *relevance requirements* for an utterance.[11] Thus, the claim here is that the notion of presupposition reduces to the notion of relevance requirement for an utterance.

In considering the case of entailed presuppositions, talk about the identification of the locus of relevance led naturally into talk about main-point and non-main-point content. Abbott 2000 argues that presuppositions are nonasserted propositions conveyed by the utterance, propositions which are of necessity conveyed but which are not intended by the speaker to be part of the main point. Presuppositions arise, she argues, by virtue of two facts: First, that there is a preference for utterances to have, roughly, a single "main point"; and second, that the expression of any thought will involve expression of many atomic propositions. As a consequence, any utterance involves the expression of propositions which are not part of the main point. In cases where a presupposition is an entailment of the presupposing sentence, the view I am articulating here is very close to hers. However, I derive the requirement for a single main point from general considerations of relevance.

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10. I am not clear on whether presuppositions are propositions required to establish a *minimal* degree of relevance, or required to establish some degree of relevance closer to optimal relevance. In fact, it may vary from case to case. (See section 4.2.4 below.) I leave this issue open for now.

11. One might collapse the two categories in the following way. Suppose that whenever an addressee encounters a communicated proposition which cannot be the intended source of relevance of the utterance, she responds by "neutralizing" it in the way discussed above, i.e. by treating it as a contextual assumption. That is, whenever an interpreter recognizes a non-main point aspect of what is communicated, and is prepared to accept it, she assumes that she is meant to treat it as part of the starting context. Given this strategy, all relevance requirements would be relevance establishers.

In the discussion above, I have said that a relevance requirement must be *accepted* by the addressee.[12] I use the term in the sense of 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.

The acceptance requirement also has consequences for the speaker, because it is the speaker's job to ensure relevance. Thus, the speaker should constrain her acts of presupposing to propositions which she believes the addressee will be willing to accept. I will draw out the consequences of this point below.

4.2.   Initial consequences of the thesis

Although the notion of relevance requirement undoubtedly needs further clarification, I hope that it is clear enough for me to move to the next step: to show that some of the standard properties of presuppositions follow straightforwardly from the thesis that presuppositions are relevance requirements.

4.2.1. Backgrounding

The proposed characterization of presuppositions explains the intuition that presuppositions are "backgrounded," or "non-main-point." Indeed, it points the way towards a clarification of that notion. To be backgrounded is to be a relevance requirement: either a component of the intended interpretative context, or a communicated proposition which is not the locus of relevance.

Sometimes, a relevance requirement – a presupposition – can have main point status, as in the familiar example:[13]

(10)   Ann: The new guy is very attractive.
            Bud: Yes, and his wife is lovely too.

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12.   I think that Sperber and Wilson would say that what is required is that the presuppositions be *manifest* to the addressee, where a proposition is manifest to an individual just in case she is capable of accepting its representation as true or probably true. I am not sure that this is a strong enough notion. However, what this notion shares with the notion of acceptance is that neither requires the propositions in question to be ones which the addressee believes true, but only propositions which she is willing to treat as true (at least for the purposes of the discourse) once they are raised for consideration.

13. Thanks to my student, Jessi Berkelhammer, for raising the issue of these cases.

In the imagined context, the main point of Bud's utterance is to inform Ann that the new guy has a wife. Nonetheless, we have the intuiton that this proposition is a presupposition, and that Bud, by conveying the information in this way, is engaging in indirection. And of course he is. For he has produced an utterance which, by the principle of relevance, *should* have as its main point the proposition that the guy's wife is lovely. But it happens to be the case that another of the communicated propositions, namely that the new guy has a wife, is more relevant for Ann than the fact that the wife is lovely. And moreover, in the situation envisaged, Ann will recognize that Bud believes that this proposition is more relevant for her. Hence, she will take his main point to be that the new guy has a wife.[14] But identification of this proposition as the intended main point is a secondary process, which is in some sense dependent on the primary, automatic process of interpretation. In this process, the proposition that the new guy has a wife functions as a relevance requirement.

4.2.2. Noncontroversiality

Under the proposed thesis, presuppositions are not required to have common ground status, to be presumed to be shared information at the time of utterance. 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 want their utterances to be accepted as relevant. To produce an utterance whose presuppositions are controversial is to invite rejection. The safest choice is to produce utterances whose presuppositions are clearly accepted by the addressee, that is, are established as old information between the interlocutors. But it is also safe to produce utterances whose presuppositions can be assumed to be non-controversial for the addressee. On the other hand, production of utterances with controversial presuppositions opens the speaker up to the risk of rejection. Such rejection will ensue not because a speaker has treated a proposition as common ground when it is not; but because the speaker has produced an utterance whose relevance depends upon a proposition which the addressee is not willing to accept. Thus, under the view presented here, cases of informative presuppositions, which on the Stalnakerian account must be treated by accommodation, raise no special issues.

In example (10) above, we saw a case where a relevance requirement is also the intended main point of the utterance. This, I suggested, involves a secondary, pragmatically driven, re-evaluation of the intended relevance of the utterance. A further complication arises where a main-point relevance requirement is also

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14. Note that Bud could produce his utterance quite innocently, not imagining that Ann has any interest in the new guy. Then his intended main point – what he believes to constitute the locus of relevance of his utterance – is the strongest proposition expressed. Ann may nonetheless pay more attention to the existential entailment, by virtue of her own interests.

controversial, as in an example from Von Fintel 2000, where a daughter informs her father that she is engaged by saying:

(11)   Oh Dad, I forgot to tell you that my fiancé and I are moving to Seattle next week.

The speaker here has produced an utterance whose relevance requires the addressee to accept (without discussion) the proposition that she has a fiancé; and this is not something that, under the circumstances, can be expected to go through without challenge. But of course, the speaker in this case would not normally expect the utterance to go through without challenge. The choice to convey such momentous information as a presupposition has various stylistic effects. But the presuppositional status of the information is still attributable to the fact that the presumption of relevance requires that information to be given non-main-point status and thus to be accepted by the addressee in order to establish the relevance of the utterance as a whole.

The proposed analysis allows for a nice distinction between ordinary cases of informative presupposition, and cases that have the feel of exploitation (in the Gricean sense) of a conversational principle. In the ordinary cases, such as my telling a colleague:

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

new information is introduced as a presupposition, i.e. as a relevance requirement. But in these cases, the intended status of this information matches its ostensible status: it not only appears to be (merely) relevance establishing, but is intended to be so. In examples (10) and (11), however, the intended status is different from the ostensible status: in these cases, what appears to be merely relevance establishing information is intended as a main point.

4.2.3. Defeasibilty

Another well known property of presuppositions is that they are often (although not always) defeasible.[15] There are three fairly familiar sorts of situations in which this occurs.

- When presuppositions are explicitly negated or denied (often involving meta-linguistic negation)
    Example: The King of France isn't bald — there *is* no King of France!

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15. See Simons 2000 for an argument that whether or not presuppositions are defeasible depends on whether they are conversationally or conventionally generated.

- When a (normally) presupposing clause is embedded in certain linguistic environments.[16]
    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 relevance requirements. The basic idea in each case would be that the relevance of the utterance as a whole is incompatible with the potential presupposition. In the first case, the explicit denial makes clear that the addressee is not to assume a context containing the proposition that there is a king of France. In the second case, the addressee cannot assume that the intended context contains the proposition that there is a king of France, as relative to such a context, the disjunction would be equivalent to its second disjunct, and there would thus be no justification for the additional processing effort involved in processing the more complex utterance. In the last case, extra-linguistic factors – the addressee's knowledge about the speaker's background knowledge and about the goals of the discourse – over-ride considerations of optimizing relevance. (And clearly the utterance is adequately relevant evaluated in the context which is available.)

In addition to these three familiar cases of cancellation, there is an additional type which has received somewhat less attention, and which is in fact predicted by the proposed view. Presuppositions may fail to arise in situations in which the relevance of the utterance does *not* depend on the assumption of the expected presupposition. Consider the following case: A researcher is conducting a study on the effects of quitting smoking. She needs subjects who have undergone this change of state. A subject comes to take part in the study. But while the criteria for participation are being explained, the subject turns to the researcher and says: "I'm sorry, I'm no use to you for this study. I haven't stopped smoking." The utterance, in these circumstances is, I think, neutral as to whether the speaker has never smoked or is an unrepentant smoker. The situation ensures the relevance of the utterance in either case.

4.2.4. *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:

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16. I return to this case in section 5.3. below.

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 an utterance can fail to achieve relevance for a variety of reasons, and to different degrees. Some types of relevance failure will be worse than others. The worse the consequences of the relevance failure, the stronger will be the assumption on the part of the interpreter that the speaker intends her to assume whatever proposition is required to avoid that failure.

Probably the most aggregious failure of relevance occurs when an utterance fails to have propositional content, or has propositional content which is not truth-evaluable, as in the case of reference failure. Consider utterances of (13) or (14):

(13)   Do you like the big red one? [Said when nothing is indicated and no red object is visible.]
(14)   If George W's son gets arrested, no-one will blink.

There is a variety of views as to the consequences of reference failure, but whichever of these views one adopts, it is clear that something goes very badly wrong in such utterances. The absence of a referent for the relevant NPs leads to a radical failure of relevance, a failure so bad that there is really nothing – no contextual effect – that the addressee can derive.[17] (Of course, the addressee might derive inferences about the beliefs or mental state of the speaker. But these would be inferences from the fact that the utterance was made, rather than from its content. See Sperber and Wilson 1985, p.121.) Because the consequences of relevance failure in this case are so severe, there is a robust assumption that one is expected to assume the existence of a referent.[18]

Now, compare this case with the following example, due to Van der Sandt 1992:

17. One might be concerned that there is a circularity here. I am arguing that reference failure results in failure to expression a proposition, which in turn results in radical failure of relevance, and that this explains the intuion that sentences with referring expressions are presuppositional. But others have argued that the *reason* that reference failure results in failure to express a proposition is *that* the existence presupposition is in force. However, there is no circularity if one assumes that an explanation for the consequences of reference failure can be given without invoking presupposition, and I think that this must surely be the case.

18. It is not clear that in these cases the "prespposition" should be framed in propositional terms. To allow for non-propositional presuppositions, the characterization of presupposition would have to be modified. I set this issue aside for the time being.

(15)   If someone at the conference solved the problem, it was Julius who solved it.[19]

An utterance of this sentence might be understood presuppositionally, i.e. an interpreter might infer that she is supposed to assume that the problem has been solved. (The antecedent then reflects uncertainty as to whether the problem was solved by someone at the conference, or someone else.) But this is only a weak inference: a non-presuppositional interpretation is also available. By adopting the presuppositional interpretation, the addressee might gain additional contextual effects deducible from the new assumption that the problem has been solved. However, the non-presuppositional reading is also likely to be adequately relevant. On any actual occassion of utterance, salient contextual assumptions might well lead an interpreter to prefer one interpretation over the other. But considerations of relevance do not rule out the non-presuppositional reading, and thus the presupposition is relatively weak.

4.3.   Further consequences

4.3.1. Dedicated triggers

So far, I have looked at properties of presupposition that are accounted for to some degree in other accounts of presupposition, in particular in the Stalnakerian account. Here, I want to consider a question which, I believe, the Stalnakerian account does not answer. The question arises with respect to what I will call *dedicated presupposition triggers*: lexical items whose sole function appears to be the triggering of a presupposition, items which can be omitted without affecting the assertoric content of the utterance. Examples of such triggers are the words *even, yet, again,* and *too*. As I have pointed out elsewhere, triggers of this kind differ from, say, factive or change-of-state verbs. In the latter cases, the presupposition is nondetachable from the content expressed by the verbs. For example, any close paraphrase of the presupposition inducing (16)a., such as the sentences given in (16)b., bears the same presupposition, given in (16)c.

(16)   a. Jane didn't leave the house.
        b. Jane didin't exit / go out of / depart from / quit the house.
        c. Jane was in the house immediately before the reference time.

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19. The crucial property of this example is its logical structure: the antecedent entails the potential presupposition of the consequent, but not vice versa. Such examples contrast with conditionals in which there is mutual entailment between the antecedent and the potential presupposition of the consequent, as in (i). Such sentences have no presuppositional reading:
    (i) If someone solved the problem, it was Julius who solved it.

A speaker who wishes to express the content of (16)a. really cannot do so without triggering the presupposition, unless she goes to some lengths to cancel or suppress it. So in these cases, the question of why the speaker has used a presupposition inducing expression does not arise. But in the case of sentences like (17)-(19), the presupposition inducing expression clearly could have been omitted without (on standard views) changing the content of what has been said.

(17)   Even Bush has admitted that global warming is real.
(18)   Jane has failed her driver's test again.
(19)   Harold failed his driver's test too.

The question then arises: Why should a speaker bother to include a presupposition trigger? The Stalnakerian account gives an answer to this question for the (supposedly "exploitative") cases where the presupposition is not in fact common ground. In these cases, according to that account, the presupposition is accommodated, and becomes common ground. So inclusion of the presupposition trigger allows the speaker to convey more information. But of course a speaker can include a presupposition trigger also when the presupposition *is* in the common ground; indeed, this is supposed to be the standard case. In this case, then, what function do presupposition triggers serve? Why should a speaker include them when the presupposition is already in the common ground? For then, presumably, the triggered presupposition will not provide the addressee with any new information.[20]

On the proposal being made here, the answer is straightfroward: the presupposition trigger is a conventional marker of a proposition which the hearer is supposed to take as contributing to the relevance of the utterance.[21] The relative strength and undefeasibility of presuppositions triggered in this way is also to be expected on this account. In the case of cancellation, the addressee infers that the speaker cannot after all intend her to presuppose the potential presupposition, given a conflict between the presupposition and other contextual or discourse information. But when a speaker uses a dedicated presupposition trigger, she thereby makes her intentions explicit.

20. Sperber and Wilson 1986, in footnote 21 of chapter 4, make a similar point, noting that the Stalnakerian framework provides no reason to expect the occurrence of conventional markers of presupposition. They also suggest that Blakemore's work (see below) offers a promising treatment of the phenomenon.

21. I have been told by Deidre Wilson (p.c.) that ideas along these lines have been explored for some time in the Relevance Theory literature. The idea, going back to Blakemore 1987, is that various non-truth-conditional lexical items might be indicators of properties of context or intended implications that the hearer is encouraged to consider in looking for relevance. I have yet to explore this literature, so what I say in this section may well be far from original.

This treatment of dedicated presupposition triggers is a natural extension of the proposals made in Blakemore 1987. Blakemore considers the function of a variety of expressions which have standardly been thought *not* to contribute to truth conditional content: expressions like *therefore, so, moreover,* and *after all*. She argues that the role of these expressions is to guide interpretation by indicating the intended inferential relations between two or more propositions expressed in a discourse. But her general claim is that the semantic contribution of certain expressions is to constrain, in one way or another, the contexts (in the relevance theoretic sense) in which utterances are interpreted. Blakemore mentions the possibility that standard presuppositional phenomena might be treated along these lines, but does not pursue the idea. My argument here is that Blakemore is right: that the function of dedicated presupposition triggers is to indicate that the speaker intends the (truth conditional content of) her utterance to be interpreted relative to a context which contains the "presupposition." By indicating this intention, the speaker indicates that she believes that interpretation of the utterance in such a context will guarantee its relevance for the addressee.

Let me try to clarify this claim with respect to *even*. Consider sentence (17) above. My claim is that the speaker of this sentence asserts that Bush has admitted that global warming is real., but also indicates to the addressee that the reason this is of current interest is that Bush is a particularly unlikely person to do so. To support this idea, consider the differences between situations in which one might utter (17) and in which one might utter the sentence without *even*, given in (20).

(20)   Bush has admitted that global warming is real.

Suppose that Bush has just made his admission during a public appearance. To tell you about it, I would most naturally (I think) say (20). Sentence (17) would be odd. In the situation just described, Bush's admission is relevant because it is brand new information. (Presumably, it is only relevant to people who care about Bush's environmental policy, but let's assume that that's who we are dealing with.) The Stalnakerian common ground story doesn't provide any explanation for why (17) would be somewhat peculiar in the circumstances just described. But the relevance story does. In the situation described, the fact that Bush is a particularly unlikely person to admit the reality of global warming isn't the primary provider of relevance for the utterance: it's the fact that he just did it. So the *even* would somehow lead the hearer astray.

On the other hand, suppose some time has passed since Bush's admission, and we are discussing continued obstacles to enviromental progress. You mention the fact that there are still global-warming deniers, to which I reply:

(21)   How much longer can they hold out? Even Bush has admitted that global warming is real.

One important point about this case is that *neither* the information that Bush is unlikely to make this admission *nor* the fact that he has done so is supposed to be new information. But the fact that Bush has made this admission is a relevant observation at this point in the conversation in light of the fact that he has been, let's say, one of the staunchest warming-deniers.

This discussion brings out two points: First, that some explanation is needed for the function of presupposition triggers in situations in which the presupposition *is* in the common ground. The common ground view tells us why they are allowed in these circumstances, but not what they *do*. The second point is that the common ground story doesn't tell us why certain presupposition triggers are disallowed in some situations even where the licensing conditions are supposedly met, e.g. when announcing something.

The claim seems equally plausible with respect to examples with *again* and *too*. Consider the following examples, repeated from above:

(22)   Jane has failed her driver's test again.
(23)   George failed his driver's test too.

It seems quite plausible in each case to say that the proposition "invoked" by the presence of the presupposition trigger is what provides the utterance with maximal relevance.[22] The significance of Jane failing her driver's test having failed it before is different – perhaps greater – than the significance of her having failed it without consideration of her prior attempts. (To announce dejectedly, *Jane failed her driver's test* is to consider this failure in isolation from other failures; to say (22), on the other hand, is to consider the sequence of failures and to invite conclusions based on the sequence.) The same seems true of the presupposition generated by *too* in (23): George's failure has a different significance in conjunction with (let's say) Jane's, than it would have alone.

4.3.2. A broad notion of presupposition

One further consequence of the characterization of presuppositions as relevance requirements is that the notion of presupposition is broadened beyond the range of linguistically triggered presuppositions. Any given utterance may require all kinds of propositions to establish its relevance; and any given sentence will require different propositions to establish its relevance on different occasions of utterance. Consider, for example, an utterance of the sentence:

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22. Clearly, these propositions are calculated, presumably compositionally, on the basis of the content of the trigger plus the rest of the content expressed. One aspect of the semantics of the presupposition trigger must be to trigger a second process of meaning composition whereby the presuppositional proposition is derived.

(24)   It's 8:01.

For an utterance of this sentence to be relevant, something must follow from it. On one occasion of use, the relevance establisher might be the proposition that the bus comes at 8:03 (and so we should hurry). On another, the relevance establisher might be the proposition that the meeting was supposed to start at 8:00, so we should proceed. And so on. On the account proposed here, all of these relevance establishers would be considered presuppositions, on a par with the linguistically triggered presuppositions considered above. This may seem a defect of the account, if our goal is to give an account of the phenomenon of linguistically triggered presupposition.

However, there is no particular reason to decide *a priori* that linguistically triggered presupposition is a distinct phenomenon from the broader notion conjured by the ordinary use of the term. On the view presented here, linguistically triggered presupposition would be a sub-case of the broader phenomenon. If there is in fact some common property shared by the class of cases normally included under the title of presupposition, a property not shared by other cases, then it will be possible to delineate this class in some way. The obvious candidate is, of course, the linguistic triggering itself.

This point, like others noted above, does not distinguish the proposal made here from the Stalnakerian treatment of presupposition. For Stalnaker, presuppositions are properties of speakers, not of sentences.[23] A speaker's utterances may reveal her presuppositions. But given Stalnaker's assumptions, I believe he would agree that a speaker who utters *It's 8:01* with the intention of getting the chairperson to start the meeting is presupposing (i.e. taking it to be part of the common ground) that the meeting was supposed to start at 8:00.

5. Projection

One very daunting problem for any fully pragmatic account of presupposition is the issue of presupposition projection. Various researchers, particularly those working in dynamic semantic frameworks, have shown that projection behavior is highly complex, in particular where presuppositions involve quantification or interaction with modals.[24] Researchers in those frameworks have also been very successful in providing formally elegant and descriptively adequate algorithmic accounts of

23. Indeed, Stalnaker contends that no contentful notion of sentence presupposition can be defined. For him, sentence presuppositions are artifacts of the interaction of general conversational principles and properties. See, for example, comments in the introduction to *Context and Content* (Stalnaker 1999), p.8.

24. There is an enormous literature in this area. For some of the foundational proposals, see Heim 1982, Van der Sandt 1992, Zeevat 1992, Beaver 1995.

projection. This work certainly makes a convincing case that there is an algorithmic component to the behavior of projection. However, what this work does not do is explain why particular presuppositions attach to particular atomic propositions or sentences in the first place.

On the algorithmic view of presupposition projection, it is claimed that presuppositions attach to atomic clauses and are then passed up to complex clauses embedding them through some mechanism of projection. To fully incorporate projection facts into the framework suggested here, one would have to argue that the appearance of projection of presuppositions from lower to higher clauses is in fact the result of a *sharing* of presuppositions among "families" of sentences. A family of sentences shares a presupposition just in case that presupposition is required to establish the relevance of utterances of any member of the family.

Can it be demonstrated that sentences share presuppositions in this way? Some initial support for the idea comes from an observation due to McLaughlin 2001.What Mclaughlin observes is that very standard cases of relevance implicature sometimes show behavior analogous to the projection behavior of standard cases of presupposition. Consider first the following dialogue:

(25)   Ann: Are we going on a picnic?
         Bud: It's raining.

Recall from section 1 that Bud's uterance introduces both an implicated assumption and an implicated conclusion. The implicated premise is that there is a connection between rain and picnics; probably, that if it rains, one does not picnic. The implicated conclusion is that there will be no picnic.

Now, consider the following similar discourse:

(26)   Ann: Are we going on a picnic?
         Bud: It's not raining.

For Bud's response to be relevant, Ann must still attribute to Bud the assumption that there is some connection between rain and picnics. With the right intonational clues from Bud, Ann might well retrieve a slightly strengthened version of the same implicated premise: that if it rains, one doesn't picnic, but if it doesn't rain, one can picnic. Then the implicated conclusion would be along the lines of: There's nothing to stop us from going on a picnic.

Now, suppose Bud had replied with either (27) or (28):

(27)   It might be raining.
(28)   Is it raining?

Again, these responses would be in compliance with Relation only if Bud assumed a connection between rain and picnics, and assumed that Ann could work out that he did. The same would seem to be true of the following conditional response:

(29)   If it rains, maybe we'll go to the movies.

In none of these cases, I think, would we want to say that the implicature projects from the embedded clause. Rather, we would want to say that each utterance gives rise to the same implicated premise: one and the same background assumption serves in each case to relate Ann's question to Bud's indirect response. Of course, on my view, this implicated premise, which is required to establish the relevance of the utterance, simply is a presupposition. McLaughlin's observation thus provides at least *prima facie* support for the claim that, given a particular conversational context, families of sentences might require the same background assumptions in order to satisfy the requirements of relevance.

6. Conclusion

In this initial presentation, I have touted what I see as the potential strengths of this proposed account of the phenomenon of presupposition. But what I have offered here is no more than a sketch of a full account. The idea of propositions serving as relevance establishers must be given more substance – enough substance that it will be possible to determine the predictions made by the account about the expected presuppositions of particular utterances.[25] This is clearly a difficult task It requires at the very least some more rigorous understanding of the notion of relevance itself, and some quantitative measure of relevance. Relevance Theory provides some machinery to begin to address this task. Computational approaches to the representation of inference in interpretation also seem promising frameworks in

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25. Here again, I am not much worse off than the competition. Stalnaker has never attempted to construct a theory of presupposition capable of making predictions about the presuppositions of particular sentences or utterances. In the various frameworks of dynamic semantics which have provided formal accounts of presupposition based (in some cases loosely) on Stalnaker's framework, precise predictions are made about the presuppositions of complex sentences, based on the assumption that certain atomic constituent clauses have a given presupposition. But these frameworks do not offer any predictions about which presuppositions will be associated with atomic sentences, or why. In contrast, those who attempt to explain presupposition in terms of conversational implicature (see, for example, Kempson 1975, Wilson 1975, Atlas and Levinson 1981) do attempt such predictions, but generally are able to deal with only a limited set of cases, and do not deal with complex projection examples. Clearly, it is an enormously difficult task to accomplish both explanatory and descriptive adequacy through the full range of cases.

which to pursue these questions.[26] The questions are undoubtedly hard. But they may nonetheless be the right ones to ask.

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26. The very beginnings of such an attempt are made in Kohlhase and Simons (ms).

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