PRAGMATICS AND SEMANTICS

MARCUS KRACHT

1. The Problem

Pragmatics and semantics are different disciplines. Semantics deals with the question of meaning, while pragmatics deals with questions of use. A typical semantic question is: is (1) true? A typical pragmatic question is: is it appropriate so utter (1) in a given situation?

(1)   There are nine planets.

To see that there is a difference, observe that (1) is true (given what we know). Nevertheless, it may not be appropriate to utter it. Reasons for this may be different from situation to situation. It may be inappropriate as an answer to whether you are hungry, for example, because you are not answering the question. It may be inappropriate within a mathematical proof because you are not drawing attention to a relevant fact. And so on. The notions of truth and appropriateness are completely independent. There are plenty of examples of true and appropriate utterances. There certainly are false and inappropriate things to say; lastly, there also are false but appropriate things to say. One example is when you are a defendant in a trial. It is not expected that you speak the truth. No penalty is incurred by lying. This is different when you are a sworn in witness. Then saying things that are false may get you into trouble. However, and very importantly, the appropriateness of an utterance may not be judged on what is actually the case (whether it is *actually* true or false). Rather, the sole criterion is whether you *know* whether it is true or false. (Or, more precisely, when you alternatively should have known this. For example, not knowing the law is not an excuse you can use in a trial, since it is expected that you do.) This distinction will be picked up below.

2. Maxims of Behaviour

Grice has given a list of several so-called *maxims*. They determine the *appropriateness* of a given utterance in normal situations (excluding exams, trials, and other exceptional situations). Grice has formulated

them in an imperative fashion. For example:

(2) **Be relevant!**

Thus, it is possible to violate a maxim by uttering a sentence. If it were a law of nature it would be inviolable. Second, maxims are normative statements. Not everybody agrees that the maxims of communication are normative; Habermas thinks that they are simply corollaries of general utility considerations (see for example his [1]). Thus, he claims that such maxims simply are consequences of rational behaviour and will thus emerge in any society. Moreover, they can be shown to apply to all forms of communication, so they happen to go beyond language. It is simply fruitless to tell lies. What will happen is that people lose faith in what you say, and that can be very damaging for yourself. It is true that we teach children verbal behaviour, for example, that a question is supposed to be answered. Thus, there is a normative element in discourse. The question however is whether this should be seen as part of linguistics rather than social science.

Leech (in [2]) has argued that the nature of maxims depends on culture as well. He introduces a maxim on top of Grice's, namely

(3) **Be polite!**

In many societies it is more important to be polite. So much so that if you ask for directions in Sicily, for example, you will always be given some. If the speaker in fact does not know where to go, he will make up some route. That is because—at least in Sicily—admitting that you don't know the answer in this case is considered less polite because you are not helpful or cooperative. Whether or not this assessment of the behaviour of Sicilians is correct is another matter. What is important, though, is the point that the concrete application of the maxims ultimately depends on norms that the society places on general behaviour, be it linguistic or not. And this concerns two places: the maxim of relevance says you should make a relevant utterance. But what is considered relevant in a context? It is said that you should be polite, but how exactly is one polite? Being polite in Japan is different from polite in France. Does that affect the generality of the maxim? Second, maxims are ranked in importance. You may sacrifice compliance with a lower ranked maxims if this is necessitated by a higher ranked maxim. In Western societies, the Maxim of Quality is arguably the highest you cannot defend a lie by saying you wanted to be polite that only works for 'small' lies; Leech argues that many societies rank Politeness above Quality. There the extent to which you may lie in order to remain polite is far greater.

3. The Linguistic Turn

The special point that Grice introduced to pragmatics were as follows. First, he formulated the maxims and then drew attention to the fact that you can get real mileage out of them assuming their validity. In conjunction with language as it is we can use the maxims to get at conclusions that semantics would not yield, but which are commonly drawn by speakers. It follows that these consequences cannot be said to be implied by what speakers say. Second, in many circumstances what you say is considered a violation of some maxim, like uttering (1) when everybody knows that there are nine planets. However, maxims are ranked, and you may violate one for the sake of complying with another. You may lie in order to be cooperative, for example. In many societies, some lies are justified if otherwise you would have to be impolite. Moreover, Grice observed that sometimes (indeed quite often) we only *appear* to be violating a maxim. This again invites an inference that by saying one thing we are actually saying something else. I give examples.

Suppose someone, call him A, says

(4)   `Some birds fly.`

Then A might be taken to say that not all birds fly. How come? First, let us notice that there is a way to say that all birds fly, and it is

(5)   `All birds fly.`

Now, we are putting this side by side to what A actually said and ask: suppose he knows that all birds fly, why did he not tell us? Here the argument really gets interesting because what enter the argumentation is not just the fact I did say something—namely (4)—but that I said (4) rather than something else, for example (5). There could be more than I could have said, but (5) is enough for our purposes. The argument—for you—goes like this:

① He said (4), so he thinks (4) is true.
② He did not say (5).
③ If he did believe that all birds fly, there must be some reason for not doing so.
④ (4) and (5) are equally relevant, and equally easy to produce and understand. (Thus, using (5) would not incur violation of Manner nor of Relevance.)
⑤ If he did think that all birds fly, he would have every reason to tell me, since he did after all say (4) and not saying (5) instead will make him violate Quantity.

⑥ He does not think that (5) is true.

To repeat: in a situation where A knows that all birds fly, (4) and (5) are both true (so none would violate Quality), they are both equally relevant and easy. Thus, they are distinct in only one thing: the amount of information that A gives away. Thus, the fact that saying (5) is more informative than (4) means that it now has to be chosen. It has not, so the premiss that A knows or believes that all birds fly is false.

Grice therefore says this: we are normally speaking only held accountable for what we say. We say 'S' so we are held to believe that S is the case. If we did not say anything at all we would not be held to believe anything at all. But once we utter any sentence at all, the fact that we did use this sentence rather than some other sentence will change what we are held to believe. And thus the entire language as a system determines what we are held to have said when we uttered a sentence. This is complex, but we should realise that to obey a certain maxim comes at a price. For example, the Maxim of Quality means we should be exact. But being too exact means being verbose, and we should also be brief (Manner). So we cannot really satisfy one without the violating other. And, it is true, we often claim, for example, that all birds fly, even though we are perfectly aware that this is not strictly speaking the case. But it is easier to say than the more precise statement that all birds that are not penguins, that are healthy and grown up fly. Somewhere down the line we ignore the complications in the hope that the other people will understand anyhow what exactly we wanted to say.

There are two ways in which this game is played. There is—as Grice observed—an irregular process in which you basically leave me guessing what you want to convey. For example, if I ask you if you are good at maths and you say

(6)   Well, I am not Einstein, you know.

then it is understood between us that that is self-evidently true. But this is not what you are intending to say. So, I have to do some guesswork. You may in fact say to me that you are poor at maths or that you are not really that great. What exactly you mean to say is not so clear, but the context may make it clearer.

There is however a more regular sort of process that comes under the name *implicature*. A sentence *A implicates B* if an utterance of *A* will be taken as a commitment to the truth of *B* unless explicitly withdrawn. So, unlike implications, which cannot be contradicted without running into inconsistency, an implicature can be contradicted. The inference above is of this kind. If I say (4) you think that I believe that

not all birds fly. But it is legitimate for me to say

(7)   Some birds fly. Indeed, all birds fly.

I have not contradicted myself, I have withdrawn the implicature. It is important to understand the difference in mechanism. The implicature is a consequence that someone may draw on the basis of an utterance of a sentence, and is held to be true unless I say something. (The alert reader will have noted that uttering 'All birds fly' after having uttered 'Some birds fly' makes the utterance of the first sentence inappropriate. If I already knew that all birds fly it is inappropriate to settle for less.)

4. SCALES

The idea that a weaker statement carries the commitment to the falsity of the stronger one has given rise to the notion of a *scale*. A *scale* is a sequence of expressions of roughly equal complexity and equal category that are linearly ordered with respect to strength. Here are some scales:

$$\langle \texttt{some}, \texttt{every} \rangle$$
$$\langle \texttt{possibly}, \texttt{necessarily} \rangle$$
(8) $\langle \texttt{believe}, \texttt{know} \rangle$
$$\langle \texttt{one}, \texttt{two}, \texttt{three} \rangle$$
$$\langle \texttt{or}, \texttt{and} \rangle$$

There are two kinds of occurrences of such elements: positive and negative. An occurrence in a sentence S is positive if whenever S_1 is obtained by replacing that occurrence of the element with a stronger element E_1, then S_1 implies S. If the occurrence is negative then S implies S_1 instead.

(9)   This equation has two solutions.

(10)   This equation has three solutions.

In (9), two occurs positively, so (10) implies (9). If we negate the sentence the occurrence turns into a negative one:

(11)   This equation does not have two solutions.

(12)   This equation does not have three solutions.

Now, (11) implies (12).

The general observation now is this. Suppose a sentence S has a positive occurrence of a scalar element E. Then uttering S carries the commitment to the falsity of S_1, which is like S except that that occurrence of E has been replaced by some E_1 which is stronger in the scale

than is E. Negative occurrence work the opposite direction. (You may also think that in negative occurrences the scale is simply inverted.) So, if I say (9) I am committed to the falsity of (10); likewise, in saying that (12) I am committed to the falsity of (11).

In this way it has been argued by some people that English `or` really is exclusive. For, by using it we are committed to the falsity of the sentence that is just like the one way uttered, only with `and` in its place. So, in saying (13) I am committed to the falsity of (14).

(13)   `The pope has issued an encyclica or he has beati-`
        `fied Galilei.`

(14)   `The pope has issued an encyclica and he has beati-`
        `fied Galilei.`

5. The Nature of the Commitment

I have been using the phrase 'committed to the truth of' which is actually a little misleading. Here I will be more precise. First, suppose that someone utters a sentence S. Let us assume that he is not lying. Then we certainly think that he believes what he says; and so, we may infer that be believes S. (This is, by the way, a consequence of the Maxim of Quality. But we are taking it as absolute, that is, inviolable, now.) Let us concede a little more, namely, that he *knows* S. Also, to simplify matters, we assume that whatever someone knows is actually true. So we infer that S is true.

   ① If A utters S, A knows that S, in symbols K_A S.
   ② In general, if someone knows S then S is true.

However, even if something is factually the case it may well be that we do not know it.

We shall use this apparatus to analyse the following question: is there a way to decide whether of not `or` really means inclusive 'or' or exclusive 'or'? First, let us exclude any pragmatic arguments and analyse it only from the semantical point of view. Then the matter is clear: we have to see what makes a sentence 'S `or` S_1' true. Suppose now that Alex haw two children, not of same age, but that he does not have two boys. Since it is technically possible that he has two daughters the following sentence would come out false it he did:

(15)   `Alec's oldest child is a daughter or Alec's younger`
        `child is a daughter.`

I think that this sentence is true even when Alec has two daughters.

Now let us add pragmatics. Let us first assume that `or` means inclusive or and see where this leads us to. We have said that `or` is in a scale with `and`. (This would not be so if it were exclusive!) This means the following. If I knew (!) that Alec has two daughters then I should say

(16) `Alec's oldest child is a daughter and Alec's younger`

`child is a daughter.`

I didn't. What we have said in this case is that I am committed to the falsity of (16). Let me be precise and say that pragmatically it is legitimate to infer that I *do not know that* (16). This does not exclude that it is true. So, all that pragmatics adds here is the following conclusion:

> Let E and E_1 be expressions in a scale, and let E_1 be stronger than E. Furthermore, let S_1 be obtained from S by replacing a positive occurrence of E by E_1 or by replacing a negative occurrence of E_1 by E. Then if A utters S, A implicates $\neg K_A S_1$.

Notice that I have said 'implicates'. This distinguishes (15) from (17) where I have explicitly claimed this.

(17) `Alec's oldest child is a daughter or Alec's younger`

`child is a daughter.  But I do not know whether`

`both are daughters.`

If (15) would simply imply that I do not know that both are daughters then it would be unnecessary to add this. But speaker did, and this carries a greater strength of commitment. Having implicated something is not the same as having said it. The inference that what you implicate is true is only pragmatically valid, not logically.

So, with S being (15) and S_1 (16), noting that the occurrence of `or` is positive, we get from the utterance of (15):

(18) $$\neg K_A S'$$

The inference is an *implicature*. This means that the we have obtained it is not by strictly logical reasoning. It relied on steps that were based on the structure of the language. Hence, it is not contradictory to utter (15) and (16) in sequence.

However, some authors have taken this further and said that the utterance of (15) allows to deduce that I know that (16) is false. The reasons for saying this sound rather obscure to me. Levinson (in [3]), for example, simply says that utterance of (15) commits the speaker to

not know that (16) and then adds in brackets: or knowing that (16) is false, but later forgets that he made a leap there that he did not justify. He continues to assume that uttering (15) carries the implicature that speaker knows that (16) is not the case. The problem here is that there is a confusion between what is the case and what is known to be the case. At some moment there is a temptation to reason as follows: if both children are daughters then speaker should say so. Since a speaker cannot base his actions on what is the case (how could he do that?) but rather on what he knows to be the case, how can you use pragmatics to infer from it more than he can possibly infer? Thus the step from 'A does not know that S' to 'A know that S is false' cannot even be pragmatically valid. But now if he does not know that S is the case he has no reason to say so. For if he did he would in fact violate a maxim: the Maxim of Quality. For if A uttered (16), he would claim to know that both children are daughters, and he doesn't. It is agreed, however, that you do not violate Quality except in very exceptional cases. So, speaker has no reason to issue the stronger statement, and at this point the pragmatic reasoning breaks down.

Let us finally assume that `or` is exclusive. Then if 'S `or` S$_1$' is the case, 'S `and` S$_1$' is false, so `or` and and cannot be on a scale. Thus this type of pragmatic argument cannot even be applied.

6. Defining One With the Help of the Other

Scalar implicature is not the only type of pragmatic argument that can be performed. There are also these types of arguments: A has uttered S, and not S$_1$. S does not mean the same what S$_1$ means because otherwise A would have uttered S$_1$. (This rests on the premiss that we can say what exactly S$_1$ means.) Now, a proponent of the inclusive or thesis can say that if A wants to communicate exclusive or, then what he can do is this: add the clause `but not both`.

(19) `Alec's oldest child is a daughter or Alec's younger`
         `child is a daughter, but not both.`

This is clear beyond doubt. The word `but` is truth conditionally the same as `and`, and so speaker has claimed that (16) is false. It logical terms, let us denote exclusive or by $+$, then we have

(20) $$p + q \equiv (p \vee q)\&\neg(p\&q)$$

Observe that

(21) $$p + q \equiv (p + q)\&\neg(p\&q)$$

Therefore, (19) denotes inclusive or no matter which assumption we make on the meaning of `or`.

Let us adopt now the thesis that `or` denotes exclusive or. Then how can we communicate inclusive or? The simplest solution would be this:

(22) `Alec's oldest child is a daughter or Alec's younger`
        `child is a daughter, or both.`

In other words, we are claiming that the following is true:

$$(23) \qquad\qquad p \lor q \equiv (p + q) + (p\&q)$$

Suppose that p is true, but q is not. Then $p+q$ is true and $p\&q$ is false, and so the right hand side is true. Similarly, if only q is true. Let us now assume that both are true. Then $p + q$ is false, and $p\&q$ is true. The right hand side is true, as desired. Now, let us finally assume that all of them are false. Then $p + q$ is false, $p\&q$ is false, and therefore the right hand side is false. Interestingly, also the following holds:

$$(24) \qquad\qquad p \lor q \equiv (p \lor q) \lor (p\&q)$$

So, it turns out that (22) denotes inclusive or no matter which assumption we make on the meaning of `or`!

The interesting moral of this is that it is possible to remove the ambiguity about whether `or` means '$\lor$' or '$+$' by issuing slightly more complex sentences.

7. The Moral

The unfortunate consequence for pragmaticists is that no argument can be constructed that `or` is inclusive or exclusive on the basis of the claim that it means one since if it meant the other we would have used a substitute expression. However such arguments are needless. This is because pragmatics is not about truth. Thus, in order to find out whether `or` is inclusive or exclusive all we have to do it construct various situations and then ask whether they make the sentence true. This should be independent of whether or not they are uttered, but the question can be asked also about particular utterances, whether what you said is now true or false. So, the question is answered as follows: if Alec has two daughters the sentence (15) is true. Uttering (15) is not saying something false. That alone should be considered when asking about meaning.

We have however seen that pragmatics adds to the meaning something else that derives however not from the meaning but solely from the fact that a particular sentence has been uttered, and as a consequence another sentence has not been uttered. We should however

realise that everything that we so deduce is not a logical consequence of what has been said. We are in first instance held accountable only for what we say and not for what we do not say. If I utter (15) you may infer pragmatically that I do not know that (16) is true, but this inference is one that I can preempt by issuing (16) after my utterance of (15). Of course, pragmatically it is inappropriate, but I have not committed any logical mistake. There is discourse where it is perfectly appropriate to less than one knows even if saying more would come at no cost (for example, in mathematics).

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DEPARTMENT OF LINGUISTICS, UCLA, 3125 CAMPBELL HALL, LOS ANGELES, CA 90095-1543