The Problem of Conditionals

I. Two questions about statements of the form "If A, then C" in ordinary language

A. What are their *truth conditions* (TCs) – what makes them true?

B. What are their *assertability conditions* (ACs) – under what conditions are they justifiably assertable or acceptable?

II. The traditional answer to the TC question: the truth-functional account (Grice, Jackson)

A. The position: the material conditional (defined in the truth table for '(A → C)') and the ordinary language conditional "If A, then C" have the same truth conditions.

This seems borne out by examples: "If it rains, then the picnic will be cancelled" is true just when either it does not rain, or it does rain and the picnic is cancelled – in other words, just the conditions under which '(R → C)' is true.

This position on the TCs of ordinary conditionals is also, humorously and somewhat confusingly, called "materialism" since the arrow denotes the "material" conditional.

B. The counter-arguments

1. The truth-functional account makes it too easy for conditionals to be true. Consider the silly-sounding conditional, "If Tim lives in Chicago, then he lives in California." This seems like a very silly thing to say. But on the truth-functional account, if Tim does *not* live in Chicago, the conditional would be *true*.

2. The truth-functional account suggests that certain inferences are correct that seem counterintuitive, e.g. "A, therefore if not A, then C" and "C, therefore if A, then C."

C. Some replies (following Grice)

1. The claim "If Tim lives in Chicago, then he lives in California" is indeed strange, but this is not because it is *false* but because it is highly *unassertable*. If the speaker knows that the antecedent is false, then he is deliberately making a weaker statement than he could make; he could simply come out and say that Tim doesn't live in Chicago.

Conversational implicature sets certain restrictions on ordinary non-deceptive discourse, and the utterance of the most informative relevant statement is one of those restrictions. What we find odd about the claim in question is that under ordinary circumstances it is obviously something that no one could, subject to that restriction, be in a position to assert.

The assertion of 'A' *implicates* 'C' if the *fact that 'A' is being asserted* (which, N.B., is not the same thing as the *content* of 'A') suggests that C is true. Utterance of a disjunction conversationally implicates that the speaker does not know which disjunct holds, since if he did he would assert that disjunct rather than the weaker claim. Hence, if ordinary language conditionals like "If A, then C" have the truth conditions of the material conditional, they have the truth conditions of the corresponding disjunctions (e.g., '(– A v C)').

2. Here again, the inferences are valid but the conditions for assertability are not met. If one is in a position to say that A, why make the weaker claim that if not A, then C? Besides, the criticism would prove too much: it would undermine unproblematic inferences like contraposition: "If he made a mistake, he didn't make a big mistake; therefore if he made a big mistake, he didn't make a mistake." (The latter conditional is highly unassertable; if we knew that the antecedent is false, we would candidly say *that* instead.)

3. Jackson elaborates (and in his view corrects) the Gricean account, with which he is broadly sympathetic, by arguing that "If A, then C" has the same truth conditions as '(A → C)' and hence of '(– A v C)' but that it carries a conventional implicature: asserting "If A, then C" suggests that P(C|A) is high for the speaker and that the conditional probability is "robust." This ties together the problem of TCs with the problem of ACs, dealt with below.

III. The possible worlds account of the TCs of ordinary conditionals (Lewis, Stalnaker)

A. The position

The ordinary language conditional "If A, then C" is true in the actual world just in case, of the possible worlds in which 'A' is true, those "closest" to the actual world are worlds in which 'C' is also true. (This is equivalent to saying that in the closest possible worlds where 'A' is true, the material conditional '(A → C)' is also true.)

B. The benefits

One attraction of this view is that it makes sense out of our deliberative strategies when we are choosing among alternatives: we envision each alternative, extending the actual situation a bit but retaining as much of it as possible, and ask what else is the case under those conditions. (*Shall I move the Knight to e5? If I do, he will exchange pieces there and then my extra space on the kingside will be balanced by his mobile center. Or I could move the Knight to d2; but then my d-pawn is weak. Or ...*)

The possible worlds account sidesteps some of the awkward paradoxes of the truth-functional approach. Note that on this account, it is not sufficient for the truth of "If A, then C" that the material conditional '(A → C)' be true in the actual world, for in some "nearby" world 'A' might be true but 'C' false.

C. The central problem

It is very difficult to define "closeness" of a possible world in any non-arbitrary sense. Indeed, if it can be defined at all, it seems that it would have to be done in terms of *which conditionals are true* in the actual world – which would obviously render the attempt to define the truth conditions of conditionals in terms of nearby possible worlds circular.

There are many non-equivalent ways of filling out stories about possible worlds, and choosing which ones among them to take seriously and which to dismiss as "too distant" is a delicate matter that can raise philosophically non-trivial questions. Critics of the possible worlds approach tend to view the talk of closeness of possible worlds as a fancy way of smuggling in unargued intuitions regarding which conditionals are true and which are false. Some defenders have tried to shore up the approach by cashing out a distance measure in terms of epistemic probabilities.

IV. The (semi-)nihilist view (Edgington, inspired by Adams)

"If A, then C" has a truth value when the antecedent A is true, namely, the same truth value as C. But when A is false, the conditional does not have a truth value.

V. The problem of assertability conditions (ACs)

A. The probabilistic view: assertability is about probability, and the probability of the conditional "If A, then C" is equivalent to the conditional probability P(C|A). (Adams)

(Terminology alert: Sometimes the term "assertib*i*lity" (spelled with an *i*) is used to denote assertability modulo implicature. This leads into some interesting issues outside of our scope here.)

B. Contrary views: the probability of "If A, then C" cannot be equivalent to the conditional probability P(C|A). (Lewis's argument)

VI. Subjunctive conditionals

It is widely held, on the basis of Stalnaker's and Lewis's work, that the subjunctive conditional "If A were the case, C would be the case" (sometimes symbolized '(A > C)') is true iff '(A & – C)' is a remote possibility compared with '(A & C)'. This is usually cashed out by saying that the subjunctive conditional is true iff some possible state of the world in which '(A & C)' holds is a less remote possibility than any in which '(A & – C)' holds. Here again we get into measures of remoteness and similarity, and some of the same problems we mentioned before apply. One intuitively satisfying result of this account is that for subjunctive conditionals certain analogues of theorems for indicatives do not hold, such as strengthening the antecedent [(A → C) ⊢ ((A & B) → C)] and contraposition [(A → C) ⊢ (– C → –A)].