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PRESUPPOSITION AND LINGUISTIC CONTEXT*

According to a pragmatic view, the presuppositions of a sentence determine the class of contexts in which the sentence could be felicitously uttered. Complex sentences present a difficult problem in this framework. No simple "projection method" has been found by which we could compute their presuppositions from those of their constituent clauses. This paper presents a way to eliminate the projection problem. A recursive definition of "satisfaction of presuppositions" is proposed that makes it unnecessary to have any explicit method for assigning presuppositions to compound sentences. A theory of presuppositions becomes a theory of constraints on successive contexts in a fully explicit discourse.

What I present here is a sequel to a couple of my earlier studies on presuppositions. The first one is the paper "Presuppositions of Compound Sentences" (Karttunen 1973a), the other is called "Remarks on Presuppositions" (Karttunen 1973b). I won't review these papers here, but I will start by giving some idea of the background for the present paper.

Earlier I was concerned about two things. First, I wanted to show that there was no adequate notion of presupposition that could be defined in purely semantic terms, that is, in terms of truth conditions. What was needed was a pragmatic notion, something along the lines Stalnaker (1972) had suggested, but not a notion of the speaker's presupposition. I had in mind some definition like the one given under (1).

- (1) Surface sentence A pragmatically presupposes a logical form L, if and only if it is the case that A can be felicitously uttered only in contexts which entail L.

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The main point about (1) is that presupposition is viewed as a relation between sentences, or more accurately, as a relation between a surface sentence and the logical form of another.¹ By "surface sentence" I mean expressions of a natural language as opposed to sentences of a formal language which the former are in some manner associated with. "Logical forms" are expressions of the latter kind. "Context" in (1) means a set of logical forms that describe the set of background assumptions, that is, whatever the speaker chooses to regard as being shared by him and his intended audience. According to (1), a sentence can be felicitously uttered only in contexts that entail all of its presuppositions.

Secondly, I argued that, if we look at things in a certain way, presupposition turns out to be a relative notion for compound sentences. The same sentence may have different presuppositions depending on the context in which it is uttered. To see what means, let us use "X" as a variable for contexts (sets of logical forms), "A" and "B" stand for (surface) sentences, and "P_A" and "P_B" denote the set of logical forms presupposed by A and B, respectively. Let us assume that A and B in this instance are simple sentences that contain no quantifiers and no sentential connectives. Furthermore, let us assume that we know already what A and B presuppose, that is, we know the elements of P_A and P_B. Given all that, what can we say about presuppositions of complex sentences formed from A and B by means of embedding and sentential connectives? This is the notorious "projection problem" for presuppositions (Morgan 1969, Langendoen & Savin 1971). For instance, what are the presuppositions of "If A then B"?

Intuitively it would seem that sentential connectives such as *if...then* do not introduce any new presuppositions. Therefore, the set P_{if A then B} should be either identical to or at least some proper subset of the combined presuppositions of A and B. This initially simple idea is presented in (2).

$$(2) \quad P_{\text{if } A \text{ then } B} \subseteq P_A \cup P_B$$

However, I found that when one pursues this line of inquiry further, things become very complicated. Consider the examples in (3).

- (3) (a) If Dean told the truth, Nixon is guilty too.
 (b) If Haldeman is guilty, Nixon is guilty too.
 (c) If Miss Woods destroyed the missing tapes, Nixon is guilty too.

In all of these cases, let us assume that the consequent clause "Nixon is guilty too" is interpreted in the sense in which it presupposes the guilt of someone else. The question is: does the compound sentence as a whole carry that presupposition? In the case of (3a), the answer seems to be definitely *yes*, in the case

¹ There is some question over whether this notion of presupposition is properly labeled "pragmatic". For Stalnaker (1972, 1973), pragmatic presupposing is a propositional attitude of the speaker. However, I will follow Thomason (1973) and others who would like to reserve the term "presupposes" for relations (semantic or pragmatic) between sentences. The idea that it is important to distinguish in this connection between surface sentences and their logical forms is due to Lakoff (1972, 1973).

of (3b) definitely *no*, and in the case of (3c) a *maybe*, depending on the context in which the sentence is used. For example, if the destruction of the tapes is considered a crime, then Miss Woods would be guilty in case she did it, and (3c) could be a conditional assertion that Nixon was an accomplice. In this context the sentence does not presuppose that anyone is guilty. But in contexts where the destruction of the tapes in itself would not constitute a crime (3c) apparently does presuppose the guilt of someone other than Nixon.

These examples show that if we try to determine the presuppositions of "If A then B" as a particular subset of the joint presuppositions of A and B, the initial simplicity of that idea turns out to be deceptive. In reality it is a very complicated enterprise. The kind of recursive principle that seems to be required is given in (4a) in the form it appears in Karttunen (1973b). (4b) says the same in ordinary English.

- (4) (a) $P_{\text{if } A \text{ then } B/X} = P_{A/X} \cup (P_{B/X \cup A} - (E_{X \cup A} - E_X))$
 where E_X is the set of logical forms entailed (in the standard sense) by X, and $X \cup A$ is the result of adding the logical form of A to X.
 (b) The presuppositions of "If A then B" (with respect to context X) consist of
 (i) all of the presuppositions of A (with respect to X) and
 (ii) all of the presupposition of B (with respect to $X \cup A$) except for those entailed by the set $X \cup A$ and not entailed by X alone.

One would like to find a better way to express this, but I am not sure there is one.² It really is a complicated question.

So much for the background. What I want to show now is that there is another way to think about these matters, and about presuppositions of complex sentences in particular. Let us go back for a moment to the attempted pragmatic definition in (1). The point of that definition is that the presuppositions of a sentence determine in what contexts the sentence could be felicitously used. A

² Peters has pointed out to me that, under certain conditions, (4a) is equivalent to the following projection principle.

$$P_{\text{if } A \text{ then } B} = P_A \cup \{ \ulcorner A \supset C \urcorner \mid C \in P_B \}$$

Peters' principle has the advantage that it assigns the same set of presuppositions to "If A then B" irrespective of any context. Note that this set is not a subset of $P_A \cup P_B$, as required by my initial assumption in (2). Peters' principle says that, for each presupposition of B, "If A then B" presupposes a conditional with that presupposition as the consequent and the logical form of A as the antecedent. In addition, "If A then B" has all of the presuppositions of A. I realize now that some of the complexity in (4a) comes from trying to state the principle in such a way that (2) holds. If this is not worth doing, Peters' way of formulating the rule is superior to mine. However, in the following I will argue that we can just as well do without any explicit projection method at all, hence the choice is not crucial.

projection method, such as (4a), associates a complex sentence with a class of such contexts by compiling a set of logical forms that must be entailed in any context where it is proper to use the sentence. Thus we say that the sentence "If A then B" can be felicitously uttered in context X only if X entails all of the logical forms in the set $P_{\text{if } A \text{ then } B/X}$, defined in (4a).

There is another, much simpler, way to associate complex sentences with proper contexts of use. Instead of characterizing these contexts by compiling the presuppositions of the sentence, we ask what a context would have to be like in order to satisfy those presuppositions. Of course, it is exactly the same problem but, by turning it upside down, we get a surprisingly simple answer. The reason is that we can answer the latter question directly, without having to compute what the presuppositions actually are.

The way we go about this is the following. We start by defining, not presupposition, but a notion of *satisfaction of presuppositions*. This definition is based on the assumption that we can give a finite list of basic presuppositions for each simple sentence of English. For all cases where A is a simple, non-compound sentence, satisfaction is defined as in (5).

- (5) Context X *satisfies-the-presuppositions-of* A just in case X entails all of the basic presuppositions of A (that is, $P_A \subseteq E_X$).

The basic presuppositions of a simple sentence presumably can be determined from the lexical items in the sentence and from its form and derivational history, say, the application of certain transformations such as Pseudo-Clefting. To give a somewhat oversimplified example, consider the word *too* that occurs in the examples under (3). As a first approximation to the meaning of *too* we could give a condition like the one in (6), which is based on Green (1968).

- (6) Context X *satisfies-the-presuppositions-of* "a is P too" only if either (i) X entails "b is P" for some b ($\neq a$), or (ii) X entails "a is Q" for some Q ($\neq P$).

This in turn is equivalent to saying that a simple sentence like "Nixon is guilty too" either has a presupposition that someone else is guilty or that Nixon has some other property.³ One or the other must be entailed in context.

For compound sentences we define satisfaction recursively by associating each part of the sentence with a different context. The basic idea behind this

³ It appears to me that the only contribution *too* makes to the meaning of a sentence is that it introduces a presupposition whose form depends on the sentence as a whole and the particular constituent *too* focuses on. If this is so, there is no reason to assume that *too* is represented in the logical form of the sentence. As far as the truth conditions are concerned, "Nixon is guilty too" seems equivalent to "Nixon is guilty", therefore, it is possible to assign the same logical form to them. The same point has been raised in Lakoff & Railton (1971) with regard to two-way implicative verbs, such as *manage*, whose only function also seems to be to bring in a presupposition.

was independently suggested in both Stalnaker (1973) and Karttunen (1973b). For conditionals, satisfaction is defined in (7).

- (7) Context X satisfies-the-presuppositions-of “If A then B ” just in case (i) X satisfies-the-presuppositions-of A , and (ii) $X \cup A$ satisfies-the-presuppositions-of B .

As before, the expression “ $X \cup A$ ” denotes the set that results from incrementing X with the logical form of A .⁴ For conjunctions, that is, sentences of the form “ A and B ”, satisfaction is defined just as in (7). For disjunctions, sentences of the form “ A or B ”, we have “ $\sim A$ ” instead of “ A ” in part (ii). Examples that illustrate and support these principles can be found in my earlier papers.⁵

Note that *satisfies-the-presuppositions-of* is a relation between contexts and sentences. As I have tried to indicate orthographically, we are defining it here as a primitive, irreducible locution. Eventually it would be better to replace this clumsy phrase with some simple verb such as “admits”, which has the right pragmatic connotations. I keep the former term only to bring out the connection between (4) and (7) more clearly. At the end, of course, it comes down to having for each simple sentence a set of logical forms that are to be entailed (in the standard logical sense) by a certain context. What is important is that we define satisfaction for complex sentences directly without computing their presuppositions explicitly. There is no need for a projection method. Secondly, in case a sentence occurs as part of a larger compound, its presuppositions need not always be satisfied by the actual conversational context, as long as they are satisfied by a certain local extension of it. For example, in order to admit “If A then B ” a context need only satisfy-the-presuppositions-of A , provided that the presuppositions of B are satisfied by the context as incremented with the logical form of A .

It can be shown that the new way of doing things and the old way are equivalent. They sanction the use of any sentence in the same class of contexts. Although it may not be obvious at first, the statement in (8) is true just in case (9) holds, and vice versa.

⁴ In simple cases, incrementing a context consists of adding one more logical form to it. If the context entails the negation of what is to be added to it, as in counterfactual conditionals, other changes are needed as well to keep the resulting set consistent. This is a difficult problem, see Lewis (1973) for a general discussion of counterfactuals.

⁵ It is possible that the principle for disjunctions, and perhaps that for conjunctions as well, should be symmetric. This depends on how we want to deal with sentences like “Either all of Jack’s letters have been help up, or he has not written any” (see Karttunen 1973a, ftn.11). A symmetric condition for “or” would read follows

X satisfies-the-presuppositions-of “ A or B ” iff $X \cup \{ \sim A \}$
 satisfies-the-presuppositions-of “ B ” and $X \cup \{ \sim B \}$
 satisfies-the-presuppositions-of “ A ”. For “and”, substitute “ A ” for “ $\sim A$ ” and “ B ” for “ $\sim B$ ”.

(8) X satisfies-the-presuppositions-of “If A then B”.

(9) $P_{\text{if A then B/X}} \subseteq E_X$

The proof is straight-forward and will not be presented in detail. Here it suffices to note that, by (4a), (9) is equivalent to the conjunction of (10) and (11).

(10) $P_A \subseteq E_X$

(11) $P_B - (E_{X \cup A} - E_X) \subseteq E_X$

Similarly, by (7), (8) is equivalent to the conjunction of (12) and (13).

(12) X satisfies-the-presuppositions-of A.

(13) $X \cup A$ satisfies-the-presuppositions-of B.

Given our basic definition of satisfaction in (5) and that A and B are simple sentences, it follows that (10) and (12) are equivalent. So it remains to be shown that (11) and (13) also amount to the same thing. This can be done with simple set-theoretic means by proving the equivalence of (11) and (14). (Note that $E_X \subseteq E_{X \cup A}$).

(14) $P_B \subseteq E_{X \cup A}$

(14) in turn says the same thing as (13) provided that B is a simple sentence, as we have assumed here. In short, (8) and (9) are equivalent by virtue of the fact that (10) is equivalent to (12) and (11) is equivalent to (13). Consequently, the class of contexts that satisfy-the-presuppositions-of “If A then B” by principle (7) is the same class of contexts that entail all of the presuppositions assigned to this sentence by (4a).⁶

As we move on to more complicated sentences, the advantages of (7) over (4) become more and more clear. For example, consider sentences of the form (15).

(15) If (A and B) then (C or D).

It is a very cumbersome undertaking to compute the set of logical forms presupposed by (15) by means of rules like (4a). But it is a simple matter to tell by principles like (7) what is required of a context in which (15) is used. This is shown in (16). Note that (16) is not a new definition but a statement that directly follows from (7) and the corresponding principles for conjunctions and disjunctions.

(16) Context X satisfies-the-presuppositions-of “If (A and B) then (C or D)” just in case

⁶ The same holds in case we choose Peters’ principle (see fn. 2) over (4a). In demonstrating this, what we prove equivalent to (14) is not (11), of course, but that $\{ \ulcorner A \supset C \urcorner \mid C \in P_B \} \subseteq E_X$. This equivalence follows straight-forwardly from the fact that $\ulcorner A \supset C \urcorner \in E_X$ just in case $C \in E_{X \cup A}$.

- (i) X satisfies-the-presuppositions-of A,
- (ii) $X \cup A$ satisfies-the-presuppositions-of B,
- (iii) $X \cup A \& B$ satisfies-the-presuppositions-of C, and
- (iv) $X \cup A \& B \cup \sim C$ satisfies-the-presuppositions-of D.

As we study complex cases such as this one, we see that we could look at satisfaction of presuppositions in an even more general way. As illustrated in (16), by our definition a given initial context satisfies-the-presuppositions-of a complex sentence just in case the presuppositions of each of the constituent sentences are satisfied by a certain specific extension of that initial context. For example, the presuppositions of D in (15) must be satisfied by a set of logical forms that consists of the current conversational context as incremented with the logical forms of “A and B” and the negation of C. In compound sentences, the initial context is incremented in a left-to-right fashion giving for each constituent sentence a *local context* that must satisfy its presuppositions.⁷ We could easily define a notion of local context separately and give the following general definition of satisfaction for all compound sentences.

- (17) Context X satisfies-the-presuppositions-of S just in case the presuppositions of each of the constituent sentences in S are satisfied by the corresponding local context.

Note that in this new framework the earlier question of how it comes about that presupposition is a relative notion for compound sentences does not arise at all. Also, the distinction between cases like (3a) and (3b) is of no particular importance. What is required in both cases is that the presupposition of the consequent clause contributed by the word *too* be entailed by the current conversational context as incremented with the logical form of the antecedent. In case of (3b), we recognize that this condition is met, no matter what the initial context is like, by virtue of the particular antecedent. In (3a) it appears that the antecedent does not contribute anything towards satisfying the presuppositions of the consequent, at least, not in contexts that immediately come to mind. Hence we can be sure that the presuppositions of the consequent are satisfied in the incremented context just in case they are already satisfied initially. It seems to me now that this is a much better way of putting it than to talk about a presupposition being “shared” by the compound in (3a) and being “cancelled” or “filtered away” in (3b), as I did in the earlier papers. Such locutions can be thrown out with the projection method that gave rise to them.

⁷ Lakoff has pointed out to me that a notion of local context is also needed for transderivational constraints that make the well-formedness of derivations in which a certain transformation has applied dependent on the context. In compound sentences, it is the local context these constraints must refer to, not the overall conversational context.

So far I have only discussed complex sentences that are formed with sentential connectives. However, satisfaction of presuppositions can easily be defined for all kinds of complex sentences. Without going into any great detail, I will try to outline how this is done for sentences with sentential subjects or objects.

Let us represent such sentences with the expression “ $v(\dots A\dots)$ ” where “ v ” stands for a complementizable verb and “ A ” for an embedded subject or object clause. Sentences with verbs like *believe* and *want* that require non-sentential subjects are represented with “ $v(a,A)$ ” where “ a ” stands for the underlying subject. In this connection we have to distinguish three kinds of complementizable verbs, as shown in (18).

- (18) I Verbs of saying: *say, ask, tell, announce*, etc. (including external negation).
- II Verbs of propositional attitude: *believe, fear, think, want*, etc.
- III All other kinds of complementizable verbs: factives, semi-factives, modals, one- and two-way implicatives, aspectual verbs, internal negation.

Essentially this amounts to a distinction between verbs that are “transparent” with respect to presuppositions of their complements (type III) and verbs that are “opaque” to one degree or another (types I and II).⁸ These distinctions of course are not arbitrary but presumably follow from the semantics of verb complementation in some manner yet to be explained.

For sentences where the main verb is of the last type, we need the condition in (19).

- (19) If v is of type III, context X satisfies-the-presuppositions-of “ $v(\dots A\dots)$ ” only if X satisfies-the-presuppositions-of A .

Thus in a case such as (20), where *may, force, and stop* all are of type III, a context satisfies-the-presuppositions-of the whole sentence only if it satisfies those of all the nested complements.⁹

- (20) The courts may force Nixon to stop protecting his aides.

For example, a context for (20) ought to entail that Nixon has or will have been protecting his aides.

⁸ One of the mistakes in Karttunen (1973a) was the claim that verbs of saying and propositional attitude verbs are all “plugs”.

⁹ Since ordinary negation is a sentential operator of type III, it also follows from (19) that a context satisfies-the-presuppositions-of “Nixon won’t stop protecting his aides” just in case it satisfies-the-presuppositions-of “Nixon will stop protecting his aides”. This is an important fact, but there is no need to make it part of the definition of pragmatic presupposition, as Thomason (1973) does, presumably for historical reasons because the semantic notion of presupposition is traditionally defined in that way.

For verbs of propositional attitude we need a condition such as (21), where the expression " $B_a(X)$ " stands for the set of beliefs attributed to a in X .

- (21) If v is of type II, context X satisfies-the-presuppositions-of " $v(a,A)$ " only if $B_a(X)$ satisfies-the-presuppositions-of A .¹⁰

The condition says that sentences such as (22) require that the subject of the main sentence be understood to have a set of beliefs that satisfy-the-presuppositions-of the complement.

- (22) John fears that Nixon will stop protecting his aides.

To satisfy the presuppositions of (22), a context must ascribe to John a set of beliefs that satisfy-the-presuppositions-of "Nixon will stop protecting his aides".

Finally, with verbs of type I a complex sentence does not necessarily require that the presuppositions of the complement be satisfied, as we can observe by contemplating examples such as (23).

- (23) Ziegler announced that Nixon will stop protecting his aides.

(23) can be spoken felicitously, perhaps even truly, no matter what the facts are understood to be or whether anyone is supposed to hold a set of beliefs that satisfy the presuppositions of the complement.

As a final example of complementation, consider the sentence in (24).

- (24) John thinks that, if Rosemary believes that Nixon has been protecting his aides, she is afraid that Nixon will stop protecting them.

By applying the principles in (21) and (7) recursively, we arrive at the conclusion that, if a given context, X , satisfies the presuppositions of (24), then the presuppositions of the last clause in (24), "Nixon will stop protecting his aides", are satisfied by the set (25).

- (25) $B_{\text{Rosemary}} (B_{\text{John}} (X) \cup \text{Rosemary believes that Nixon has been protecting his aides})$.

This set contains all of the beliefs attributed to Rosemary in a context that consists of all of the beliefs attributed to John in X and the logical form of the given sentence. By virtue of its last-mentioned ingredient, this set in (25) is guaranteed to entail that Nixon has been protecting his aides. Therefore, (24) does not require that this particular presupposition of the last clause be entailed in contexts where (24) is used, or by the set of beliefs that in those contexts are attributed to John or to Rosemary. As far as I am able to tell, this is the correct result.

This concludes what I have to say about satisfaction of presuppositions. What we are interested in is associating sentences with proper contexts of use. We can achieve this goal directly by defining a notion of satisfaction as a relation between contexts and sentences. In this way we avoid the many complications

¹⁰ It is implicit in this treatment that every individual's beliefs are considered to be closed under entailment. I am not sure whether this is a defect.

that have to be built into a projection method that does the same by associating each sentence with a set of presuppositions. The efforts by Langendoen and Savin (1971), Morgan (1969, 1973), Keenan (1973), Lakoff and Railton (1971), Herzberger (1973), myself (1973a, 1973b), and many others to find such a method now seem misplaced to me. The best solution to the projection problem is to do away with it. The moral of this paper is: do not ask what the presupposition of a complex sentence are, ask what it takes to satisfy them.

I will conclude with a few comments about the notion of *context*. It is implicit in what I have said about satisfaction that a conversational context, a set of logical forms, specifies what can be taken for granted in making the next speech act. What this common set of background assumptions contains depends on what has been said previously and other aspects of the communicative situation. In a fully explicit discourse, the presuppositions of the next sentence uttered are satisfied by the current context. This guarantees that they are true in every possible world consistent with the context. Of course, it is possible that the actual world is not one of them, since people may be talking under various misapprehensions. Satisfaction of presuppositions is not a matter of what the facts really are, just what the conversational context is.

Once the new sentence has been uttered, the context will be incremented to include the new shared information. Viewed in this light, a theory of presuppositions amounts to a theory of a rational order of contexts from smaller to larger sets of shared information. At each step along the way that a fully explicit discourse proceeds, the current context satisfies the presuppositions of the next sentence that in turn increments it to a new context.

There are definitions of pragmatic presupposition, such as (1), which suggest that there is something amiss in a discourse that does not proceed in this ideal, orderly fashion. Those definitions make it infelicitous to utter sentences whose

¹¹ Many things can of course go wrong. First of all, the listener may refuse to go along with the tacit extension that the speaker appears to be suggesting. In case of the classical example: "Have you already stopped beating your wife?" he may have a good reason to balk. The listener may also be unable to comprehend what tacit extension of the current context the speaker has in mind. Some types of presupposition are especially unsuited for conveying anything indirectly. For example, "Nixon is guilty too" is not a good vehicle for suggesting that Agnew is guilty, although the presuppositions of the sentence are satisfied in all contexts where the latter is the case. Finally, the listener may extend the context in some way other than what was intended by the speaker. To what extent we actually can and do make use of such shortcuts depends on pragmatic considerations that go beyond the presuppositions themselves.

Note also that there are certain expressions in current American English that are almost exclusively used to convey matters indirectly, hence it is a moot question whether there is anything indirect about them any more. One is likely never to hear "Don't you realize it's past your bedtime" in a context entailing that the addressee ought to be in bed.

presuppositions are not satisfied by the current conversational context. They outlaw any leaps and shortcuts. All things considered, this is an unreasonable view. Consider the examples in (26).

- (26) (a) We regret that children cannot accompany their parents to commencement exercises.
 (b) There are *almost* no misprints in this book.
 (c) I would like to introduce you to *my wife*.
 (d) John lives in *the third brick house down the street from the post office*.
 (e) It has been *pointed out* that there are counter examples to my theory.

The underlined items in these sentences bring in a certain presupposition. Thus (26a) presupposes that its complement is true. Yet the sentence could readily be used in a conversational context that does not satisfy this presupposition. Perhaps the whole point of uttering (26a) is to let it be known that parents should not bring their kids along. Similarly, (26d) might be used to give directions to a person who up to that point had no idea that there are at least three brick houses down the street from the post office, which is a presupposition for the sentence by virtue of the underlined definite description. The same goes for the other examples in (26).

What do we say here? I am not all sure we want to say that, in these cases, a sentence has been used infelicitously. I am sure that there is no advantage in saying that sentences like (26a) sometimes do and sometimes do not presuppose their complements. A notion of “part-time presupposition” is not going to help; on the contrary. Had we defined presupposition as a relation between a sentence and its speaker, we would be tempted to talk about some presuppositions being optional.

I think the best way to look at this problem is to recognize that ordinary conversation does not always proceed in the ideal orderly fashion described earlier. People do make leaps and shortcuts by using sentences whose presuppositions are not satisfied in the conversational context. This is the rule rather than the exception, and we should not base our notion of presupposition on the false premiss that it does not or should not happen. But granting that ordinary discourse is not always fully explicit in the above sense, I think we can maintain that a sentence is always taken to be an increment to a context that satisfies its presuppositions. If the current conversational context does not suffice, the listener is entitled and expected to extend it as required. He must determine for himself what context he is supposed to be in on the basis of what was said and, if he is willing to go along with it, make the same tacit extension that his interlocutor appears to have made.¹¹ This is one way in which we communicate indirectly, convey matters without discussing them.

When we hear a sentence such as (26a), we recognize that it increments contexts which entail that children are not permitted at commencement exercises. These are the only contexts that satisfy the presuppositions of (26a). So if we

have not realized already that we are supposed to be in that kind of context, the sentence lets us know that indirectly. Perhaps the whole point of uttering (26a) was to make us conclude this for ourselves so that we would not have to be told directly.¹²

One must be careful not to confuse presuppositions with features of contexts that satisfy those presuppositions. Consider a sentence such as (27), which is a modified version of an example discussed by Lakoff (1971).

(27) John called Mary a Republican and then she insulted him back.

Because of the word *back*, the second conjunct of (27) presupposes that John has insulted Mary. The principle (17) tells us that this presuppositions ought to be satisfied by the corresponding local context. In this case, the local context consists of the initial context for (27) incremented with the logical form of "John called Mary a Republican". Let us suppose that this context in fact satisfies the presupposition that John has insulted Mary, and that the initial context by itself would not satisfy it. This state of affairs could come about in several ways. The most obvious one is that the initial context entails that calling someone a Republican constitutes an insult.

Note that there is nothing in (27) which presupposes that "Republican" is a dirty word. It is not a necessary feature of every context that satisfies the presuppositions of (27). But there are some contexts in which the presuppositions of (27) are satisfied only because of it. Sometimes we can exploit this fact by uttering (27) in a context which does not satisfy its presuppositions. In that case we expect the listener to notice what extension we have in mind. This is similar to what can be done with the examples in (26), except that here the piece of information that is passed along under the counter is neither presupposed nor entailed by any part of (27).

As a final example, consider a case of the kind first discussed in Liberman (1973).

(28) Bill has met either the King or the President of Slobovia.

The two disjuncts that constitute (28) have conflicting presuppositions: Slobovia is a monarchy/Slobovia is a republic. Yet, (28) as a whole is not contradictory. It seems to assert that Bill has met the Slobovian Head of State and indicates that the speaker does not know much about Slobovia. What sort of context does it take to satisfy-the-presuppositions-of (28)?

Assuming that the condition for "or" is symmetric (see fn. 5 above), we find that, according to our principles, (28) can be admissible at least in contexts which entail the logical forms of the three sentences in (29).

(29) (a) Slobovia is either a monarchy or a republic.

(b) If Slobovia is a monarchy, Bill has met the King of Slobovia.

(c) If Slobovia is a republic, Bill has met the President of Slobovia.

Such a context can satisfy the presuppositions of (28) for the following reason. By

¹² I owe this example to an official MIT bulletin about the spring 1973 commencement.

incrementing it with the negation of the first disjunct, "Bill has not met the King of Slobovia", we get a context which entails that Slobovia is a republic, which is what the second disjunct presupposes. By incrementing the original context with the negation of the second disjunct, we get a context which entails that Slobovia is a monarchy, which is a presupposition for the first disjunct. Given that both constituent sentences in (28) are admissible in their respective local contexts, (28) as a whole is admissible.

If our way of looking at presuppositions is correct, it should be in principle possible to utter (28) to someone who has never even heard of Slobovia and leave it up to him to conclude that the speaker assumes (29). It seems to me that this is a desirable result.

In this paper I have argued that a theory of presuppositions is a best looked upon as a theory of constraints on successive contexts in a fully explicit discourse in which the current conversational context satisfies-the-presuppositions-of, or let us say from now on, *admits* the next sentence that increments it. I have outlined a recursive definition of admittance, based on the assumption that we can give a finite list of presuppositions for each simple sentence. In this approach we do not need an explicit projection method for assigning presuppositions to complex sentences. A theory of presuppositions of the kind advocated here attempts to achieve both less and more than has been expected of such a theory: less in the sense that it is not a theory of how ordinary discourse does or ought to proceed; more in the sense that it tries to explain some of the principles that we make use of in communicating indirectly and in inferring what someone is committed to, although he did not exactly say it.

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