Until recently, pragmatics - the study of language in relation to the users of language - has been the neglected member of the traditional three-part division of the study of signs: syntax, semantics, pragmatics. The problems of pragmatics have been treated informally by philosophers in the ordinary language tradition, and by some linguists, but logicians and philosophers of a formalistic frame of mind have generally ignored pragmatic problems, or else pushed them into semantics and syntax. My project in this paper is to carve out a subject matter that might plausibly be called pragmatics and which is in the tradition of recent work in formal semantics. The discussion will be programmatic. My aim is not to solve the problems I shall touch on, but to persuade you that the theory I sketch has promise. Although this paper gives an informal presentation, the subject can be developed in a relatively straightforward way as a *formal* pragmatics no less rigorous than present day logical syntax and semantics. The subject is worth developing, I think, first to provide a framework for treating some philosophical problems that cannot be adequately handled within traditional formal semantics, and second to clarify the relation between logic and formal semantics and the study of natural language.

I shall begin with the second member of the triad, semantics. The boundaries of this subject are not so clear as is sometimes supposed, and since pragmatics borders on semantics, these boundaries will determine where our subject begins. After staking out a claim for pragmatics, I shall describe some of the tasks that fall within its range and try to defend a crucial distinction on which the division between semantics and pragmatics is based.

# I. SEMANTICS

If we look at the general characterizations of semantics offered by Morris and Carnap, it will seem an elusive subject. Semantics, according to them, concerns the relationship between signs and their *designata*. The *designatum* of a sign, Morris writes, is what is "taken account of in virtue

of the presence of the sign". He also says "a *designatum* is not a thing, but a kind of object, or a class of objects".<sup>1</sup> Carnap is equally vague in giving a general characterization. The designatum of an expression, he says, is what he who uses it intends to refer to by it, "e.g., to an object or a property or a state of affairs. ... (For the moment, no exact definition for 'designatum' is intended; this word is merely to serve as a convenient common term for different cases – object, properties, etc., whose fundamental differences in other respects are not hereby denied.)"<sup>2</sup>

Though a clear general definition is hard to come by, the historical development of formal semantics is well delineated. The central problems in semantics have concerned the definition of truth, or truth conditions, for the sentences of certain languages. Formal semantics abstracts the problem of giving truth conditions for sentences away from problems concerning the purposes for which those sentences are uttered. People do many things with language, one of which is to express *propositions* for one reason or another, propositions being abstract objects representing truth conditions. Semantics has studied that aspect of language use in isolation from others. Hence I shall consider semantics to be the study of propositions.

The explication of *proposition* given in formal semantics is based on a very homely intuition: when a statement is made, two things go into determining whether it is true or false. First, what did the statement say: what proposition was asserted? Second, what is the world like; does what was said correspond to it? What, we may ask, must a proposition be in order that this simple account be correct? It must be a rule, or a function, taking us from the way the world is into a truth value. But since our ideas about how the world is change, and since we may wish to consider the statement relative to hypothetical and imaginary situations, we want a function taking not just the actual state of the world, but various possible states of the world into truth values. Since there are two truth values, a proposition will be a way – any way – of dividing a set of possible states of the world into two parts: the ones that are ruled out by the truth of the proposition, and the ones that are not.<sup>3</sup>

Those who find the notion of a *possible world* obscure may feel that this explication of proposition is unhelpful, since formal semantics generally takes that notion, like the notion of an individual, as primitive.<sup>4</sup> Some explanation is perhaps needed, but I am not sure what kind. Even without explanation, the notion has, I think, enough intuitive content to make it fruitful in semantics. I shall say only that one requirement for identifying a possible world is to specify a domain of individuals said to exist in that world.<sup>5</sup>

If we explain propositions as functions from possible worlds into truth values, they will have the properties that have traditionally been ascribed to them. Propositions are things that may be considered in abstraction on the one hand from particular languages and linguistic formulations (the sentences that express them), and on the other hand from the kinds of linguistic acts in which they figure (for example the assertions and commands in which a proposition is asserted or commanded). Thus once the homely intuition mentioned above has done its work, we may forget about assertions and consider propositions themselves, along with similar things such as functions taking individuals into propositions, and functions taking propositions into propositions.

Generally, the study of formal semantics has proceeded by first setting up a language, and then laying down rules for matching up the sentences of that language with propositions or truth values. But the languages are set up usually for no other purpose than to represent the propositions, or at least this is how formalized languages have been used by philosophers. Regimentation or formalization is simply a way to make clearer what the truth conditions are – what proposition is expressed by what is regimented or formalized. But with an adequate theory of propositions themselves, such philosophical analyses can proceed without the mediation of a regimented or formalized object language. Rather than translate a problematic locution into an object language in which it is clear what propositions are expressed by the sentences, one can simply state what proposition is expressed by that locution. The effect is the same. Unless one is concerned with proof theory, he may drop the language out altogether with no loss.

According to this characterization of semantics, then, the subject has no essential connection with languages at all, either natural or artificial. (Of course semantical theories are expressed *in* language, but so are theories about rocks.) This is not to deny the possibility of a *causal* relation between language and our conception of a proposition. It may be, for example, that the fact that we think of a possible world as a domain of individuals together with the ascription of properties to them is a

result of the fact that our language has a subject-predicate structure. It is also not to deny that the study of the grammar of natural language may be a rich source of insight into the nature of propositions and a source of evidence for distinctions among propositions. If we find in grammar a device for marking a distinction of content, we may presume that there is a distinction of content to be marked. But whatever the causal or evidential story, we may still abstract the study of propositions from the study of language. By doing so, I think we get a clearer conception of the relation between them.

Though one may study propositions apart from language, accounting for the relation between language and propositions still falls partly within the domain of semantics. One of the jobs of natural language is to express propositions, and it is a semantical problem to specify the rules for matching up sentences of a natural language with the propositions that they express. In most cases, however, the rules will not match sentences directly with propositions, but will match sentences with propositions relative to features of the context in which the sentence is used. These contextual features are a part of the subject matter of pragmatics, to which I shall now turn.

#### **II. PRAGMATICS**

Syntax studies sentences, semantics studies propositions. Pragmatics is the study of linguistic acts and the contexts in which they are performed. There are two major types of problems to be solved within pragmatics: first, to define interesting types of speech acts and speech products; second, to characterize the features of the speech context which help determine which proposition is expressed by a given sentence. The analysis of illocutionary acts is an example of a problem of the first kind; the study of indexical expressions is an example of the second. My primary concern will be with problems of the second kind, but I shall say a few general things about the first before I go on to that.

Assertions, commands, counterfactuals, claims, conjectures and refutations, requests, rebuttals, predictions, promises, pleas, speculations, explanations, insults, inferences, guesses, generalizations, answers and lies are all kinds of linguistic acts. The problem of analysis in each case is to find necessary and sufficient conditions for the successful (or perhaps in some cases normal) performance of the act. The problem is a pragmatic one since these necessary and sufficient conditions will ordinarily involve the presence or absence of various properties of the context in which the act is performed<sup>6</sup>, for example, the intentions of the speaker, the knowledge, beliefs, expectations or interests of the speaker and his audience, other speech acts that have been performed in the same context, the time of utterance, the effects of the utterance, the truth value of the proposition expressed, the semantic relations between the proposition expressed and some others involved in some way.

Almost all of the speech act types mentioned above involve the expression of a proposition, and in the first type of pragmatic problem, the identity of that proposition is taken to be unproblematic. In most cases, however, the context of utterance affects not only the force with which the proposition is expressed, but also the proposition itself. It may be that the semantical rules determine the proposition expressed by a sentence or clause only relative to some feature of the situation in which the sentence is used.

Consider a statement 'everybody is having a good time'. I assume that you understand the *sentence* well enough. Now assume also that you are omniscient with respect to people having a good time: you know for each person that ever lived and for each time up to now whether or not that person was having a good time at that time. Under these conditions, you may still be in doubt about the truth of the statement for at least two reasons: first, you do not know when it was made; second, you do not know what class of people it was made about. It is unlikely that the speaker meant everybody in the universe. He may have meant everybody at some party, or everyone listening to some philosophical lecture, and if so, then we have to know what party, or what lecture before we know even what was said, much less whether what was said is true.

Statements involving personal pronouns and demonstratives furnish the most striking examples of this kind. When you say "We shall overcome", I need to know who you are, and for whom you are speaking. If you say "that is a great painting", I need to know what you are looking at, or pointing to, or perhaps what you referred to in your previous utterance. Modal terms also are notoriously dependent on context for their interpretation. For a sentence using *can*, *may*, *might*, *must* or *ought*, to determine a proposition unambiguously, a domain of 'all possible

worlds' must be specified or intended. It need not be *all* conceivable worlds in any absolute sense, if there is such a sense. Sentences involving modals are usually to be construed relative to all possible worlds consistent with the speaker's knowledge, or with some set of presuppositions, or with what is morally right, or legally right, or normal, or what is within someone's power. Unless the relevant domain of possible worlds is clear in the context, the proposition expressed is undetermined.

The formal *semantic* analysis of such concepts as universality and necessity isolates the relevant contextual or pragmatic parameters of an interpretation (as, for example, a domain of discourse in classical first order logic, a set of possible worlds and a relation of relative possibility on them in Kripke's semantics for modal logic), and defines truth conditions relative to these parameters. The second kind of pragmatic problem is to explicate the relation of these parameters to each other, and to more readily identifiable features of linguistic contexts.

The scheme I am proposing looks roughly like this: The syntactical and semantical rules for a language determine an interpreted sentence or clause; this, together with some features of the context of use of the sentence or clause determines a proposition; this in turn, together with a possible world, determines a truth value. An interpreted sentence, then, corresponds to a function from contexts into propositions, and a proposition is a function from possible worlds into truth values.

According to this scheme, both contexts and possible worlds are partial determinants of the truth value of what is expressed by a given sentence. One might merge them together, considering a proposition to be a function from context-possible worlds (call them points of reference) into truth values. Pragmatics-semantics could then be treated as the study of the way in which, not propositions, but truth values are dependent on context, and part of the context would be the possible world in which the sentence is uttered. This is, I think, the kind of analysis of pragmatics proposed and developed by Richard Montague.<sup>7</sup> It is a simpler analysis than the one I am sketching; I need some argument for the necessity or desirability of the extra step on the road from sentences to truth values. The step is justified only if the middlemen – the propositions – are of some independent interest, and only if there is some functional difference between contexts and possible worlds.

The independent interest in propositions comes from the fact that they

are the objects of illocutionary acts and propositional attitudes. A proposition is supposed to be the common content of statements, judgments, promises, wishes and wants, questions and answers, things that are possible or probable. The meanings of sentences, or rules determining truth values directly from contexts, cannot plausibly represent these objects.

If O'Leary says "Are you going to the party?" and you answer, "Yes, I'm going", your answer is appropriate because the proposition you affirm is the one expressed in his question. On the simpler analysis, there is nothing to be the common content of question and answer except a truth value. The propositions are expressed from different points of reference, and according to the simpler analysis, they are different propositions. A truth value, of course, is not enough to be the common content. If O'Leary asks "Are you going to the party?" it would be inappropriate for you to answer, "Yes, snow is white."

When O'Leary says at the party, "I didn't have to be here you know", he means something like this: it was not necessary that O'Leary be at that party. The words *I* and *here* contribute to the determination of a proposition, and this proposition is what O'Leary declares to be not necessary. Provided he was under no obligation or compulsion to be there, what he says is correct. But if the proposition declared to be not necessary were something like the meaning of the sentence, then O'Leary would be mistaken since the sentence 'I am here' is true from all points of reference, and hence necessarily true on the simpler analysis.

Suppose you say "He is a fool" looking in the direction of Daniels and O'Leary. Suppose it is clear to me that O'Leary is a fool and that Daniels is not, but I am not sure who you are talking about. Compare this with a situation in which you say "He is a fool" pointing unambiguously at O'Leary, but I am in doubt about whether he is one or not. In both cases, I am unsure about the truth of what you say, but the source of the uncertainty seems radically different. In the first example, the doubt is about what proposition was expressed, while in the second there is an uncertainty about the facts.

These examples do not provide any criteria for distinguishing the determinants of truth which are part of the context from those which are part of the possible world, but they do support the claims that there is a point to the distinction, and that we have intuitions about the matter.

I certainly do not want to suggest that the distinction is unproblematic, or that it is not sometimes difficult or arbitrary to characterize certain truth determinants as semantic or pragmatic.<sup>8</sup> I want to suggest only that there are clear cases on which to rest the distinction between context and possible world, and differences in language use which depend on how it is made. To lend more detailed support to the suggestion, I shall first discuss a concept of *pragmatic presupposition* which is central to the characterization of contexts, as opposed to possible worlds, and second describe a kind of *pragmatic ambiguity* which depends on the distinction.

# **III. PRESUPPOSITIONS**

The notion of presupposition that I shall try to explicate is a pragmatic concept, and must be distinguished from the semantic notion of presupposition analyzed by van Fraassen.<sup>9</sup> According to the *semantic* concept, a proposition P presupposes a proposition Q if and only if Q is necessitated both by P and by *not-P*. That is, in every model in which P is either true or false, Q is true. According to the *pragmatic* conception, presupposition is a propositional attitude, not a semantic relation. People, rather than sentences or propositions are said to have, or make, presuppositions in this sense. More generally, any participant in a linguistic context (a person, a group, an institution, perhaps a machine) may be the subject of a presupposition. Any proposition may be the object, or content of one.

There is no conflict between the semantic and pragmatic concepts of presupposition: they are explications of related but different ideas. In general, any semantic presupposition of a proposition expressed in a given context will be a pragmatic presupposition of the people in that context, but the converse clearly does not hold.

To presuppose a proposition in the pragmatic sense is to take its truth for granted, and to assume that others involved in the context do the same. This does not imply that the person need have any particular mental attitude toward the proposition, or that he need assume anything about the mental attitudes of others in the context. Presuppositions are probably best viewed as complex dispositions which are manifested in linguistic behavior. One has presuppositions in virtue of the statements he makes, the questions he asks, the commands he issues. Presuppositions are propositions implicitly *supposed* before the relevant linguistic business is transacted.

The set of all the presuppositions made by a person in a given context determines a class of possible worlds, the ones consistent with all the presuppositions. This class sets the boundaries of the linguistic situation. Thus, for example, if the situation is an inquiry, the question will be, which of the possible worlds consistent with the presuppositions is the actual world? If it is a deliberation then the question is, which of those worlds shall we make actual? If it is a lecture, then the point is to inform the audience more specifically about the location of the actual world within that class of possible worlds. Commands and promises are expected to be obeyed and kept within the bounds of the presuppositions. Since the presuppositions play such a large part in determining what is going on in a linguistic situation, it is important that the participants in a single context have the same set of presuppositions if misunderstanding is to be avoided. This is why presupposition involves not only taking the truth of something for granted, but also assuming that others do the same.

The boundaries determined by presuppositions have two sides. One cannot normally assert, command, promise, or even conjecture what is inconsistent with what is presupposed. Neither can one assert, command, promise or conjecture what is itself presupposed. There is no point in expressing a proposition unless it distinguishes among the possible worlds which are considered live options in the context.

Presuppositions, of course, need not be true. Where they turn out false, sometimes the whole point of the inquiry, deliberation, lecture, debate, command or promise is destroyed, but at other times it does not matter much at all. Suppose, for example, we are discussing whether we ought to vote for Daniels or O'Leary for President, presupposing that they are the Democratic and Republican candidates, respectively. If our real interest is in coming to a decision about who to vote for in the Presidential election, then the debate will seem a waste of time when we discover that in reality, the candidates are Nixon and Muskie. However, if our real concern was with the relative merits of the character and executive ability of Daniels and O'Leary, then our false presupposition makes little difference. Minor revisions might bring our debate in line with new presuppositions. The same contrast applies to a scientific experiment per-

formed against the background of a presupposed theoretical framework. It may lose its point when the old theory is rejected, or it may easily be accommodated to the new theory. Sometimes, in fact, puzzlement is resolved and anomalies are explained by the discovery that a presupposition is false, or that a falsehood was presupposed. An experimental result may be more easily accommodated to the new presuppositions than to the old ones.

Normally, presuppositions are at least *believed* to be true. That is one reason that we can often infer more about a person's beliefs from his assertions than he says in them. But in some cases, presuppositions may be things we are unsure about, or even propositions believed or known to be untrue. This may happen in cases of deception: the speaker presupposes things that his audience believes but that he knows to be false in order to get them to believe further false things. More innocently, a speaker may presuppose what is untrue to facilitate communication, as when an anthropologist adopts the presuppositions of his primitive informant in questioning him. Most innocent of all are cases of fiction and pretending: speaker and audience may conspire together in presupposing things untrue, as when the author of a novel presupposes some of what was narrated in earlier chapters. In some contexts, the truth is beside the point. The actual world is, after all, only one possible world among many.

The shared presuppositions of the participants in a linguistic situation are perhaps the most important constituent of a context. The concept of pragmatic presupposition should play a role, both in the definition of various speech acts such as assertion, prediction, or counterfactual statement, and also in specifying semantical rules relating sentences to propositions relative to contexts.

# **IV. PRAGMATIC AMBIGUITY**

The best example of the kind of ambiguity that I shall describe is given in Keith Donnellan's distinction between referential and attributive uses of definite descriptions.<sup>10</sup> After sketching an account of his distinction within the theory of pragmatics, I shall give some examples of other pragmatic ambiguities which have similar explanations.

Consider the following three statements, together with parenthetical comments on the contexts in which they were made:

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- (1) Charles Daniels is bald (said about a philosopher named Charles Daniels by one of his friends).
- (2) I am bald (said by Charles Daniels, the man mentioned above).
- (3) The man in the purple turtleneck shirt is bald (said by someone in a room containing one and only one man in a purple turtleneck shirt, that man being Charles Daniels).

The question is, what proposition was expressed in each of these three cases? In the first case, since 'Charles Daniels' is a proper name, and since the speaker knows the intended referent well, there is no problem: the proposition is the one that says that *that* man has the property of being bald. In possible worlds in which that same man, Charles Daniels, is bald, the statement is true; in possible worlds in which he is not bald, the statement is false. What is the truth value in possible worlds where he does not exist? Perhaps the function is undefined for those arguments. We need not worry about it though, since the existence of Charles Daniels will be presupposed in any context in which that proposition is expressed.

The second statement expresses exactly the same proposition as the first since it is true in possible worlds where the referent of the pronoun, I, Charles Daniels, is bald, and false when he is not. To believe what is expressed in the one statement is to believe what is expressed in the other; the second might be made as a report of what was said in the first. To interpret the second *sentence*, one needs to know different things about the context than one needs to know to interpret the first, but once both statements are understood, there is no important difference between them.

In both cases, there is a pragmatic problem of determining from the context which individual is denoted by the singular term. The answer to this question fixes the proposition – the content of what is said. In case (1), a relatively unsystematic convention, the convention matching proper names to individuals, is involved. In case (2), there is a systematic rule matching a feature of the context (the speaker) with the singular term I. Different rules applied to different sentences in different contexts determine the same proposition.

What about the third case? Here there are two ways to analyze the situation corresponding to the referential and attributive uses of definite descriptions distinguished by Donnellan. We might say that the relation

between the singular term "the man in the purple turtleneck shirt" and the referent, Charles Daniels, is determined by the context, and so the proposition expressed is the same as that expressed by statements (1) and (2). As with the term I, there are relatively systematic rules for matching up definite descriptions with their denotations in a context: the referent is the one and only one member of the appropriate domain who is *presupposed* to have the property expressed in the description. The rule cannot always be applied, but in the case described, it can be.

Alternatively, we might understand the rule picking out the denotation of the singular term to be itself a part of the proposition. This means that the relation between the definite description and its denotation is a function, not of the context, but of the possible world. In different possible worlds the truth value of the proposition may depend on different individuals. It also means that we may understand the proposition – the content of the statement – without knowing who the man in the purple turtleneck shirt is, although we may have to know who he is in order to know that it is true.

The simpler account of pragmatics which merges possible worlds with contexts cannot account for Donnellan's distinction. If one goes directly from sentence (together with context) to truth value, one misses the ambiguity, since the truth conditions for the sentence in a fixed context (in normal cases at least) coincide for the two readings. If one goes from sentence together with context to proposition, and proposition together with possible world to truth value, however, the ambiguity comes out in the intermediate step. There are at least three important differences between the referential and attributive uses of descriptions. These differences provide further argument for a theory which allows the distinction to be made and which gives some account of it.

First, in modal contexts and contexts involving propositional attitudes, the distinction makes a difference even for the *truth value* of statements in which descriptions occur. Compare

- (4) The man in the purple turtleneck shirt might have been someone else.
- (5) The man in the purple turtleneck shirt might have worn white tie and tails.

Both statements say approximately that a certain proposition was possi-

bly true. But in each case there are two propositions that can be intended, and which one is chosen may make a difference in the truth value of the ascription of possibility to the proposition. If the first means, roughly, that Daniels might have been someone else, it is false, perhaps contradictory. On the other hand, if it means that someone else might have been the one wearing the turtleneck shirt (perhaps he almost lent it to me), then it may be true. The second statement can mean either that Daniels might have worn white tie and tails, or that it might have been the case that whoever was the one wearing a purple turtleneck shirt was *also* wearing white tie and tails. Clearly, the truth conditions are different for these two readings.

In a formal language containing modal or epistemic operators and descriptions, the distinction can be interpreted as a *syntactical* distinction. That is, statements (4) and (5) could each be formalized in two syntactically different ways with the description falling inside of the scope of the modal operator in one and outside the scope in the other.<sup>11</sup> But this procedure has two limitations: (a) it would be highly implausible to suggest that the *English* sentences (4) and (5) are syntactically ambiguous. There are no natural syntactical transformations of (4) and (5) which remove the ambiguity. (b) modal and propositional attitude concepts may be involved, not only as parts of statements, but as comments on them and attitudes toward them. The content of statement (3) above, which cannot be treated as syntactically ambiguous even in a formalized language, may be doubted, affirmed, believed or lamented. What one is doing in taking these attitudes or actions depends on which of the two readings is given to the statement.

Second, as Donnellan noted, the distinction makes a difference for the presuppositions required by the context in which the statement is made. In general, we may say that when a simple subject predicate statement is made, the existence of the subject is normally presupposed. When you say "the man in the purple turtleneck shirt is bald", you presuppose that the man in the purple turtleneck shirt exists. But of course the same ambiguity infects that statement of presupposition; how it is to be taken depends on what reading is given to the original statement. If the statement is given the referential reading, then so must be the presupposition. What is presupposed is that Daniels exists. If the statement is given the attributive reading, then the presupposition is that there is one and only

one man (in the appropriate domain) wearing a purple turtleneck shirt. This is exactly the presupposition difference pointed out by Donnellan. Within the framework I am using, the different presuppositions can be seen to be instances of a single principle.

Third, the distinction is important if one considers what happens when the description fails to apply uniquely in the context. In *both* referential and attributive uses of descriptions, it is a presupposition of the context that the description applies uniquely, but if this presupposition is false, the consequences are different. In the case of referential uses, Donnellan has noted, the fact that the presupposition fails may have little effect on the statement. The speaker may still have successfully referred to someone, and successfully said something about him. When the presupposition fails in the attributive sense, however, that normally means that nothing true or false has been said at all. This difference has a natural explanation within our framework.

Where the rules determining the denotation of the singular term are considered as part of the context, what is relevant is not what is true, but what is presupposed. The definite description in statement (3) above, on the referential reading, denotes the person who is *presupposed* to be the one and only one man in a purple turtleneck shirt (in the relevant domain). If there is no one person who is presupposed to fit the description, then reference fails (even if some person does *in fact* fit the description uniquely). But if there is one, then it makes no difference whether that presupposition is true or false. The presupposition helps to determine the proposition expressed, but once that proposition is determined, it can stand alone. The fact that Daniels is bald in no way depends on the color of his shirt.

On the attributive reading, however, the rule determining the denotation of the description is a part of the proposition, so it is what is true that counts, not what is presupposed. The proposition is about whoever uniquely fits the description, so if no one does, no truth value is determined.

The points made in distinguishing these two uses of definite descriptions can be generalized to apply to other singular terms. Proper names, for example, are normally used to refer, but can be used in a way resembling the attributive use of definite descriptions. When you ask, "Which one is Daniels?" you are not *referring* to Daniels, since you do not presuppose of any one person that he is Daniels. When I answer "Daniels is the bald one" I am using "the bald one" referentially, and the name Daniels attributively. I am telling you not that Daniels is bald, but that he is Daniels. Using this distinction, we can explain how identity statements can be informative, even when two proper names flank the identity sign.

It has been emphasized by many philosophers that referring is something done by people with terms, and not by terms themselves. That is why reference is a problem of pragmatics, and it is why the role of a singular term depends less on the syntactic or semantic category of the term itself (proper name, definite description, pronoun) than it does on the speaker, the context, and the presuppositions of the speaker in that context.

The notion of pragmatic ambiguity can be extended to apply to other kinds of cases. In general, a sentence has the potential for pragmatic ambiguity if some rule involved in the interpretation of that sentence may be applied either to the context or to the possible world. Applied to the context, the rule will either contribute to the determination of the proposition (as in the case of the referential use of definite descriptions) or it will contribute to the force with which the proposition is expressed. Applied to the possible world, the rule is incorporated into the proposition itself, contributing to the determination of a truth value. Conditional sentences, sentences containing certain modal terms, and sentences containing what have been called parenthetical verbs are other examples of sentences which have this potential.

If a person says something of the form 'If A then B' this may be interpreted either as the categorical assertion of a conditional proposition or as the assertion of the consequent made conditionally on the truth of the antecedent. In the former case, a proposition is determined on the level of semantics as a function of the propositions expressed by antecedent and consequent. In the latter case, the antecedent is an additional presupposition made temporarily, either because the speaker wishes to commit himself to the consequent only should the antecedent be true, or because the assertion of the consequent would not be relevant unless the antecedent is true (as in, for example, "there are cookies in the cupboard if you want some").<sup>12</sup>

A sentence of the form 'It may be that P' can be interpreted as expressing a modal proposition, that proposition being a function of P, or

it may be interpreted as making explicit that the negation of P is not presupposed in the context. In the latter case, P is the only *proposition* involved. The modal word indicates the force with which it is expressed.

A sentence of the form 'I suppose that P' may be meant as a report about a supposition of the speaker, or as a rather tentative assertion of P. To read it the second way is to treat I suppose as a parenthetical verb, since on this reading, the sentence is synonomous with 'P, I suppose'. The differences between these two readings are explored in Urmson's famous article on parenthetical verbs.<sup>13</sup>

Each of these examples has its own special features and problems. I do not want to suggest that they are instances of a common form. But the ambiguity, in each case, rests on the distinction between context and possible world.

### **v.** CONCLUSION

Let me summarize the main points that I have tried to make. In section one I claimed that semantics is best viewed as the study of propositions, and argued that propositions may be studied independently of language. In section two I defined pragmatics as the study of linguistic acts and the contexts in which they are performed. Two kinds of pragmatic problems were considered; first, the definition of speech acts - the problem of giving necessary and sufficient conditions, not for the truth of a proposition expressed in the act, but for the act being performed; second, the study of the ways in which the linguistic context determines the proposition expressed by a given sentence in that context. The formulation of problems of the second kind depends on a basic distinction between contextual determinants of propositions and propositional determinants of truth. I argued that the distinction has an intuitive basis, and is useful in analyzing linguistic situations. In the final two sections, I tried to support this distinction, first by characterizing a pragmatic notion of presupposition that is a central feature of contexts as opposed to possible worlds, and second by describing a kind of pragmatic ambiguity which rests on the distinction.

In this sketch of a theory of pragmatics, I have relied on some undefined and problematic concepts, for example, possible worlds, contexts, and presuppositions. I have given some heuristic account of these concepts, or relied on the heuristic accounts of others, but I have made no **ROBERT C. STALNAKER** 

attempt to reduce them to each other, or to anything else. It may be charged that these concepts are too unclear to be the basic concepts of a theory, but I think that this objection mistakes the role of basic concepts. It is not assumed that these notions are clear. In fact, one of the points of the theory is to clarify them. So long as certain concepts all have *some* intuitive content, then we can help to explicate them all by relating them to each other. The success of the theory should depend not on whether the concepts can be defined, but on whether or not it provides the machinery to define linguistic acts that seem interesting and to make conceptual distinctions that seem important. With philosophical as well as scientific theories, one may explain one's theoretical concepts, not by defining them, but by using them to account for the phenomena.

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\* The research for and preparation of this paper was supported by the National Science Foundation, grant number GS-2574. I would like to thank Professors David Shwayder and Richmond Thomason for their helpful comments on a draft of this paper.

<sup>1</sup> Charles W. Morris, Foundations of the Theory of Signs, Chicago 1938, pp. 4-5.

<sup>2</sup> Rudolf Carnap, Foundations of Logic and Mathematics, Chicago 1939, p. 4.

<sup>3</sup> See Dana Scott, 'Advice on Modal Logic' in *Philosophical Problems in Logic*. *Recent Developments* (ed. by Karel Lambert), D. Reidel Publishing Company, Dordrecht 1970, pp. 143–173.

<sup>4</sup> This is not an inevitable strategy. Instead of taking individuals and possible worlds as primitive, defining properties and relations as functions from one to the other, one might take individuals, properties and relations as primitive and define possible worlds in terms of these.

 $^5$  A theory of possible worlds and propositions defined in terms of them is not committed to any absolute notion of synonymy or analyticity. Since propositions are functions taking possible worlds as arguments, a domain of possible worlds must be specified as the domain of the function. But the domain need not be *all* possible worlds in any absolute or metaphysical sense. We may leave open the possibility that the domain may be extended as our imaginations develop, or as discoveries are made, or as our interests change. Propositional identity is, of course, relative to the specification of a domain of possible worlds.

<sup>6</sup> This is not necessarily so, however. Since speech act types can be *any* way of picking out a class of particular speech acts, one might define one in such a way that the context was irrelevant, and the problem of analysis reduced to a problem of syntax or semantics, as for example the speech act of uttering a grammatical sentence of English, or the speech act of expressing the proposition X.

<sup>7</sup> R. Montague, 'Pragmatics' in *Contemporary Philosophy – La philosophie contemporaine* (ed. by R. Klibansky), La Nuova Italia Editrice, Florence 1968, Vol. I, pp. 102–122. Montague uses the phrase 'point of reference' as does Dana Scott in the paper mentioned in note 3.

<sup>8</sup> Tenses and times, for example, are an interesting case. Does a tensed sentence determine a proposition which is sometimes true, sometimes false, or does it express different timeless propositions at different times? I doubt that a single general answer can be given, but I suspect that one's philosophical views about time may be colored by his tendency to think in one of these ways or the other.

<sup>9</sup> Bas C. van Fraassen, 'Singular Terms, Truth Value Gaps, and Free Logic', *Journal of Philosophy* **63** (1966) 481–495; and van Fraassen, 'Presupposition, Implication, and Self Reference', *Journal of Philosophy* **65** (1968) 136–151.

<sup>10</sup> Keith Donnellan, 'Reference and Definite Descriptions', *Philosophical Review* 75 (1966) 281–304.

<sup>11</sup> See R. Thomason and R. Stalnaker, 'Modality and Reference', *Noûs* 2 (1968) 359–372; and R. Stalnaker and R. Thomason, 'Abstraction in First Order Modal Logic', *Theoria* 34 (1968) 203–207.

<sup>12</sup> See R. Stalnaker, 'A Theory of Conditionals' in *Studies in Logical Theory* (ed. by Nicholas Rescher), Oxford 1968, pp. 98–112 for a semantical theory of conditional propositions. Nucl Belnap has developed a theory of conditional assertion in 'Conditional Assertion and Restricted Quantification', *Noûs* 4 (1970).

<sup>13</sup> J. O. Urmson, 'Parenthetical Verbs', Mind 61 (1952) 192-212.