Case 2. The coefficient is zero because $P(A \rightarrow C/C) = P(A \rightarrow C/-C)$. Then since the right-hand side also is zero, and since its second term vanishes, we have that

$$\begin{aligned} 0 &= P(A/C) - P(C/A)[P(A/C) - P(A/-C)] \\ &= P(A/C)[1 - P(C/A)] + P(C/A)\, P(A/-C) \\ &= P(A/C)\, P(-C/A) + P(C/A)\, P(A/-C), \end{aligned}$$

which contradicts our choice of P, C, and A, whereby all of $P(A/C)$, $P(-C/A)$, $P(C/A)$, and $P(A/-C)$ must be positive. This completes the *reductio*.

VI

ON ASSERTION AND INDICATIVE CONDITIONALS*

FRANK JACKSON

INTRODUCTION

THE circumstances in which it is natural to assert the ordinary indicative conditional 'If *P* then *Q*' are those in which it is natural to assert 'Either not *P* or, *P* and *Q*', and conversely. For instance, the circumstances in which it is natural to assert 'If it rains, the match will be cancelled' are precisely those in which it is natural to assert 'Either it won't rain, or it will and the match will be cancelled.' Similarly, the circumstances in which it is natural to assert 'Not both *P* and *Q*' are precisely those in which it is natural to assert 'Either not *P* or not *Q*.' We explain the latter coincidence of assertion conditions by a coincidence of truth conditions. Why not do the same in the case of the conditional? Why not, that is, hold that 'If *P* then *Q*' has the same truth conditions as 'Either not *P* or, *P* and *Q*'?

This hypothesis—given the standard and widely accepted truth-functional treatments of 'not', 'or', and 'and'—amounts to the Equivalence thesis: the thesis that $(P \rightarrow Q)$ is equivalent to $(P \supset Q)$. (I will use '$\rightarrow$' for the indicative conditional, reserving '$\Box\!\!\rightarrow$' for the subjunctive or counterfactual conditional.) In this essay I defend a version of the Equivalence thesis.

As a rule, our intuitive judgements of assertability match up with our intuitive judgements of probability, that is, S is assertable to the extent that it has high subjective probability for its assertor.

Frank Jackson, 'On Assertion and Indicative Conditionals', *Philosophical Review*, 88 (1979): 565–89. Used with permission.

* I am conscious of a more than usually large debt to many discussions with Brian Ellis, Lloyd Humberstone, and Robert Pargetter; and also to comments from the referee.

Now it has been widely noted that when $(P \supset Q)$ is highly probable but both $-P$ and Q are not highly probable, it is proper to assert $(P \rightarrow Q)$.[1] The problem for the Equivalence thesis is to explain away the putative counter examples to '$P \vdash (P \rightarrow Q)$' and '$Q \vdash (P \rightarrow Q)$', the only too familiar cases where despite the high probability of $-P$ or of Q, and so of $(P \supset Q)$, $(P \rightarrow Q)$ is not highly assertable.

I will start in Sect. 1 by considering the usual way of trying to explain away these counter-examples and argue that it fails. An obvious reaction to this failure would be (is) to abandon the Equivalence thesis; but I argue in Sect. 2 that another is possible, namely that the general thought behind the usual way of explaining away the paradoxes of material implication is mistaken. This leads in Sect. 3 to the version of the Equivalence thesis I wish to defend. In Sect. 4 I point out some of the advantages of this account of indicative conditionals, and in Sect. 5 I reply to possible objections.

1. THE USUAL WAY OF EXPLAINING AWAY THE COUNTER-EXAMPLES

Suppose S_1 is logically stronger that S_2: S_1 entails S_2 but not conversely. And suppose S_1 is nearly as highly probable as S_2. (It cannot, of course, be quite as probable, except in very special cases.) Why then assert S_2 instead of S_1? There are many possible reasons: S_2 might read or sound better, S_1 might be unduly blunt or obscene, and so on. But if we concentrate on epistemic and semantic considerations widely construed, and put aside more particular, highly contextual ones like those just mentioned, it seems that there would be no reason to assert S_2 instead of S_1. There is no significant loss of probability in asserting S_1 and, by the transitivity of entailment, S_1 must yield everything and more than S_2 does. Therefore, S_1 is to be asserted rather than S_2, *ceteris paribus*.

This line of thought, which I will tag, 'Assert the stronger instead of the weaker (when probabilities are close)', has been

[1] Though the point is commonly put in terms of evidence, see e.g. Charles L. Stevenson, 'If-iculties', *Philosophy of Science*, 37 (1970): 27–49, and G. H. von Wright, 'On Conditionals' in *Logical Studies* (Routledge & Kegan Paul: London, 1957), see 139.

prominent in defences of the Equivalence thesis that the ordinary indicative conditional, $(P \rightarrow Q)$, is equivalent to the material conditional, $(P \supset Q)$.[2] The Equivalence theorist explains away the impropriety of asserting $(P \supset Q)$ when one of $-P$ or Q is highly probable by saying that in such a case you should come right out and assert the logically stronger statement, namely either $-P$ or Q as the case may be.

The same idea can be put in terms of evidence instead of probability.[3] If your evidence favours $(P \supset Q)$ by favouring one of $-P$ or Q you should simply assert $-P$ or Q, whichever it is, and not the needlessly weak conditional.[4] But I will concentrate in the main on the probabilistic formulation when presenting my objections.

My first objection is that a conditional like 'If the sun goes out of existence in ten minutes time, the earth will be plunged into darkness in about eighteen minutes' time' is highly assertable. However, the probability of the material conditional and the probability of the negation of its antecedent are both very close (if not equal) to one, and so at most the probability of the conditional is only marginally the greater. Hence this is a case where the

[2] Particularly in discussion, but see R. C. Jeffrey, *Formal Logic* (New York, 1967), ch. 3; David Lewis, 'Probabilities of Conditionals and Conditional Probabilities', *Philosophical Review*, 75 (1976): 297–315; and for support for the general idea and other arguments for the Equivalence thesis see Michael Clark, 'Ifs and Hooks', *Analysis*, 32.2 (1971): 33–9.

[3] I understand that this was the emphasis in H. P. Grice's influential, unpublished William James Lectures (since published as *Studies in the Way of Words* (Cambridge, Mass., 1989)), see L. Jonathan Cohen, 'Some Remarks on Grice's Views about the Logical Particles of Natural Language', in *Pragmatics of Natural Languages*, ed. Y. Bar-Hillel (Reidel: Dordrecht, 1971); Clark, 'Ifs and Hooks', and particularly 'Ifs and Hooks: A Rejoinder', *Analysis*, 34.3 (1974): 77–83; A. J. Ayer, *Probability and Evidence* (Macmillan: London, 1972); Stevenson, 'If-iculties'; and J. L. Mackie, *Truth, Probability and Paradox* (London, 1973).

[4] In their presentation of Grice's (tentative) views Cohen *et al.* sometimes use formulations that are ambiguous about whether it is all or part of your evidence that is meant. If it is all, things are as above; but if it is part, the view being reported is that $(P \rightarrow Q)$ is assertable if *part* of your total evidence favours $(P \supset Q)$ without favouring one of $-P$ or Q, even if your total evidence favours one of them. There is immediate trouble for such a view. Suppose I know that Fred and Bill both live in Oak Street. Even though my evidence strongly favours the material conditional, it would normally be wrong to assert 'If Fred lives in Elm Street, Bill lives in Elm Street' in such a case; nevertheless *part* of what I know, namely that they live in the same street, favours the material conditional without favouring its consequent and without favouring the negation of its antecedent.

weaker is assertable despite the absence of any appreciable gain in probability, contrary to the maxim 'Assert the stronger instead of the weaker.'

The second objection is that conditionals whose high probability is almost entirely due to that of their consequents may be highly assertable. Suppose we are convinced that Carter will be re-elected whether or not Reagan runs. We say both 'If Reagan runs, Carter will be re-elected' and 'If Reagan does not run, Carter will be re-elected.' The high subjective probability can only be due to that of the common consequent, yet the consequent is allegedly logically stronger and so by the maxim the conditionals ought not be assertable.

Moreover, such cases cannot be handled by a conventional exemption[5] from the maxim in the case of conditionals with very probable consequents. Both the following conditionals are highly *unassertable*, but have very probable consequents: 'If the history books are wrong, Caesar defeated Pompey in 48 BC', 'If the sun goes out of existence in ten minutes time, the earth will *not* be plunged into darkness in eighteen minutes' time.'

The third objection is that there is a third paradox of material implication. If the Equivalence thesis is true, then $((P \rightarrow Q) \vee (Q \rightarrow R))$ is a logical truth. But evidently it is not in general highly assertable. Of course logical truths are as logically weak as you can get, but nevertheless 'Assert the stronger instead of the weaker' is of no assistance in explaining away the third paradox. Whatever you think about this maxim in general, it does not apply universally to logical truths. 'If that's the way it is, then that's the way it is', 'George must either be here or not here', 'The part is not greater than the whole', and so on, are all highly assertable.

The fourth objection is that 'Assert the stronger instead of the weaker' is, of necessity, silent about divergences in assertability among logical equivalents simply because logical equivalents do not differ in strength. But the equivalence theorist must acknowledge some marked divergences among equivalents. According to him, $((-P \,\&\, (P \rightarrow R))$ and $(-P \,\&\, (P \rightarrow S))$ are logically equivalent, both being equivalent to $-P$. But their

[5] *Pace* what appears to be Lewis's suggestion, 'Probabilities of Conditionals and Conditional Probabilities', 308.

assertability can differ sharply. 'The sun will come up tomorrow but if it doesn't, it won't matter' is highly unassertable, while 'The sun will come up tomorrow but if it doesn't, that will be the end of the world' is highly assertable.

My final objection is that if the standard way of trying to explain away the paradoxes is right, 'or' and '$\rightarrow$' are on a par. It would, for instance, be just as wrong, and just as right, to assert 'P or Q' merely on the basis of knowing P as to assert $(P \supset Q)$ merely on the basis of knowing not P. And, more generally, '$P \vdash (P$ or $Q)$' and '$Q \vdash (P$ or $Q)$' should strike us as just as much a problem for the thesis that 'P or Q' is equivalent to $(P \vee Q)$ as do the paradoxes of material implication for the Equivalence thesis. It is a plain fact that they do not. The thesis that 'P or Q' is equivalent to $(P \vee Q)$ is relatively non-controversial, the thesis that $(P \rightarrow Q)$ is equivalent to $(P \supset Q)$ is highly controversial.

This objection, of course, applies not just to attempts to explain away the paradoxes in terms of 'Assert the stronger', but to any attempt which appeals simply to considerations of conversational propriety. It leaves it a mystery why we—who are after all reasonably normal language-users—find it so easy to swallow one thesis and so hard to swallow the other.

Should we respond to these objections by abandoning the Equivalence thesis or by looking for a different way of explaining away the paradoxes? An argument for the latter is that the thought behind 'Assert the stronger rather than the weaker' contains a serious lacuna, as I now argue.

2. A REASON FOR SOMETIMES ASSERTING THE WEAKER

Suppose, as before, that S_1 is logically stronger than S_2 and that S_1's probability is only marginally lower than S_2's. Consistent with this it may be that the impact of new information, I, on S_1 is very different from the impact of I on S_2; in particular it may happen that I reduces the probability of S_1 substantially without reducing S_2's to any significant extent (indeed S_2's may rise). I will describe such a situation as one where S_2 but not S_1 is *robust* with respect to I. If we accept Conditionalization, the plausible thesis that the impact of new information is given by the relevant conditional probability, then 'P is robust with respect to I' will be true just when both $Pr(P)$ and $Pr(P/I)$ are close and high.[6] (Obviously a more general account would simply require that $Pr(P)$ and $Pr(P/I)$ be close, but throughout we will be concerned only with cases where the probabilities are high enough to warrant assertion, other things being equal.)

We can now see the lacuna in the line of thought lying behind 'Assert the stronger instead of the weaker.' Despite S_1 and S_2 both being highly probable and S_1 entailing everything S_2 does, there may be a good reason for asserting S_2 either instead of or as well as S_1. It may be desirable that what you say should remain highly probable should I turn out to be the case, and further it may be that $Pr(S_2/I)$ is high while $Pr(S_1/I)$ is low. In short, robustness with respect to I may be desirable, and (consistent with S_1 entailing S_2) S_2 may have it while S_1 lacks it.

Examples bear this out. Robustness is an important ingredient in assertability. Here are two examples taken from those which might be (are) thought to be nothing more than illustrations of 'Assert the stronger instead of the weaker.'

Suppose I read in the paper that Hyperion won the 4.15. George asks me who won the 4.15. I say 'Either Hyperion or Hydrogen won.' Everyone agrees that I have done the wrong thing. Although the disjunction is highly probable, it is not highly assertable. Why? The standard explanation is in terms of 'Assert the stronger instead of the weaker.'[7] But is this the whole story? Consider the following modification to our case. What I read is that H___won. The name is too blurred for me to do more than pick out the initial letter. However I happen to know that

[6] See e.g. Jeffrey, *Logic of Decision* (New York, 1965); and F. P. Ramsey, *Foundations of Mathematics* (London, 1931), ch. 7. Robustness is a notion I first heard about some years ago from Manfred von Thun in the context of *weight* in J. M. Keynes's sense, *Treatise on Probability* (London, 1921). Brian Skyrms uses 'resilience' for a similar notion, see his 'Physical Laws and Philosophical Reduction' in *Induction, Probability and Confirmation*, Minnesota Studies in Philosophy of Science, vi, ed. G. Maxwell and R. M. Anderson, Jr. (University of Minnesota Press: Minneapolis, 1975). Neither should be held responsible for my use of the notion in what follows.

[7] 'Standard' in that it is offered by non-equilavence theorists as well as equivalence theorists, see e.g. Mackie, *Truth, Probability and Paradox*, 76.

Hyperion and Hydrogen are the only two horses in the 4.15 whose names begin with 'H', and in addition I know that Hydrogen is a no-hoper from the bush. Clearly it is still the case that 'Hyperion won' is highly probable and it would be quite proper for me to say so. But it would *also* be quite proper for me to say 'Hyperion or Hydrogen won', despite its being weaker and only marginally more probable. Indeed the natural thing to do would be to say something like 'Either Hyperion or Hydrogen won. It can't have been Hydrogen—he's a no-hoper. So it must have been Hyperion.'

The obvious explanation for the marked change in the assertability of the disjunction is that in the original case it was not robust with respect to the negation of both its disjuncts taken separately, while in the modified case it is. In the original case, were I to learn that Hyperion was not the winner I would have to abandon the disjunction. In the modified case I would not, though I would have to abandon my low opinion of Hydrogen. Therefore, in the modified case there is point to asserting that Hyperion or Hydrogen won instead of simply that Hyperion won, even if the probabilities are very close. This disjunction possesses a relevant robustness that its left disjunct lacks.

Indeed surely there are many cases where disjunctions are highly assertable even though they have probabilities for their assertors only marginally greater than that of one of their disjuncts. Consider 'Either Oswald killed Kennedy or the Warren Commission was incompetent.' This is highly assertable even for someone convinced that the Warren Commission was not incompetent. Yet they are in a position to assert the stronger 'Oswald killed Kennedy.' The disjunction is nevertheless highly assertable for them, because it would still be probable were information to come to hand that refuted one or the other disjunct. The disjunction is robust with respect to the negation of either of its disjuncts taken separately—and just this may make it pointful to assert it. Because it makes it acceptable to a possible hearer who denies one or other of the disjuncts.

Moreover, we can have highly probable disjunctions which are, unlike the two just considered, significantly more probable than either of their disjuncts and yet which are not highly assertable.

Suppose I propose to toss a fair coin five times in such a way that the tosses are probabilistically independent; then 'At least one of the five tosses will be a head' is probable enough (~97 per cent) to warrant assertion. Consequently so is the equivalent disjunction 'Either at least one of the first three tosses or at least one of the last two tosses will be a head', and moreover each disjunct is significantly less probable than the disjunction. But it would be highly misleading to assert the disjunction in preference to the equivalent sentence. For it would create in hearers the mistaken expectation that should the first three tosses fail to yield a head, they can be sure that at least one of the last two will.

The second example is one of David Lewis's.

> We are gathering mushrooms; I say to you 'You won't eat that one and live.' A dirty trick: I thought that one was safe and especially delicious, I wanted it myself, so I hoped to dissuade you from taking it without actually lying. I thought it highly probable that my trick would work, that you would not eat the mushroom, and therefore I would turn out to have told the truth. But though what I said had a high subjective probability of truth, it had a low assertability and it was a misdeed to assert it. Its assertability goes not just by probability but by the resultant of that and a correction term to take account of the pointlessness and misleadingness of denying a conjunction when one believes it false predominantly because of disbelieving one conjunct.[8]

But this explanation faces two difficulties. First, suppose I am not *that* confident that my trick will work. I am pretty sure but not certain enough to warrant outright assertion. And further suppose that I am also pretty certain that you will die for reasons unconnected with mushrooms. The two factors combined bring the probability of 'You won't eat that one and live' up to a level sufficient to warrant assertion. In this case the probability of falsity of each conjunct contributes significantly to the probability that the negated conjunction is true, but nevertheless it would still be a misdeed to assert it. Second, suppose the mushroom really is dangerous and I say 'You won't eat that one and live' while crushing it under my foot for safety's sake. The difference in probability between the negated conjunction and 'You won't eat that one' will then be minuscule. But the negated conjunction is nevertheless highly assertable in this case.

[8] 'Probabilities of Conditionals and Conditional Probabilities', Essay IV in this volume.

It seems to me, therefore, that a better explanation is one in terms of robustness. You take me to be providing information relevant to mushroom-eating pleasures, and so construct for yourself the following piece of practical reasoning. I won't eat that one and live. (Premiss supplied by me.) I eat that one. (Premiss you can make true.) Therefore, I won't live. The conclusion is undesirable, hence you are led to refrain from making the second premiss true.

Why were you tricked? The argument is valid, the premiss I supplied does have a high probability, and you are able to give the second premiss a high probability. But in order to infer the conclusion of a valid argument all premisses need to be highly probable *together*; and if you were to make the second premiss highly probable, the first premiss (supplied by me) would no longer be highly probable. In the circumstances you were entitled to take it that not only was 'You won't eat that one and live' highly probable, it was also robust with respect to 'You eat that one.' My misdeed lay in asserting something lacking appropriate robustness.

The upshot, then, is simply that when considering propriety of assertion we should take account of robustness *as well as* high probability, relevance, informativeness, and so on.

3. THE APPLICATION OF ROBUSTNESS TO CONDITIONALS

Robustness is a relative affair. A highly probable sentence may be very robust relative to one possible piece of information[9] and the opposite relative to another. Often the possible information relative to which robustness is desirable is given by the context. In the mushroom-gathering story it was obvious that the hearer expected sentences that were robust relative to his eating the mushroom. That is how he was tricked. But context will not always

[9] The possible information may be actual. Obviously we are often interested in robustness relative to what we might, but don't to date, know. But this is not part of the definition of robustness. If it was, *P* would automatically become non-robust with respect to *I* on learning *I*! When *I* is known at *t*, our definition makes *P* robust with respect to *I* if and only if *P* is highly probable at *t*.

be enough. It makes sense that we should have syntactical constructions which signal the possible information relative to which we take what we are saying to be robust.

Their role would be akin to that of 'but' in signalling or indicating a contrast without the obtaining of this contrast being a necessary condition for speaking truly.[10] Thus the truth conditions for '*P* but *Q*' are the same as those for '*P* & *Q*'. In familiar jargons[11] their literal content is the same, but the use of the first carries a conventional (not conversational) implicature that the second does not; or they differ in tone but are alike in sense. I will however talk mainly of signalling and indicating rather than implicature or tone. What follows does not depend crucially on the precise way such a distinction should be drawn.

It is, of course, vital that we allow the possibility of distinguishing signalling or indicating an attitude towards a sentence from making that attitude part of the truth-conditions, sense, or literal content of what we say. There is a great difference between producing a sentence *S* as something accepted and thereby asserted, and producing it as an example or as something granted for the sake of argument. It is thus important that we can signal this—perhaps by using Frege's assertion sign—and such a signal cannot be taken simply as part of the content of what is said. Because '*S* and I accept (or assert) *S*' may as easily as *S* itself be produced as an example or granted for the sake of argument, rather than being asserted.[12]

I am suggesting, then, that when we assert a sentence it makes sense that we should have ways of indicating that as well as obeying the base rule that requires that *S* be highly probable, we also take it that, for some *I*, *S* is robust with respect to *I*.

One way of doing this is to put your sentence in disjunctive form when it would be shorter and simpler not to. Suppose I am asked what colour Harry's car is. It is perfectly acceptable for me to reply simply that it is blue, even if my ground for being confident that it is blue is that it is light-blue. Unless there is reason to think that the precise shade matters, near enough is good enough here. Suppose however that I replied that Harry's car is either light-blue or dark-blue. This reply is not acceptable in the circumstances even if the precise shade does not matter, despite the fact that (ignoring borderline cases) it is equivalent to the acceptable one (and so incidentally the difference in assertability cannot be explained by reference to 'Assert the stronger instead of the weaker'). The reason that the second reply is not acceptable is that in putting it in explicitly disjunctive form you signal robustness with respect to the negation of each disjunct taken separately. The reply would be proper only if both the (subjective) probability of its being light-blue or dark-blue given it is not light-blue and the probability of its being light-blue or dark-blue given it is not dark-blue were high. And in our case the former is low.

In general we are happiest asserting disjunctions which are two-sidedly robust. We most happily assert '*P* or *Q*' when $Pr(P \vee Q)$, $Pr(P \vee Q/-P)$, and $Pr(P \vee Q/Q-Q)$ are all high. (Thus, the oft-noted 'exclusive feel' about the inclusive 'or'. Accordingly, when we are not in a position to so assert, we should expect to have a way of signalling merely one-sided robustness in order to avoid misleading our hearers into assuming two-sided robustness. And it seems that we do.

Consider the following, common enough kind of case. You are pretty sure that George lives in Boston but not quite sure enough to warrant outright assertion. You are, though, sure enough that he lives somewhere in New England. You say 'He lives in Boston or anyway somewhere in New England.' Likewise we say things like 'He is a fascist (communist) or anyhow on the far right (left)' and 'Caesar defeated Pompey in 48 BC, or at least that's what George told me.' We use the '*P* or anyway *Q*' construction to indicate that '$P \vee Q$' is robust with respect to $-P$, but not with respect to $-Q$. Should you learn against your expectation that George does not live in Boston, the disjunction will still be highly probable for you due to its right disjunct 'George lives in New England' still being so; but obviously you will have to abandon the disjunction altogether should you learn that George does not live in New England after all.

[10] See e.g. M. Dummett, *Frege* (Duckworth: London, 1973): 85–6.

[11] See e.g. Dummett, *Frege*, and various of Grice's papers, including 'Logic and Conversation', in *Syntax and Semantics*, iii, ed. Peter Cole and Jerry L. Morgan (New York, 1975), and 'Further Notes on Logic and Conversation' in *Syntax and Semantics*, ix, ed. Peter Cole (New York, 1978).

[12] Cf. Dummett, *Frege*, 316.

A consequence of this asymmetry is that commutation can give strange-sounding results. 'He lives in Boston or anyway somewhere in New England' is a happy saying, whereas 'He lives somewhere in New England or anyway in Boston' is not. Nevertheless commutation is valid; for the truth-conditions of '*P* or anyway *Q*' are just those of '$P \vee Q$'. 'George lives in Boston or anyway somewhere in New England' is true if and only if either 'George lives in Boston' is true or 'George lives somewhere in New England' is true. 'Caesar defeated Pompey in 48 BC, or at least that is what George told me' is true if either disjunct is true and false if neither is; and so on and so forth. Signalling robustness does not invade truth-conditions.

Before I apply these ideas to indicative conditionals, let me review the course of the argument. High probability is an important ingredient in assertability. Everyone accepts that. But so is robustness. Commonly, cases cited to illustrate 'Assert the stronger instead of the weaker' really illustrate the importance of robustness. The relevant robustness, however, is relative to statements other than the one being asserted. (Every highly probable statement is trivially robust with respect to itself.) Thus we need devices and conventions to signal which statements our assertions are robust relative to. We have just been looking at some of these devices and have noted that their presence does not alter truth-conditions. Accordingly, I suggest that the indicative conditional construction is such a device. It signals robustness with respect to its antecedent. Hence it is proper to assert $(P \rightarrow Q)$ when $(P \supset Q)$ is highly probable and robust with respect to *P*, that is, when $Pr(P \supset Q/P)$ is also high. But, by analogy with explicit disjunction and '—or anyway—', the truth-conditions of $(P \rightarrow Q)$ are those of $(P \supset Q)$. It is like 'Nevertheless *P*' in this regard. The use of 'nevertheless' signals the robustness of *P* with respect to what has gone before, but the whole sentence is true if and only if *P* is.

At first glance it may appear that this version of the Equivalence thesis is totally opposed to those theories which assign conditionals assertion and acceptance, but not truth, conditions.[13] But in fact it is a half-way house. Consider again 'Nevertheless *P*'. Although the whole is true if and only if *P* is true; a part—'nevertheless'—contributes to assertion—conditions without affecting truth-conditions. We can give the conditions under which it is proper to use 'nevertheless', but not those under which using it is saying something true. Likewise with the signalling role of the indicative conditional construction. Our theory is thus a supplemented Equivalence theory. In the widest sense of 'meaning', $(P \rightarrow Q)$ and $(P \supset Q)$ do not mean the same. But their truth-conditions are the same—they agree in sense or literal content. The extra element is that in using $(P \rightarrow Q)$ you explicitly signal the robustness of $(P \supset Q)$ with respect to *P*, and this element affects assertion-conditions without affecting truth-conditions.

[13] For recent examples see Ernest W. Adams, *The Logic of Conditionals* (Reidel: Dordrecht, 1975), and Mackie, *Truth, Probability and Paradox*.

We could have gone further and made the robustness of $(P \supset Q)$ with respect to *P* a necessary condition for the truth of $(P \rightarrow Q)$. But this seems, as a simple fact of linguistic usage, too strong. For, first, we allow that a person may speak truly in the conditional mode without *deserving* to do so. Suppose it is highly probable that it will rain tomorrow and in consequence that the match will be cancelled. But, with the intention of misleading Fred, I say that if it rains, the match will go ahead. In this case 'It rains $\supset$ the match will go ahead' is neither probable nor robust with respect to 'It rains'. Further suppose that it does indeed rain, but against the odds, the match goes ahead. We allow that I have spoken truly without of course deserving to do so. And, secondly, we allow that *one* member of the set of conditionals of the form 'If I write down the number ——, I will write down the number of molecules in this room' is true. Yet *none* is robust with respect to its antecedent.

What is the point of signalling the robustness of $(P \supset Q)$ with respect to *P*? The answer lies in the importance of being able to use *modus ponens*. Although $(P \supset Q), P, \therefore Q$ is certainly valid, there is a difficulty about using it in practice. Suppose my evidence makes $(P \supset Q)$ highly probable but that I have no evidence concerning *P*. *Q* is of interest to me, so I set about finding evidence for *P* if I can. The difficulty is that finding evidence that makes *P* highly probable is not enough in itself for me to conclude *Q* by *modus ponens*. For the evidence that makes *P* probable may make $(P \supset Q)$ improbable. Indeed it is easy to prove from the calculus that, except in special cases of extreme probability, $Pr(P \supset Q/P) < Pr(P \supset Q)$; that is, normally on learning P I must *lower* the probability I give $(P \supset Q)$ so endangering the inference to Q. It is thus of particular interest whether or not $(P \supset Q)$'s high probability would be unduly diminished by learning P; that is, it is important whether or not $(P \supset Q)$ is robust with respect to P. In sum, we must distinguish the *validity* of *modus ponens* from its *utility* in a situation where I know $(P \supset Q)$ but do not know P.[14] The robustness of $(P \supset Q)$ relative to P is what is needed to ensure the utility of *modus ponens* in such situations.

It does not, though, ensure the utility of *modus tollens*. $Pr(P \supset Q/P)$ can be high when $Pr(P \supset Q/-Q)$ is low. And this is how things should be. You may properly assert $(P \rightarrow Q)$ when you would *not* infer $-P$ on learning $-Q$. Suppose you say 'If he doesn't live in Boston, then he lives somewhere in New England' or 'If he works, he will still fail', you will—despite the validity of *modus tollens*—neither infer that he lives in Boston on learning (to your surprise) that he doesn't live in New England nor infer that he didn't work on learning (to your surprise) that he passed. Rather on learning either you would abandon the original conditional as mistaken.[15] Of course it is not only the robustness of material conditionals with respect to their antecedents that is important. Accordingly if our approach is along the right lines we should expect a linguistic device to signal the robustness of Q with respect to P, not merely of $(P \supset Q)$ with respect to P. But if the Supplemented Equivalence thesis is right, the latter is sufficient for the former. Consider $(Q \,\&\, (P \rightarrow Q))$. According to the Equivalence thesis it is equivalent to Q, and according to our supplementation the right-hand conjunct signals that $Pr(P \supset Q/P)$ is high. But $Pr(P \supset Q/P)$ simplifies to $Pr(Q/P)$. Hence asserting $(Q \,\&\, (P \rightarrow Q))$ is equivalent to asserting Q and also signals the robustness of Q with respect to P—just what we are looking for.

[14] In my view the objection to *disjunctive syllogism* in A. R. Anderson and N. D. Belnap, *Entailment* (Princeton, 1977), conflates these two questions. Note particularly the top paragraph of their p. 177.

[15] I here dissent from W. E. Johnson's illuminating remarks in ch. 3 of *Logic*, pt. 1 (New York, 1964). (Incidentally, saying P only if Q does seem to signal robustness of $P \supset Q$ with respect to $-Q$.)

When we assert both Q and $(P \rightarrow Q)$ we commonly use a 'still' construction: 'The match will be played, and it will still be played if it rains', 'Carter will be re-elected, and if the Camp David talks fail, he will still be re-elected.' And often we don't bother to repeat the common element, Q. Context makes it clear that we think that the match will be played or that Carter will be re-elected, and we simply say 'The match will still be played if it rains' or '(Even) if the Camp David talks fail, Carter will still be re-elected.' A stronger position is that 'If P, then still Q' entails Q.[16] But consider one who makes, all in one breath, the following perfectly acceptable remark. 'If it rains lightly, the match will still be played. But if it rains heavily, as it well may, the match will be cancelled.' Surely he is not asserting *inter alia* that the match will be played.

4. DEFENCE

I take for granted one negative argument for our Supplemented Equivalence thesis, namely that all its competitors face well-known objections. One obvious positive argument for it would consist in assembling a large number of examples of indicative conditionals and testing our intuitions concerning assertion against the results our theory predicts. Fortunately this is not necessary. Ernest Adams has provided a simple formula governing our intuitions, and the Supplemented Equivalence theory explains this formula.

Adams has shown that the (intuitively justified) assertability of $(P \rightarrow Q)$ is given by

$$Pr(Q/P) =\text{df } \frac{Pr(PQ)}{Pr(P)}.$$ [17]

[16] Some have held the similar position that 'Q even if P' entails Q. See e.g. Mackie, *Truth, Probability and Paradox*, 72, and Pollock, *Logic of Conditionals*, 29. I would advance a similar objection to this position.

[17] Adams, *Logic of Conditionals*, and his earlier papers 'The Logic of Conditionals', *Inquiry*, 8/2 (1965): 166–97 and 'Probability and the Logic of Conditionals' in *Aspects of Inductive Logic*, ed. J. Hintikka and P. Suppes (Amsterdam, 1966): 265–316. Strong evidence that he is essentially right is the number of authors of very different philosophical persuasions who have found this general kind of thesis congenial, e.g. Brian Ellis, 'An Epistemological Concept of

Thus I assent to 'If it rains, the match will be cancelled' to the extent that my subjective probability of the match being cancelled given it rains is high.

We explain Adams's thesis as follows. On our theory, the assertability of $(P \rightarrow Q)$ will be the product of two factors: the extent to which $Pr(P \supset Q)$ is high and the extent to which $(P \supset Q)$ is robust with respect to P. But we have from the calculus that $Pr(P \supset Q/P) = Pr(Q/P)$, and that $Pr(P \supset Q) \geqslant Pr(Q/P)$. Consequently both conditions are satisfied to the extent that $Pr(Q/P)$ is high. QED.

An important recent result of Lewis's highlights the significance of this derivation. He *proves* that the obvious alternative explanation of Adams's thesis fails. He proves (by a *reductio* argument) that $(P \rightarrow Q)$ does not differ in truth-conditions from $(P \supset Q)$ in such a way as to make $Pr(P \rightarrow Q) = Pr(Q/P)$.[18]

Consequently, we can explain why $(P \rightarrow Q)$ and $(P \rightarrow -Q)$ are not assertable together when P is consistent. $Pr(Q/P)$ and $Pr(-Q/P)$ cannot (from the calculus) both be high.[19] Or, more precisely, they cannot both be high relative to the same body of evidence. Robustness, like probability in general, is relative to evidence, and of course $Pr(Q/P \,\&\, R)$ and $Pr(-Q/P \,\&\, S)$ can both be high. Accordingly our theory predicts that we should be happy to assert both $(P \rightarrow Q)$ and $(P \rightarrow -Q)$ when it is *explicit* that the relevant bodies of evidence are appropriately different. Exactly this happens. Harry and George are discussing whether Fred went to the rock concert. Harry says 'If Fred went, he must have gone by car, because there was a transport strike at the time.' George says 'But Fred regards the private car as exploitative and never goes anywhere by car on principle; so if he went, it cannot have been by car.' They conclude 'In that case, obviously Fred did not go to the rock concert.' Instead of regarding their statements as mutually inconsistent, Harry and George draw from them the conclusion that Fred did not go.[20]

Our theory, then, makes highly assertable just those conditionals intuition judges to be highly assertable. But what of our intuitive, judgements of validity? I am committed to taking $-P, \therefore P \rightarrow Q$, and $Q, \therefore P \rightarrow Q$ to be valid, and they notoriously lack intuitive appeal. But this lack of appeal seems to derive from our reluctance to assert $(P \rightarrow Q)$ merely because we are confident that $-P$ and our (less-marked) reluctance to assert $(P \rightarrow Q)$ merely because we are confident that Q, and our theory can explain these easily enough. Neither the fact that $Pr(-P)$ is high nor the fact that $Pr(Q)$ is high is sufficient for $Pr(P \supset Q/P)$ being high. The reason our reluctance is less marked in the case of asserting $(P \rightarrow Q)$ on the basis of our certainty that Q, is that $Pr(Q)$ being high together with P and Q being probabilistically independent *is* sufficient for $Pr(P \supset Q/P)$ being high.

Similarly, what I referred to earlier as the third paradox—that $((P \rightarrow Q) \vee (Q \rightarrow R))$ is a logical truth and yet is far from invariably highly assertable—is not a decisive objection to our supplemented version of the Equivalence thesis, because the presence of signals can make logical truths unassertable. We have already noted the plausibility of giving 'Nevertheless P' the same truth-conditions as P. Consequently 'Nevertheless P or nevertheless not P' is a logical truth, but it is not highly assertable.

What of *strengthening the antecedent, hypothetical syllogism*, and *contraposition*, all of which are of course valid on our theory. Take *contraposition* (similar points apply to all three). The problem is not that it seems invalid stated in symbols; exactly the reverse is the case, as is evinced by its appearance in *Natural* Deduction systems. The problem is rather a certain class of apparent counter-examples like: 'If George works hard, he will (still) fail; therefore, if he passes, he won't have worked hard', and 'If Carter is re-elected, it won't be by a large margin; therefore if Carter is re-elected by a large margin, he won't be re-elected.'

Truth' in *Contemporary Philosophy in Australia*, ed. R. Brown and C. D. Rollins (London, 1969); Jeffrey, 'If', *Journal of Philosophy*, 61 (1964): 702–3; Robert Stalnaker, 'Probability and Conditionals', *Philosophy of Science*, 37 (1970): 64–80; and Lewis, 'Probabilities of Conditionals and Conditional Probabilities', Essay IV in this volume. Adams's formula does not of course take into account the kind of 'local' sources of unassertability set to one side in section 1, like obscenity, rudeness, and long-windedness.

[18] 'Probabilities of Conditionals and Conditional Probabilities', Essay IV in this volume.

[19] When P is inconsistent, $Pr(P) = 0$, and $Pr(Q/P)$ is undefined; accordingly we need a ruling about the assertability of $(P \rightarrow Q)$ in such cases. The ruling I will follow is that all such conditionals are assertable. Others are possible.

[20] For other examples of this kind see Clark, 'Ifs and Hooks: A Rejoinder'.

But these apparent counter-examples are paralleled by ones against the commutativity of '—or anyway—': for instance, 'It won't rain or anyway not heavily; therefore, it won't rain heavily or anyway it won't rain.' Despite this, we noted that it seemed clearly right to give the same truth-conditions to '*P* or anyway *Q*' as are standardly given to '*P* or *Q*'. The explanation for the counterintuitive feel must therefore lie not in the failure of *commutation* but in the failure of what is signalled by 'anyway' to 'commute'. Similarly *addition* is hardly appealing when applied to '—or at least—'. Consider 'Harry said that Caesar defeated Pompey in 48 BC; therefore Harry said that Caesar defeated Pompey in 48 BC or at least Caesar defeated Pompey in 48 BC.'

It seems therefore not unreasonable to attribute the counterintuitive feel of certain instances of *contraposition* to the failure of what is signalled by the indicative conditional construction to 'contrapose' (and likewise for *hypothetical syllogism*, and so on). And it may be confirmed by inspection that the putative counter-examples to *contraposition* are all ones where $Pr(P \supset Q/P) = Pr(Q/P)$ is high, and $Pr(-Q \supset -P/-Q) = Pr(-P/-Q)$ is low. For example, the probability of Carter not being re-elected by a large margin given he is re-elected may be high when the probability of Carter not being re-elected given he is re-elected by a large margin is minimal. Accordingly, we can explain our reluctance to assert 'If Carter is re-elected by a large margin, then Carter will not be re-elected' even when we are happy to assert 'If Carter is re-elected, then it will not be by a large margin' in terms, not of the first being false and the second true, but in terms of what is signalled by saying the first being false and what is signalled by saying the second being true.

5. ON THREE OBJECTIONS

(i) It may be objected that the account offered above is circular. The Equivalence thesis itself is not circular, obviously, but the supplemented thesis involves a story about the role of the indicative conditional construction as signalling robustness, and it might be objected that robustness can only be elucidated via a conditional construction. *P* is robust for person *S* relative to *I* just if *P*'s high probability for *S* would not be substantially reduced *if S were* to acquire the information that *I*. One reply would be to urge that we simply define robustness in terms of conditional probability,

$$Pr(P/I) = \text{df}\, \frac{Pr(PI)}{Pr(I)}.$$

No conditionals there.

This reply is open to challenge. For the defence of so defining robustness must involve a defence of Conditionalization, the thesis that the impact of new information is given by the relevant conditional probability, and it might be urged that talk of the impact of new information can best be understood as talk of what one's probabilities would or should be *if* one were to acquire the new information. But another reply is possible. The conditionals involved here are essentially subjunctive and counterfactual in character, and as such are importantly distinct from indicative conditionals. It is not, therefore, uselessly circular to appeal to the former in one's story about the latter.

I take the case for separating out the problem of indicative conditionals from the problem of subjunctive conditionals to be familiar.[21] It derives from pairs like 'Carter is bald, no one knows it' and 'If Carter were bald, no one would know it', and 'If Oswald did not shoot Kennedy, someone else did' and 'If Oswald had not shot Kennedy, someone else would have.' For each pair we assent to the first and dissent from the second, and our dissent from the second member of each pair is accompanied by assent to, respectively, 'If Carter were bald, everyone would know it' and 'If Oswald had not shot Kennedy, no one would have.'

It sometimes seems to be thought that the contrast between indicative and subjunctive or counterfactual conditionals only shows up when (1) the consequents are *known* one way or the other and (2) they are not about the future.[22] But here is a pair involving a future, doubtful event. I have been told that Fred's

[21] From e.g. Lewis, *Counterfactuals* (Oxford, 1973), and Adams, 'Subjunctive and Indicative Conditionals', *Foundations of Language*, 6 (1970): 89–94.

[22] See e.g. Ellis, 'A Unified Theory of Conditionals', *Journal of Philosophical Logic*, 7 (1978): 107–24, and (with reservations) Adams, *Logic of Conditionals*: ch. 4.

birthday and George's birthday fall next week. But I cannot remember the exact days, only that Fred's is the day before George's. I say 'If Fred's is next Tuesday, George's will be next Wednesday', and I don't say 'If Fred's were next Tuesday, George's would be next Wednesday' (unless of course I know that the hospital specially arranged George's birth one day after Fred's, or something of that kind). Likewise, suppose that station B is half-way between A and C. A person at B observing a train passing through *on time* may well affirm 'If the train had been late leaving A, it would be late pulling into C' while denying 'If the train was late leaving A, it will be late pulling into C.'

It is nevertheless undeniable that the contrast between indicative and counterfactual conditionals is less marked in the case of conditionals pertaining to the future. For example, *before* the assassination of Kennedy we would say both 'If Oswald *were* not to shoot Kennedy, no one would' and 'If Oswald *does* not shoot Kennedy, no one will.' It is only now, after the event, that we say 'If Oswald did not shoot Kennedy, someone else did.' But this is a point in favour of our theory, for it can explain why the contrast is less marked in the case of the future.

It is a fact that we know more about the past than about the future. I know more about who won last year's election than I do about who will win next year's. In particular, our beliefs about the future by and large depend on relatively tenuous beliefs about what present and past conditions will give rise to, while our beliefs about the past are frequently independent of our beliefs about how the past came about. My beliefs about next year's election-winner rest on my beliefs about present conditions and their effect on electoral popularity, while my beliefs about last year's winner are by and large independent of my views as to what led to her success. Predicting election-winners calls for a theory of what makes for electoral popularity, retrodicting them only calls for an ability to read the newspapers. Consequently the probabilities we assign future events depend on our views about what would lead to what. But by our theory it is these very probabilities that settle the indicative conditionals we assert and it is these very views about what would lead to what that are expressed in subjunctive and

counterfactual conditionals.[23] Hence the general match between the two in the case of the future. On the other hand, the probabilities we assign past events may be largely independent of our views about what would lead to what. When Q is past we may give $Pr(Q/P)$ a high value independently of what we believe gave rise to it, and so may assert $(P \rightarrow Q)$ largely independently of our stance on counterfactuals of the form $(- \Box\!\!\rightarrow Q)$, including in particular $(P \Box\!\!\rightarrow Q)$.

It might also be thought that the contrast between indicative and subjunctive conditionals is simply due to the different role of what is being taken for granted, presupposed, or regarded as common knowledge in the context.[24] When we consider indicative conditionals we 'hold on to' common knowledge, when we consider subjunctive conditionals we need not.[25] It is taken for granted that someone shot Kennedy, hence even under the indicatively expressed supposition that Oswald did not shoot Kennedy, we hold that someone (else) did. But under the subjunctively expressed supposition that Oswald had not, we may abandon this presupposition. Likewise with the other examples given. It is common knowledge that Carter is not bald and also (we were supposing) that Fred's birthday is the day before George's and that the train was on time at B, and these facts were what was being retained when the indicatives were in question and being abandoned when the subjunctives were in question.

However, the reverse happens with other examples. You and I

[23] I argue this in detail in 'A Casual Theory of Counterfactuals', *Australasian Journal of Philosophy*, 55 (1977): 3–21; but the general idea is widely accepted.

[24] I am indebted here in particular to the referee for drawing my attention to Stalnaker, 'Indicative Conditionals', in *Language in Focus*, ed. A. Kasher (Dordrecht, 1976).

[25] Ibid. 182–7, shows how to express this in terms of the familiar possible-worlds approach to counterfactuals (due to him, 'A Theory of Conditionals', in *Studies in Logical Theory*, ed. N. Rescher (Oxford, 1968), and Lewis, *Counterfactuals*). According to Stalnaker this approach works for both indicative and subjunctive conditionals, the difference between the two being due to the fact that in the case of the former but not the latter the similarity relation is constrained by the need to preserve common knowledge. When we consider $(P \rightarrow Q)$ at world i we are to look for the closest P-world *which shares with i what is being taken to be common knowledge in the context of assertion* and ask whether it is a Q-world. But see the counter-examples below.

have been taking the date of Caesar's defeat of Pompey as common knowledge; and it is just this we hold on to in asserting the *subjunctive* 'If the historians had reported the date of Caesar's victory as 50 BC, they would have been wrong' (not even historians can change the past), and it is just this we abandon in asserting the indicative 'If the historians do report the date as 50 BC, then I am wrong in giving it as 48 BC.' Perhaps it will be objected that what was taken as common knowledge was that the historians have the date right, rather than the date itself. But then my point can be made with a different pair. We *assert* 'If Caesar's victory was in 50 BC, the historians have the date wrong', while *denying* 'If Caesar's victory had been in 50 BC, the historians would have got the date wrong.' Likewise, it is common ground that the declared winner of a presidential election is the person with the most votes. Yet it is just this we are prepared to abandon when we consider indicative conditionals starting. 'If Ford got more votes than Carter, . . .', and just this we hold on to when considering subjunctive conditionals starting 'If Ford had got more votes than Carter, . . .'

(ii) Thus far I have focused on explaining assent patterns to conditionals in terms of the Supplemented Equivalence theory. What of dissent? Standardly you dissent from an assertion just when its subjective probability of falsity is high (neglecting, as before, highly contextual factors like obscenity). The probable falsity of what may be signalled by the assertion is by and large irrelevant.[26] You dissent from 'He is poor but happy' just when it is probable that he is either not poor or not happy, not when you dissent from the signalled contrast. Dissent is typically dissent from what is literally said. But it is clear and generally acknowledged that we dissent from conditionals in circumstances other than those where it is probable that the antecedent is true and the consequent false. Even anti-Warrenites dissent from 'If Oswald killed Kennedy, then the Warren Commission got the killer's identity wrong'; but they do not regard 'Oswald killed Kennedy and the Warren Commission got the killer's identity right' as highly probable. They think rather that Oswald did not kill Kennedy and that the Warren Commission got the killer's identity wrong.

[26] Cf. Cohen's report of Grice's views, 'Some Remarks on Grice's Views'.

There are, however, exceptions to the rule that we dissent just when it is probable that what is literally said is false. Suppose I say in a serious tone of voice 'I believe that it will rain tomorrow.' There are *two* circumstances in which you naturally dissent. One is when you think I am lying, that is, when the probability of falsity of what is literally said is high (by your lights). The other is when you think it will not rain. In this case your dissent is not from what I literally say but from what I signal by saying it in a serious tone of voice, namely that its raining is highly probable.

Another example is when I say 'The winner of the election for club president will come from Tom, Dick, and Harry.' What I say counts as true if anyone of these three wins. But you won't dissent only if you think this improbable. You may grant it probable because of the excellent chance Tom has of winning but nevertheless dissent because I left out George, and in your view George has the best chance after Tom. In other words, you will dissent when what *you* would assert is that the winner will come from Tom and George, and not only when you are prepared to say that none of Tom, Dick, and Harry has a chance.

The explanation for these two cases being exceptions to the rule that dissent is prompted by low probability of literal truth, appears to lie in the peculiarly intimate relationship that obtains in them between what is said and what is signalled. In the second example what is signalled is sufficient for the high probability of what is said. In saying that the election is out of Tom, Dick, and Harry, I signal that the high probability for me of the triple disjunction is robust with respect to the conjunction of the negations of any two of the disjuncts (for example, that it is highly probable that Dick will be elected given that Harry won't and Tom won't). This is sufficient (by the calculus) for the high probability of the disjunction. In the first example what is signalled is arguably sufficient for the truth of what is said. If I say 'I believe it will rain tomorrow' in an appropriately serious tone it is arguable that I signal that I do indeed believe it will rain tomorrow, and I am not, say, producing the sentence merely as a handy example of a belief-sentence. At any rate, it can hardly be denied that there is a close connection between what is said and what is signalled in this case.

According to our account, conditionals are yet another example of the same general kind. What is singalled by the assertion of $(P \rightarrow Q)$ amounts to $Pr(Q/P)$ being high. This is sufficient for $Pr(P \supset Q)$ being high. So what is signalled is sufficient for the high probability of what is literally said. Hence, drawing on the moral of the two examples just discussed, dissent from $(P \rightarrow Q)$ may be prompted by the dissenter giving a low value to $Pr(Q/P)$ as much as by his giving a low value to $Pr(P \supset Q)$. Moreover, the latter is sufficient for the former by the calculus, so all cases of dissent from $(P \rightarrow Q)$ are ones where $Pr(Q/P)$ is low. This result squares with our intuitions. I dissent from 'If it rains, the match will be cancelled given rain is low. Further if $Pr(Q/P)$ is low, both $Pr(P \supset -Q)$ and $Pr(-Q/P)$ are high. So our theory predicts assent to $(P \rightarrow -Q)$ when you dissent from $(P \rightarrow Q)$.

And this is just how it turns out in practice. If you dissent from 'If Fred went, he went by car', you assent to 'If Fred went, he did not go by car', which of course is consistent with our earlier observation that in special cases you may assent to both. Indeed the earlier observation highlights the significance of the derivation of the result that if you dissent from $(P \rightarrow Q)$, you assent to $(P \rightarrow -Q)$. For the result cannot be explained in terms of the two being contradictories.

(iii) Conditionals like 'If he is speaking the truth, I'm a Dutchman' are often cited as being more hospitable to the Equivalence thesis than most. But they present a prima-facie objection to our version. 'He is speaking the truth $\supset$ I'm a Dutchman' is not robust with respect to 'He is speaking the truth.' Should he turn out to be speaking the truth, I won't conclude that I'm a Dutchman. The probability that I'm Dutch given he is speaking the truth is low. But there is good reason to hold that Dutchman conditionals are a very special case. For suppose what he is saying is that I am a Dutchman. Then 'If he is speaking the truth, I'm a Dutchman', standardly interpreted, is certainly true,

but I would *not* use it in this case to express my utter disbelief in his truthfulness. Instead I would say something like 'If he's speaking the truth, pigs have wings.' Therefore the use of a Dutchman conditional to express disbelief in its antecedent is not the standard one. The very circumstances in which 'If he's speaking the truth, I'm a Dutchman', standardly interpreted is beyond doubt true are the very ones in which we would *not* use it in the way in question. Hence it is not an objection to our theory that it does not cover them. Our theory is a theory of the standard indicative conditional.

Postscript

Why not simply say the following about $(P \rightarrow Q)$? We can distinguish truth-conditions from assertion-conditions. The truth-conditions for $(P \rightarrow Q)$ are those of $(P \supset Q)$. There are good and well-known arguments for this. And the assertion-condition for $(P \rightarrow Q)$ is that $Pr(Q/P)$ be high. There are good and well-known arguments for this. End of story.

My reason is that conjoining is not explaining. The problem is to explain one in terms of the other. And given the widely accepted view that the best approach to meaning and analysis is via truth-conditions, we should hope for a theory which explains the assertion-conditions in terms of the truth-conditions. This is essentially what I have attempted. I have tried to show how *a* plausible thesis about $(P \rightarrow Q)$'s truth-conditions, namely the Equivalence thesis, can, in the light of the importance of robustness for assertability, explain *the* plausible thesis about $(P \rightarrow Q)$'s assertion-condition, namely Adams's thesis.

In my view this puts a very different complexion on certain putative counter-examples to the Equivalence thesis. We saw, for instance, how granting the validity of *contraposition* can force the equivalence theorist into holding that 'If Carter is re-elected by a large margin, then he will not be re-elected' is true. But what is it that is *immediately evident* about this putative counter-example? Surely that it has very low assertability. But the Supplemented Equivalence theory *explains* this, and what a theory well explains cannot be an objection to that theory.