PRAGMATICS. Stalnaker's pragmatic approach to meaning is another incarnation of the idea that the content (meaning) of a statement is to be explained in terms of its truth conditions.

By the term 'pragmatics' here we understand a theory of relations between contents of linguistic expressions and contexts of their use. First, context affects content, because 'what the expression says' is affected by where and when it is being used. But, less straightforwardly, contents affect contexts. Stalnaker's theory with both kinds of influence.

COMPARISON TO DEMONSTRATIVES Earlier we saw an account of context-dependence suggested by David Kaplan. It was designed to give a semantic theory of indexical and demonstrative expressions. The crux of this approach lies in the distinction between the character and the content of expressions. For every expression ϕ, its character is something that can be known by every competent speaker of the language. When ϕ occurs within some utterance on a particular occasion, its character remains constant. The context of an utterance U is its circumstance. Kaplan proposed to identify four parameters of context: the time of utterance, the place of utterance, the utterer, and the world of utterance. Before we specify the context of utterance, the statement containing a demonstrative expression not only lacks a truth-value, but also does not have content. In Kaplan's idiom, it does not say anything. The explanation is that although demonstratives have constant characters, the function which assigns content for every such character is not constant. It is dependent on one or more parameters of the context.

Robert Stalnaker's approach aims to extend Kaplan's strategy to the kinds of statements other than those involving demonstratives. It employs a different conceptual setting. We consider concrete utterance tokens and for every such utterance token different addressees of the utterance along with the utterer himself may form different pragmatic presuppositions. These latter are nothing but propositions assumed by the speaker, who can either seriously believe in them, assume them 'for the sake of argument', or perhaps pretend to believe in them. By occupying himself with utterance tokens, Stalnaker envisages a situation where the addressee of my utterance (call him 'Jacob') interprets his sensory experience as an act of assertion. Such an interpretation is an integral part of a successful assignment of semantic values to the particular assertion, i.e. of the Jacob's presuppositions. It has several components. In the first place, it must contain some sort of a behavioural theory allowing Jacob to identify the opening of my mouth as an act of assertion, rather than as an act of singing a song or cleaning my throat. Secondly, Jacob should have a lexical theory associating the sequence of noises emanating from my mouth with linguistic items. When I utter a statement—say, 'Snow is white'—Jacob's lexical theory should tell him I utter it in English, rather than in some obscure idiolect vocally indistinguishable from English. Plainly lexical theory employs mundane empirical observations, such as the location of the conversation (London as opposed to Beijing), the name of the addresser ('John Smith' as opposed to 'Mao Zedong'), and so forth.

Since Kaplan's theory is concerned with utterance types, his goal is not in accounting for the sensory experiences of the speakers which are responsible for treating certain noises and shapes as utterances in a particular language. It is helpful to think of his theory as explaining those actual conversations which contain only genuine assertions in a native language, so that no foreigners or jokers are allowed to take part in the conversation. On several occasions Stalnaker stresses the absence of a conflict between Kaplan's approach and his own:

> [These two are] theories that are applied at different stages in the explanation of speech. And they are not competing [theories]: neither can do the job that the other was designed to do. (*Semantics for belief*, 123)

PRESUPPOSITIONS Stalnaker is concerned with pragmatic presuppositions. To presuppose a proposition in the pragmatic sense is to make certain assumptions about the context of utterance. Pragmatic presuppositions should be distinguished from semantic ones. A semantic presupposition would normally qualify as a pragmatic one. The reverse does not hold.

Definition 1. A proposition *P semantically presupposes* a proposition *Q* just in case *Q* is necessitated by *P* and is also necessitated by ~*P*.

Definition 2. A proposition *P pragmatically presupposes* a proposition *Q* just in case under normal conditions one can infer that a speaker believes that *Q* from either his assertion or his denial that *P*.

Example 3. Consider the proposition 'Lenin loves Stalin'. The proposition 'Lenin exists' is a semantic and pragmatic presupposition. The proposition 'Lenin is a sentient being' is a pragmatic, but not a semantic, presupposition. 'Lenin is aware of Stalin's existence' is another pragmatic presupposition.

Question 4. Costruct your own example illustrating the contrast between semantic and pragmatic presuppositions.

Generally, then, it is propositions that are presupposed. But a more abstract way of representing presuppositions is to think of them as possible worlds. Those worlds must be relevant to what is going on in the conversation. They will constitute the *context set*.

Example 5. Suppose I come to the class right after the election night and announce, 'Trump is the US President'. Among the worlds that are in my context set will be the following:

w_1 = {The US exists, the US has the institution of presidency, Clinton won the election, ... }
w_2 = {The US exists, the US has the institution of presidency, Trump won the election, ... }
w_3 = {The US exists, the US has the institution of presidency, the election was invalid, ... }

A proposition is presupposed iff it is true in every world within the context set. Hence, e.g., 'The US exists' would be a pragmatic presupposition.

Presuppositions, in other words, delimit the set of alternative possibilities that that the speakers intend to distinguish with their speech acts. Each participant in the conversation has his own context set, yet a speaker assumes that all participants presuppose everything that he presupposes.

TWO-DIMENSIONAL SEMANTICS Consider the statement 'You are mad' uttered by me in the company of Jon and Ken. The propositional concept associated with my utterance is given by a 3×3 matrix displayed in Table 1. Different rows correspond to different contexts—that is, to different sets of presuppositions of the parties involved. Different columns correspond to different circumstances of evaluation—that is, to different beliefs of the speakers about the world.

Suppose that in uttering the statement 'You are mad' I am talking to Jon. So the content of what I am saying with my utterance is [Jon is mad]. This content and its truth values are represented along the *i*th line of the propositional concept. I happen to believe that Jon is mad. Thus δ_{ii} = 1. Jon does not believe that he is mad. Thus δ_{ij} = 0. Ken also does not believe that Jon is mad. Thus δ_{ik} = 0. Now Jon understands what I am saying. So, according to Jon, the content of my utterance is also [Jon is mad]. That is

	i	*j*	*k*
i	1	0	0
j	1	0	0
k	0	1	0

Table 1: 'You are mad'

why the *i*th and *j*th rows are bound to be identical. Now Ken misunderstands me and thinks that I am talking to him. So, according to him, the content of my utterance is [Ken is mad]. Its truth values are represented along the *k*th row. I do not believe that Ken is mad. Thus δ_{ki} = 0. But Jon does believe that Ken is mad. Thus δ_{kj} = 1. Finally, Ken does not believe of himself that he is mad. Thus δ_{kk} = 0.

We have said that Jon and myself disagree on the fact that Jon is mad. This is reflected in $\delta_{ii} \neq \delta_{ij}$. But this is not the full story. For me, the fact that δ_{ij} = 0 is equivalent to saying that if the world *were* as Jon believes it is, then Jon would not have been mad. This is a disagreement about a counterfactual state of the world. The fact that we disagree about the *actual* state of the world is rather reflected in the fact that $\delta_{ii} \neq \delta_{jj}$. Since, however, the utterance has the same content for both Jon and myself, the values of δ_{ij} and δ_{jj} have to be the same. Things are different with Ken. For him my utterance has a different content. That is why the *k*th row is different both from *i*th and *j*th rows.

DIAGONALISATION. We shall now introduce the notion of a *diagonal proposition*. It is the set of worlds such that the utterance's propositional concept, evaluated at that world, yields a proposition that is true at that world. There are at least two uses for this notion. (*a*) It can capture Kaplan's notion of character. The diagonal proposition is a proposition read-off by the speakers by virtue of their grasp of the lexical component of the utterance. (This claim should be treated with caution, since there are important disanalogies between character and diagonal proposition.) (*b*) It can be used to

distinguish between necessary a posteriori and contingent a priori statements. Suppose I utter the statement 'Hesperus is Phosphorus'. How to fill in the propositional matrix for this utterance? First, the statement is true, i.e. actually true. As we have seen, names are rigid designators. They denote the same individual in every possible world. So the utterance expresses a necessary truth. On the other hand, if one of the speakers—Ken, for example—is ignorant about astronomical facts, he might believe the statement be false. And since he is convinced by Kripkean arguments about the rigid designation of proper names, he will also believe it to be necessarily false. The resulting propositional concept is in Table 2.

However, if we leave the analysis there, we shall violate the following:

> *Principle of effective communication.* A proposition asserted must be the same relative to each world in the context set.

HP	i	j	k
i	1	1	1
j	1	1	1
k	0	0	0

Table 2: 'Hesperus is Phosphorus'

So we may try to eliminate the world k from the matrix. But the resulting matrix will have $\delta_{xy} = 1$ for every x and y, and thus will make the utterance appear trivial. For if it is the case that the speaker uttered a necessary truth relative to every participant in the conversation, then he in effect asserted something trivial. Hence we would violate the following:

> *Principle of non-triviality.* A proposition asserted is always true in some, but not all, of the possible worlds in the context set.

To satisfy both principles we must interpret the content of the utterance as reflected in the diagonal proposition (see Table 3). We project the diagonal onto the horizontal. That is, we replace each row with the diagonal. In this example, the speaker Ian means to convince the audience that the astronomical facts are as Ian and Jon believe they are, and not as Ken believes they are. Another interesting operator is $\ddagger$. For a propositional matrix M, $\ddagger M$ is a matrix obtained by projecting the diagonal onto the vertical—that is, by replacing each column with the diagonal.

To see the relevance of this operator, we have to interpret the worlds of the matrix not as contents of beliefs of the speakers, but rather as 'worldly entities'. Thus consider the sentence, 'Lenin is the founder of the USSR.' The world i is our world, and the worlds j and k are the worlds where Stalin is the founder of the USSR. The resulting matrix is in Table 4. Suppose now we want to say that Lenin is in fact ('actually') is the founder of the USSR. Then we have to evaluate this sentence at every world by taking into account which world is actual. The result is in applying the $\ddagger$ operator to the original matrix (Table 5).

†HP	i	j	k
i	1	1	0
j	1	1	0
k	1	1	0

Table 3: 'Hesperus is Phosphorus' diagonalised

L	i	j	k
i	1	0	0
j	1	0	0
k	1	0	0

Table 4: 'Lenin is the founder of the USSR'

$\ddagger$L	i	j	k
i	1	1	1
j	0	0	0
k	0	0	0

Table 5: 'Actually, Lenin is the founder of the USSR'