

## I. Indicative Conditionals, Material Conditionals, & Grice

The webpage for the course:

<https://rjh221.user.srcf.net/courses/1Aconditionals/>

### I. Two Types of Conditional in Ordinary English; and One in Logic

Consider the two sentences

- (1) If Oswald didn't shoot Kennedy, then someone else did;
- (2) If Oswald hadn't shot Kennedy, then someone else would have.

Clearly these don't mean the same thing. Following fairly standard usage, we'll call sentences of the form of (1) 'indicative conditionals'; and we'll call sentences of the form of (2) 'subjunctive conditionals' (they are sometimes called 'counterfactuals', since they are normally—but not always—uttered when the antecedent is assumed to be false). Most philosophers and linguists think that subjunctive conditionals involve a modal claim—they are typically expressed using modal verbs like 'would'—and are best handled using a modal logic with the apparatus of possible worlds. Roughly: a subjunctive conditional is true iff the closest possible worlds in which the antecedent is true (Oswald doesn't shoot Kennedy) are worlds in which the consequent is true (Somebody other than Oswald shoots Kennedy). The subjunctive conditional is not truth functional: you can't tell whether an instance of it is true or false just by knowing the truth values of the antecedent and consequent in the actual world. You need to know how things *would have been*.

Here, however, our focus will be on the indicative conditionals like (1), which do not explicitly contain modal terms (we'll only come back to the subjunctive conditionals right at the end).

We will also be concerned with the conditional that is introduced, not in ordinary language, but in standard propositional calculus (e.g. in the logic text *Forallx*). That conditional is *stipulatively* defined by the following truth table:

P	Q	$P \rightarrow Q$
T	T	T
T	F	F
F	T	T
F	F	T

Again following standard usage, we'll call it the 'material conditional'. So to summarize:

*Indicative conditionals* are the conditionals that occur in ordinary English, exhibited in sentences like (1). It is a matter of empirical investigation how they work.

*Material conditionals* are the conditionals that occur in the formal logical language of the propositional calculus, represented by the symbol ' $\rightarrow$ '. We know how they work because their truth conditions are *stipulated*.

When the material conditional was introduced in *Formal Logic*, its use was illustrated by sentences of ordinary English containing the indicative conditional, such as:

(3) If Jean is in Paris, then Jean is in France.

Implicitly then, that assumed the following:

*The Equivalence Thesis*: the indicative conditional of ordinary English is equivalent to the material conditional,  $(P \rightarrow Q)$ , of propositional calculus.

This is tantamount to the idea that the indicative conditional is truth conditional; for if it is, the material conditional provides the only plausible truth table.

Our primary concern in these lectures is with whether the Equivalence Thesis is correct.

## 2. Three problems with the Equivalence Thesis

### 1. *False antecedent*

(4) If Biden is French, the Democrats will win every senate seat in the 2024 election.

Assuming that Biden is not in fact French, then if the indicative conditional has the truth conditions of the material conditional, (4) is bound to be true (any material conditional with a false antecedent is true). But it is far from obvious that (4), as a sentence of ordinary English, is true.

### 2. *True consequent*

(5) If Trump was lying when he said he was married to Melania, then he spoke the truth when he said he was married to Melania.

Again, assuming that Trump is indeed married to Melania, and has truthfully said as much, then the consequent is true. So, if the indicative conditional has the truth conditions of the material conditional, then (5) is true, even if the antecedent is false. Again it is far from obvious that it is. It looks like a simple contradiction.

### 3. *No connection between the antecedent and the consequent*

(4) and (5) at least had some intuitive connection between the antecedent and the consequent. But if the truth conditions are really given by the truth conditions of the material conditional, there is not even any need for this. So consider:

- (6) If water is not H<sub>2</sub>O, then the Democrats will win every senate seat in the 2024 election.

Again (6) will be true because of the false antecedent. But now there is a further problem, namely that the composition of water, and the Democrat's likely election result, have nothing to do with each other.

Collectively these problems are sometimes called the 'paradoxes of the material conditional'. But they are not paradoxes for the material conditional itself; as we have said, that is stipulatively defined to have the truth table that it has. They are paradoxes once we add the Equivalence Thesis. There are three obvious possible responses:

(i) change the logic: amend the rules governing the use of the material conditional to ensure that there must be a real connection between antecedent and consequent, one that blocks the other two paradoxes. This is what relevance logic tries to do. It is far from straightforward: the logic that results is messy, and there is much debate whether it ultimately does the job (for a review see Ed Mare's *Stanford Encyclopedia* page 'Relevance Logic').

(ii) deny the Equivalence Thesis. Since the only possible truth functional account of the indicative conditional is the material conditional, this will involve denying that the indicative is truth functional. So we will need to say instead that the indicative condition is not truth functional: either it should be understood as implicitly modal; or, more radically, it shouldn't be thought of as expressing a proposition at all, but instead should be understood in the kind of way that expressivists understand moral sentences.

(iii) argue that the paradoxes are not really paradoxical once other features are taken into account. That is the approach that we shall investigate in these lectures. That needs some background ideas.

### 3. Grice on conversational implicature

Grice's basic idea is that our assertions are governed by a general pragmatic rule 'be helpful'. This breaks down into specific requirements: be appropriately informative, be relevant, be orderly, brief, clear etc. Sentences that fail these rules are not assertible, even if they are true. We make sense of what people are saying on the supposition that they are meeting these requirements. As a result, we can communicate things even without explicitly saying them. This is the process of *conversational implicature*.

Some examples to bring this process out:

(i) If someone stops you outside Kings and asks where there is a branch of Marks and Spencers, and you tell them that there is one at the station, that would be pretty misleading, given that you know there is one just the other side of the Market Square. Why is that? You haven't explicitly said that the one at the station is the nearest. It is rather that you reasonably assumed that given their question they wanted to go to Marks and Spencers; in which case it is reasonable to assume that they want to go to the nearest. So if you only mention the one at the station, then the conversational implicature would be that that is the closest one you know about, even if you don't explicitly say this.

(ii) A university advertising for a job in philosophy receives a letter of reference for candidate X that says simply: ‘X is always punctual and has neat handwriting’. Clearly that is not a strong reference; though punctuality and neat handwriting might have some benefits to a philosopher, they are hardly central. But is it not simply that the reference fails to address the substantial issues; it actually succeeds in conveying something *uncomplimentary* about X. Having a reference like this is worse for X’s application than getting no reference at all. Again the work is done by conversational implicature: we assume that the reference writer is trying to be cooperative; see that they don’t say anything about the candidate’s philosophical skills, and that the best thing the referee can find to praise is their punctuality and handwriting, and so conclude they are not very good at philosophy.

Note that conversational implicature is a pragmatic phenomenon. It isn’t simply produced by the lexical meanings of the words involved. You need to know the background, what the participants in the exchange are aiming for, and so on. The same words could be used in different contexts to give rise to very different implicatures. In fact even in these contexts, conversational implicatures can be cancelled by adding more words. So if the writer of the reference goes on to say ‘Furthermore, X is the best philosopher I have ever met’, you might think it a little odd that they have talked about punctuality and handwriting, but no derogatory implicature remains.

#### 4. A Gricean Defence of the Equivalence Thesis

Now we have the materials to try to undermine the force of the paradoxes. The material conditional ( $P \rightarrow Q$ ) is equivalent to the disjunction ( $\sim P \vee Q$ ). So in thinking about the pragmatic rules governing the conditional, we can start by thinking about the pragmatic rules governing the disjunction. Such considerations provided the basis for Paul Grice’s defence of the Equivalence Thesis.

If someone asserts a disjunction in ordinary English they shouldn’t, normally, be in a position to assert either of the disjuncts. The disjunction would be less informative, and more complex than simply asserting the relevant disjunct. Suppose I ask

(7) Where is Arif?

and you, knowing that Arif is in his office, answer

(8) Arif is either in his office or he’s at home.

You haven’t exactly lied; what you have said is *true*. But it is a *misleading* thing to say under the circumstances, since it leaves open the possibility that he’s at home, which you know to be false. So in the circumstances (8) is normally unassertible as an answer to my question.

So now consider again the first of the instances of the conditional paradox, that with the false antecedent:

(4) If Biden is French, the Democrats will win every senate seat in the 2022 election.

If the Equivalence Thesis is true, that will be equivalent to

- (9) Either Biden isn't French, or the Democrats will win every senate seat in the 2022 election.

We know that sentence is true, because we know the first disjunct is true: Biden isn't French. But it is a misleading thing to say—it is standardly unassertible—because it suggests that we don't know which of the disjuncts is true.

Perhaps then what is wrong with (4) is not that it is false, but that it fails to be assertible for the same reason that (9) is not assertible. The unassertibility of (4) is exactly what the Equivalence Thesis would predict.

Similarly, if I know that two sentences are both true, then it's misleading to assert them in a disjunction. So if I know that Arif is in his office, *and* that he's working on his book, it is misleading to say:

- (10) Arif's in his office or he's working on his book.

I should rather use the conjunction. But now consider the second of the problem conditionals, that with a true consequent:

- (5) If Trump was lying when he said he was married to Melania, then he spoke the truth when he said he was married to Melania.

If the Equivalence Thesis is correct, that is equivalent to:

- (10) Either Trump wasn't lying when he said he was married to Melania, or he spoke the truth when he said he was married to Melania.

And if we know that both of those conjuncts are true, that is unassertible; we should assert the conjunction. So again perhaps the problem with (5) is not that it is false, but that it is unassertible, something that the equivalence thesis would predict.

So Grice has a nice response to the first two problems. What about the relevance constraint on indicative conditionals: the idea that there needs to be some relevant connection between antecedent and consequent? Can this Gricean strategy explain that? That is less obvious, and we'll take it up next week.