III. Indicative Conditionals I: the Ramsey test, triviality & truth-functional accounts

Two approaches to indicative conditionals

Indicatives have proved more contentious than subjective conditionals. There is no consensus as to which of two broad approaches should be taken.

Propositional accounts
One approach treats the assertion of a sentence containing an indicative conditional as broadly similar to the assertion of other declarative sentences. That is, the sentence is understood as expressing a proposition, with truth conditions, which the speaker straight-forwardly asserts. One way of developing this approach is to treat the indicative conditional as a *truth-functional* connective. If we take this path, the only plausible account sees it as the material conditional '⊃' (or '→ ', but note that Bennett uses this to abbreviate the English indicative conditional). This brings the familiar 'paradoxes of the material conditional'. Grice and Jackson try to avoid those by pointing to various pragmatic constraints. The alternative way of developing this first approach is to see the indicative conditional as expressing a *non-truth-functional* proposition. That, after all, was the approach that we took with subjunctive conditionals. Stalnaker and Kratzer, amongst others, take this path

Non-propositional accounts
The second approach denies that the assertion of a conditional involves the same kind of speech act as normal assertions. Rather it involves a 'conditional assertion'. What is this? Various possible parallels: conditional bets; conditional promises; expressivist accounts of moral sentences. Whatever it is, it isn't the simple assertion of a proposition. Indeed, the normal thought here is that there is no proposition expressed. Expressivism always seems like the last resort: after all, these look like propositions, they behave like propositions, there are familiar difficulties for any such account (Frege-Geach puzzles etc.). So why take it? To get a sense of that, we need a bit of background.

The Ramsey test

Ramsey suggested that in accepting an indicative conditional, one accepts that if one were to add the antecedent to one's suppositions, one would conclude with the consequent. So that provides a test to see whether one accepts the conditional: try adding the antecedent to one's suppositions and see if the consequent would follow.

There's surely something right about this, but it is hard to formulate it. For instance, it can't be formulated in terms of adding the antecedent to one's *beliefs*; witness:

If my partner is cheating on me they'll be hiding it so well that I will never notice.

So we need to stick with *suppositions*: I can suppose that my partner is cheating and that I don't notice. We might try to broaden this into a probabilistic framework: add the antecedent to one's suppositions and see if the consequent would be made probable. To think about this we need the idea of conditional probability: $P(A|B)$, the probability of A conditional on B. Standardly (but not uncontroversially) this is given as $P(A\&B)/P(B)$. (Don't think of $A|B$ as a proposition; the line combines with the initial probability operator to provide a single two-place operator.)

With that we can formulate two much discussed claims, first:

The Equation (or Stalnaker's Thesis): P (If A then B) = P (B|A);

and then, somewhat weaker and certainly vaguer:

Adams' Thesis: 'If A then B' is assertible iff P(B|A), is high (or, more generally, the assertibility of the indicative conditional is proportional to the value of the associated conditional probability).

(Beware: the former is often called 'Adams' Thesis'; and even when the two are distinguished, there is a great deal of uncertainty as to how the latter should be formulated. See Hajek. 'The Fall of Adams' Thesis' and Rumfitt, 'Old Adams Buried' for discussion)

Much of the pressure for expressivism about indicative conditionals comes from a set of results (the 'Triviality results') that purport to show that The Equation is provably false; and hence that Adams' Thesis is also along the wrong lines. Conclusion: given that the conditionals can't be understood in terms of the propositions one would naturally assign them, those reflected in Adams' thesis, they should not be understood in terms of propositions at all.

The first of these results is from Lewis; others purportedly simpler proofs have followed. They are all somewhat involved, and require a number of additional assumptions. Lewis's works by showing that, given the Equation and various other assumptions, P (If A then B) = P (B); hence the idea of triviality. To get a sense of them see Bennett, Ch. 5; and for some sceptical notes on the later versions, see Rumfitt.

But should we find either Adams' Thesis or The Equation plausible in the first place? And hence should we use them to characterize how the indicative conditional should be understood if it were propositional? A worrying example, again from Rumfitt:

(1) If Goldbach's conjecture is true, then 1 = 0.

That looks like a claim one might make in showing Goldbach's conjecture to be false; if a mathematician could prove that 1 = 0 followed from Goldbach's conjecture, that would certainly look like a proof of its falsity. But in this case P (1=0 | Goldbach's conjecture is true) = 0; and, so if The Equation were true, P(1) = 0; and if Adams' Thesis were true, (1) would not be assertible.

Perhaps then we should be cautious of understanding what seems right about the Ramsey test in this probabilistic direction. So let's instead investigate the propositional accounts, starting with the truth functional. If the indicative is truth functional, then it is presumably the material conditional (what else can it be?). But how can we reconcile that with the standard 'paradoxes of the material conditional': the mere truth of the consequent or the falsity of the antecedent don't make the indicative conditional assertable; and moreover, in an assertable indicative conditional, the consequent and antecedent feel as though they should be somehow relevantly related to each other (the relevance constraint).

Grice

Basic idea: our assertions are governed by a general pragmatic rule ‘be helpful’. This breaks down into specific requirements: be appropriately informative, be truthful, be relevant, be orderly, brief, clear etc. We make sense of what people say on the supposition that they are meeting these rules. (Interesting question: could we have a society that didn’t live by such rules?)

So if someone asserts a disjunction they shouldn’t, normally, be in a position to assert either of the disjuncts. The disjunction would be less informative, and more complex than asserting the relevant disjunct. But then if a conditional is equivalent to a disjunction (~a v b), one shouldn’t assert it if one can assert either of the disjuncts. Perhaps this also helps to explain the relevance constraint: for why else would we be in a position to assert the disjunction where we are not able to assert either of the disjuncts? (Is that right?)

Problems for Grice

(i) Suppose that the speaker is sure of the falsity of the antecedent of an indicative conditional; then they shouldn’t be able to assert that conditional. But consider again:

> (1) If Oswald didn’t shoot Kennedy, then someone else did.

Surely I can say that, even if I am certain that Oswald *did* shoot Kennedy. But on Grice’s account, that should be unassertible.

(ii) Likewise, if the speaker is sure of the truth of the consequent of an indicative conditional, it may still be assertible, and least for future conditionals:

> (2) If we don’t stop burning fossil fuels at the the current rate, global temperatures will rise by more than 2 degrees. In fact if we do stop burning fossil fuels tomorrow, global temperatures will (still) rise by more than 2 degrees.

(iii) How does it explain the relevance constraint? Perhaps typically we would only assert a disjunction if there were some connection between the two disjuncts, but it seems much weaker than that involved in an indicative conditional. Moreover, the connection in an indicative conditional seems to have direction: it matters which is the antecedent and which is the consequent, unlike with a disjunction. This comes out in a further feature:

(iv) indicative conditionals don’t always contrapose, returning to the second half of (2):

> (3) If we do stop burning fossil fuels tomorrow, global temperatures will rise by more than 2 degrees.

is not the same as

> (4) If global temperatures will not rise by more than 2 degrees, then we won’t stop burning fossil fuels.

and it doesn't help if we make the grammar more acceptable:

> (5) If global temperatures don't rise by more than 2 degrees, then we won't stop burning fossil fuels.

Jackson

Jackson wants to add the feature described by Adam's Thesis to the information that is communicated by an indicative conditional. But he doesn't want to do this by making it part of the truth conditions of the conditional. Rather, using another device from Grice, he argues indicative conditional brings a conventional implicature that the consequent is robust with respect to the antecedent, by which he means that the probability of the consequent, conditional on the truth of the antecedent, is high.

Let's take this in parts.

Conventional implicatures share with conversational implicatures that they are not part of the truth conditions. But unlike conversation implicatures, they are part of the meanings of the words involved, rather than being derived from general conversational rules. So, to take an example from Grice, the sentence:

> (6) She was poor but honest

brings a (rather objectionable) suggestion that her honesty is surprising given her poverty. But is that actually part of the truth conditions? Grice argues that it isn't. He argues that the truth conditions are the same as

> (7) She was poor and honest

The implicature somehow lurks in the background, rather than being part of what is said in the most straightforward sense. (Why think that? Suppose that someone asserted (6), and you objected to the suggestion that poverty typically brings dishonesty. You would be unlikely to say 'No she isn't'; you'd be more likely to say something like, 'Yes, she is, but I object to what you are trying to suggest'.)

Jackson wants to say that the indicative conditional brings a conventional implicature that expresses Adams' Thesis: to use the indicative conditional is to conventionally implicate that the conditional probability of the consequent on the antecedent is high. That means that there

Problems for Jackson

(i) Other words that bring conventional implicatures have corresponding terms that lack them: we saw that 'but' has 'and' playing that role. Does the indicative conditional have something that plays this role? If Jackson's theory is correct, 'or' should do so. But are ordinary speakers likely to accept that indicative conditionals are truth functionally equivalent to disjunctions in the way that they allegedly accept that 'but' and 'and' are?

(ii) Should we believe in conventional implicature at all? The intuitions on which Grice's case was based seem rather fragile. A number of theorists have argued that there are no conventional implicatures: Kent Bach's 'The Myth of Conventional Implicature' is the most influential piece here; he argues that 'but' expresses a secondary but still truth conditional proposition (but see Potts *The Logic of Conventional Implicatures* for a response).

(iii) If the standard account of *subjective* conditionals is along the right lines, then they are clearly not truth functional: they are to be understood in terms of possible world or the like. If that's right, then, given Jackson's account, indicative and subjunctive conditionals behave in very different ways. So it seems to be just a coincidence that they are both marked in English with the word 'if'; these are just unrelated homonyms, like the two senses of 'bank' or 'bear'. But in turns out that this isn't just a feature of English: indicative and subjunctive conditionals are represented in most languages in very similar ways — in French with 'si', in German with 'wenn', and so on, even across very different languages. That makes it much less plausible that it is just a coincidence in English. But then wouldn't we want both types of conditional to be explained in broadly similar ways? A number of theorists — Robert Stalnaker is one — argue that both indicative conditionals and subjective conditionals should be understood as non-truth functional in rather similar ways: very roughly, on Stalnaker's account, the latter makes you consider worlds that you know to be non-actual, whereas the former makes you consider worlds that you are supposing could be actual. At the very least, Jackson owes us an account of why many different languages use the same sorts of construction for such different roles.