'If' and '⊃'

The Popular Package

We can't really talk about a 'standard' or 'received' view of conditionals—the topic is far too contentious. But we can perhaps pick out one package of views as being rather commonly held. The Popular Package has four components:

- Conditional sentences divide into two key sorts, which can usefully be distinguished as 'indicative' vs. 'subjunctive' or 'counterfactual' conditionals
- Both kinds of conditional sentences are used to assert propositions, i.e. have truth-conditions—but the kinds of truth-conditions in the two cases are fundamentally different.
- Indicative conditionals have the same truth-conditions as the corresponding material conditionals of propositional logic; 'if P then Q' is true just so long as either P is false or Q is true.
- Subjunctive conditionals have possible-world truth-conditions; as a first shot, 'if P were the case, Q would be the case' is true if at the closest possible world where P obtains, Q obtains too.

The first two components are common ground amongst very many theorists. Frank Jackson, who buys the whole package, is a notable recent defender of the third component. Another supporter of the whole package is David Lewis, though he is particularly associated with the defence-in-depth of the fourth component.

> Note very carefully the statement of the third and fourth components. In particular, note that the claim that 'indicative conditionals have the same truth-conditions as the corresponding material conditionals' is *not* (or at least, not obviously) to say that an indicative conditional is simply to be *identified* in meaning with a material conditional. For arguably, there can be more to meaning than truth-conditions—as we will see, sentences can arguably share truth-conditions and yet differ in conventional meaning (broadly construed). So, as here defined at any rate, a defender of Popular Package is *not* committed to saying there is no more to ordinary-language conditionals than to the logicians' constructs, but is only committed to saying that what more there is (if anything) doesn't affect truth-conditions.

There are reasons to resist all four components of the Popular Package—but it isn't popular for nothing: there are familiar considerations in favour of each element. In these notes, we consider what might be thought the least plausible element, i.e. the third one. Beginners in logic told about the problems with the material conditional right from the outset—so how come that, despite the problems, it indeed remains so popular to say that indicative conditionals are truth-functional?

Preliminary remark: ingredients of meaning

Consider the following (hackneyed, but still very useful) example, the pair of sentences

1. Jack worked hard but got a lower second,
2. Jack worked hard and got a lower second.

The sentences (1) and (2) differ in conventional meaning. But, so the story goes, they do not differ in what is required of the world for their truth. Rather the difference in mean-

ing is roughly as follows. It is conventionally appropriate to assertively utter (1) only if you take it to be the case that there is some contrast or tension between Jack's working hard and his (only) getting a lower second. There is no such appropriateness convention governing the use of the colourless (2).

Another example: compare

3. Jill came to the party,

4. Even Jill came to the party.

There seems to be no difference between what is required for the *truth* of these two claims: but it would be inappropriate to use (4) unless you thought that Jill's attendance was in some way unexpected or out of the normal run of things.

A third example (more contentious): compare

5. Jo was spared a lecture on the mating habits of newts,

6. Jo was deprived of a lecture on the mating habits of newts.

Suppose that Jo indeed had to go without the newt lecture. How you report the fact may depend, in part, on your view of the event (would it have been a dire fate for Jo or a good night out?). Thus, roughly speaking, (5) would be inappropriate for you to assert (seriously, non-ironically) unless you think that a lecture on newts would be a negative thing for Jo. Likewise (6) would be inappropriate for you to assert unless you thought the lecture a good thing. And arguably that is the only difference between (5) and (6); i.e. both are true in just the same circumstances, and the difference between them is in the additional attitudinal appropriateness conventions governing their use.

It seems, then, that there can be pairs of sentences that share truth-conditions and yet differ in some further conditions that conventionally govern appropriate assertion, and hence differ in over-all meaning (a competent speaker of the language has to grasp more than the truth-conditions to fully master the conventions governing the sentences). Hence, we must carefully distinguish two claims

- The truth-conditions of 'if P then Q' and '(P ⊃ Q)' are the same (though there may be non-truth-conditional differences between the two)—the *Weak Equivalence Thesis*.

- The total meanings of 'if P then Q' and '(P ⊃ Q)' are the same (so, in particular, there are no additional non-truth-conditional conventional constraints on the appropriate assertion of 'if P then Q')—the *Strong Equivalence Thesis*.

The weaker first view has some pretty plausible arguments in its favour (below!): but even if correct, they do *not* establish the second, stronger, view.

Arguing FOR the Weak Equivalence Thesis

It is looks incontrovertible that someone who claims that if P then Q is at least ruling out the possibility that P holds but Q fails. Thus someone who claims

If the door was locked, Grannie leapt in through the window

is ruling out the possibility that the door was locked yet Grannie did not leap in through the window. Generalizing, we have the following uncontroversial entailment claim:

(1) if P then Q entails ¬(P & ¬Q).

Now for the converse: suppose that you are given ¬(P & Q). Surely it immediately follows that if P holds, then Q doesn't. Thus, from

It isn't the case that the door was locked and the window was locked too

(else how did Grannie get in?), it follows that

If the door was locked, then the window wasn't.

And generalizing again we get the following entailment claim:

¬(P & Q) entails if P then not-Q,

Exactly similarly (the very same thought applied the negation of Q) we have

¬(P & ¬Q) entails if P then not-(not-Q),

whence (assuming that we can eliminate double negations)

(2)　　¬(P & ¬Q) entails if P then Q.

And (1) and (2) together imply that if P then Q is true exactly when ¬(P & ¬Q) is, i.e. when P ⊃ Q is true—which is the (Weak) Equivalence Thesis.

(2) can be dubbed a Passage Principle (as it legitimizes a passage from a negated conjunction to a conditional). To avoid the Weak Equivalence Thesis, we'd have to reject this Passage Principle. Yet the principle is very compelling.

Suppose that we have a standard classical natural deduction system of inference rules governing 'and', 'or' and 'not'. Now add to our deduction system a new connective, '⇒', intended to capture 'if … then …', and governed by the two rules

MP: From A and A ⇒ C you can infer C

CP: Given a proof of C from the supposition A, you can infer A ⇒ C.

Plausibly, these rules must govern any attempt to render the indicative conditional in a standard deductive system. If a connective doesn't obey modus ponens, it isn't a conditional (surely!). And likewise, conditional proof is surely a paradigm way of establishing a conditional. Indeed, in street-level talk, the move from 'Suppose A holds. Then C will be true too' to 'If A, then C' seems no move at all. The suppositional construction and the conditional are treated in many cases just as stylistic variants.

But now we have a very simple result: given MP and CP, then P ⇒ Q and ¬(P & ¬Q) are interderivable. For the entailment (1) above, we have (Proof 1):

1.	P ⇒ Q		Prem
2.		(P & ¬Q)	Supp
3		P	2 &E
4		Q	1,3 MP
5		¬Q	2 &E
6		Contradiction!	4, 5
6	¬(P & ¬Q)		2, 6 Reductio

And for the converse entailment (2) we have (Proof 2):

1.	¬(P & ¬Q)			Prem
2.		P		Supp
3			¬Q	Supp
4			(P & ¬Q)	2, 3 &I
5			Contradiction!	1, 4
6		¬¬Q		3, 5 Reductio
7		Q		6, DN elimination
8	P ⇒ Q			2, 8 CP.

Which gives us the key result

Given the background truth-functional system for the other connectives and a classical deductive framework, a connective '⇒' governed by the rules MP and CP must be truth-functional too, i.e. be identical with '⊃'.

Arguing AGAINST the Weak Equivalence Thesis

Of course, arguments *against* the Weak Equivalence Thesis are easy to come by! For example, we might have thought that the conditional

  If Jo is in London, then he's in Wales

has to be plain false (given London isn't in Wales), and indeed that we can know that conditional is false irrespective of where Jo currently is. Yet on the truth-functional account, this proposition is *true* whenever Jo steps outside London. Again, we might have thought that the proposition

  Either it's hot if it's freezing or it's freezing if it's hot

was a disjunction of two obvious falsehoods and so false; but on the truth-functional account this—like any proposition of the form (P ⊃ Q) ∨ (Q ⊃ P)—is a *tautology*! And such examples can be multiplied a hundred-fold. Here's just one more, due to Dorothy Edgington: I think

  The Labour Party will win the next election.

On the truth-functional reading of the conditional, that means I should accept

  If there's a horrendous series of financial and sexual scandals involving Tony Blair and seven other cabinet ministers, then the Labour Party will win the next election.

But of course I don't think *that*—which (apparently) either convicts me of elementary inferential incompetence, or the Equivalence Thesis of misrepresenting the truth-conditions of the conditional.

 So (very familiarly) it seems that the Weak Equivalence Thesis leads to absurdity. But now we have a problem! Apparently there strong arguments both *for* (last section!) and *against* (this section!) the Weak Equivalence Thesis. What to do?

The options

- We can reject the Weak Equivalence Principle, in particular by rejecting the Passage Principle, which means—given the second proof in the box above—rejecting the classical system for the other connectives and/or rejecting the rule CP for the indicative conditional. That can be done. But the price is apprently high, classical logic for the other connectives being attractive, and CP looking secure.

- We can accept the Weak Equivalence Principle and the truth-functionality of the conditional, and somehow explaining away apparent counter-examples. We then need to explain why e.g. the inference '¬P, therefore if P then Q' seems in some way improper, despite its being a valid entailment if 'if P then Q' has the same truth-conditions as '(P ⊃ Q)'. The natural thing is to say that there is some constraint which we should recognize which makes it somehow odd or improper to assert if P then Q merely on the grounds that ¬P.

 But what kind of constraint could this be? There are two options

 G There are some constraints that apply, or at least apply as a default, to the business of assertion quite generally. And these *general* constraints applied to the particular question of when it is proper to assert P ⇒ Q implies that one normally shouldn't do so when one's grounds are ¬P.

 J There is, tied to the meaning of the conditional, some *specific* constraint on when it is proper to assert P ⇒ Q, as opposed to P ⊃ Q or ¬(P & ¬Q), a constraint akin to the specific constraint tied to the meaning of 'but' on when it is

proper to assert 'P but Q' rather than 'P and Q'. And this specific constraint implies that one shouldn't assert P $\Rightarrow$ Q when one's grounds are ¬P.

Option **G** is especially associated with Grice (see not just the material reprinted in Jackson, ed., *Conditionals*, Oxford Readings in Philosophy, but also Grice's *Studies in the Way of Words*, chs. 2–4). Option **J** is associated (latterly) with Frank Jackson (though it goes back to a debate between Strawson and Grice in the early sixties).

The Gricean approach: general background

In this section, we'll say more about toption **G**. First, some general remarks about Grice and conversational implicature.

Grice famously argues that conversational exchanges should generally conform to certain 'maxims'. Note, though, that it *isn't* being suggested that conversationalists bear these maxims in mind and consciously follow their guidance. *Nor, at their most general, are these maxims especially to do with conversation.* Rather, the idea is that rational agents engaged in a cooperative endeavour—whether it is a matter of cooking a meal together, or a matter of exchanging information—will normally make their input to the joint venture appropriate in a variety of ways, to make things run smoothly. So Grice speaks of our implicitly following, inter alia, maxims of …

> *Quantity* Suppose you and I are cooking omelettes; you need eggs, I am in a position to pass them. Then given cooperative intent, it would be uncooperative of me to pass you two eggs when you need plainly half a dozen, or to overshoot by giving you a whole crate of eggs. Similarly if you and I are exchanging information—we should give as much as is appropriate for the current purposes of the conversational exchange. Being underinformative or over-loquacious would be uncooperative.
>
> *Quality* You ask for eggs: it would be highly uncooperative of me to pass ones I know to be bad. Similarly in information exchange: we should conform (other things being equal) to the principles
>
>> Do not say what you believe to be false
>> Do not say that for which you lack adequate evidence
>
> *Relation* Cooking omelettes together again, I shouldn't pass you things like a coffee grinder or a packet of spaghetti. These are not relevant to the purpose at hand. Similarly, when engaged in cooperative conversations, what one says should have some bearing on the current topic of conversational exchange
>
> *Manner* Lobbing the eggs to you across the kitchen, creeping to you with them at one centimetre per minute, or such like, would again be inappropriate to the proceedings. Likewise, rational conversational exchanges (as opposed to the discourse of post-modernists!) will
>
>> avoid obscurity
>> avoid prolixity
>> avoid ambiguity
>> be orderly

To repeat, then, there is a default expectation that, as rational agents engaged in a cooperative venture, we will act in a way that efficiently furthers the purpose at hand. In particular, when engaged in the business of communicating information, we will as rational agents behave as if conforming our behaviours to satisfy certain maxims concerning

'quantity', 'quality', relevance, and the like.

These reflections explain, plausibly enough, why certain conversational contributions readily accrue certain implications which are not part of what is strictly said. For example, you ask me where Jo is. I reply

> Jo is either in her room or in the library.

You naturally take it I don't know which: in the circumstances, that is surely an implication of my remark. But why so? Because if I did know, you'd expect me to say. Assuming me to be a co-operative conversationalist, if I could give you more well-backed information in less breath, then I would. That I don't know Jo's whereabouts more accurately isn't part of what I say; but my saying what I do implies ignorance.

Another example: you ask me where you can get petrol. I reply

> There's one of those very large supermarkets just round the corner

and you naturally take my remarks to imply that (I think that) the supermarket has a petrol station which is open. Why so? Because even if my claim is true, it would not be relevant to the conversational context to make it if I didn't suppose there was petrol available there.

In those two cases my remarks pick up an implication because you suppose me to be talking in accordance with maxims of good conversational practice. On other occasions, my remarks can pick up an implication precisely because I am so obviously *flouting* the normal maxims. Your director of studies ask me for a report, and I say, simply,

> Jo has beautiful handwriting.

This may be true, but it is so patently irrelevant to the question of whether you are any good at philosophy that the purpose of my utterance is a mystery—unless I am relying on you inferring from the fact that I conspicuously say nothing about your philosophical merits that I have nothing good to say.

In summary, general considerations about what can be normally expected of rational cooperative conversationalists explain why various implications that go beyond what is explicitly said can be read into various remarks.

Now, since these implications are generated by normal expectations, further features of the context (either additional sayings or other features of the context) can *defeat* the normal expectations, and hence remove the implications. For example, I say

> Salman is somewhere in the South of France

and now, given a special context where you think I probably wouldn't/shouldn't say even if I did know his detailed whereabouts, you draw no conclusions about my further knowledge or lack of it. Again, I could say explicitly

> Salman is somewhere in the South of France, and that's all I'm telling you.

again removing nay implication that I do not know. Compare too the cases

> There's one of those very large supermarkets just round the corner, but it's very probably shut by now.

> Jo has beautiful handwriting, which makes her quite wonderful essays an aesthetic as well as an intellectual delight.

This point that additional context (spoken or otherwise) can kill conversational implications is very important. It marks a difference between the sort of implications generated by background general assumptions of conversational rationality and the sort generated by local semantic conventions on conditions for correct assertion. To see the point, compare

a   Jo is either in her room or in the library [default implication of asserting this—speaker doesn't know which].

b   Jo is a cricket blue but a good philosopher [implication of asserting this—speaker thinks there is a tension between being a cricket blue and being a good philosopher].

In the first case, the implication can be *cancelled* in the strict sense that remarks can be added which remove the implication but without revealing the original form of words to be the slightest bit inappropriate or ill-chosen. There is nothing at all linguistically odd about e.g.

a+ Jo is either in her room or in the library—I know which, but I'm not saying!

Compare

b+ Jo is a cricket blue but a good philosopher—not, of course, that there is any tension between the two!

The second half of this remark reveals that the first half was inappropriately put, it constitutes a *correction* rather than an amplification that leaves the first part in good order.

We can take this, then, to be one key distinction between what Grice calls conversational implicatures and conventional implications—the first can be cancelled in a way that the second can't be.

Here's a second, related, distinction. In our second case (b), the implication can be pinned to the selection of a particular word (the use of 'but'). If instead what is said is e.g.

Jo is a cricket blue and a good philosopher

the same worldly state of affairs is asserted to obtain), but the implication simply evaporates. On the other hand, if we express the same disjunctive state of affairs as (a) in some other way, e.g. by saying

It's not the case that Jo is neither in her room nor the library,

this carries the same implication that the speaker doesn't don't know exactly where Jo is. That's what you'd expect if the conversational implication is generated by the interplay of factual message conveyed and conversational context; alternative ways of conveying the same basic message are liable to accrue the same implications. Grice puts it this way. Conventional implications due to the presence of a certain words ('but', 'even', 'spare' …) can often be *detached*, in the sense that other words can be chosen to convey the same factual message but without the implication. Conversational implicatures (other than those due to prolixity etc.) cannot be so detached.

Grice on conditionals

Now back to conditionals. The application of these considerations is as follows.

Suppose we did speak Material, a dialect of English except that the indicative conditional was stipulated to express no more than the truth-functional material conditional. And imagine someone now asserting something of the form 'If P then Q' in Material, and so, by hypothesis, asserting no more than the bare ¬(P & ¬Q), or equivalently ¬P ∨ Q.

- Being a good rational conversationalist, a speaker won't normally assert ¬(P & ¬Q) when her only grounds are knowledge of the falsehood of P or the truth of Q (for that wouldn't be maximally informative). So, normally when we hear an utterance of ¬(P & ¬Q)— which, remember, is pronounced 'if P then Q' in Material—we expect that the speaker *isn't* relying on bare knowledge of the truth-value of a disjunct.

- So, since rational conversationalists conform to the Maxim of Quality—i.e. don't assert what they haven't got grounds for—we'll expect the speaker to have other grounds for her assertion. What could these other grounds be? Some inference-

sustaining link between the matters of the antecedent and the consequent of the conditional.

- So, even in Material, rational conversationalists will be expected—when they assert a conditional—normally to have grounds for supposing that there is *some* connection between the antecedent and the consequent. And because of that, they will normally be taken as setting themselves up for a modus ponens (i.e. if they do discover the truth of P, then will be happy to conclude the truth of Q; they won't take back the conditional).

- And indeed it might be suggested that the reason why Material offers us a shorthand for ¬(P & ¬Q) or ¬P ∨ Q is that the form 'if P then Q' is so nicely adapted to make the presentation of modus ponens inferences especially smooth and neat.

- Hence even in Material (the Gricean argument goes), conversationalists will sense some oddity, a running against normal expectation, if someone asserts a conditional just on the basis of the falsity of the antecedent. If my reason for saying 'if P then Q' in Material is that I think that P is false, then I won't be happy to infer Q if I change my mind and come to think that P is true after all—I won't be prepared to accept the modus ponens, instead I'll probably just withdraw the conditional.

- But now this (the argument continues) is just the key speech phenomena we find in regular English—i.e. we sense that it is odd to assert a conditional just on the basis of the falsity of the antecedent. That's why 'not-P, so if P then Q' strikes us as improper. So at least as far as this phenomenon goes, we might well *be* speaking Material already!

Well, there is indeed a pleasing economy and elegance about this Gricean idea of keeping the semantics of specific expressions as simple as possible and explaining additional features of use by appeal to universal pragmatic principles. Though it does raise some difficult methodological issues.

Suppose we introduce a term into the language governed by a postulated semantic rule. But in use, because of pragmatic principles (or for some other reason), the term carries some additional associations. And after a while, we all know this, and know our audience knows this, and our audience knows we know, and so on and so forth. Then it may be difficult for the term in question not to become *conventionally* tied to what were originally just mere associations.

> Here's a motivating example. You and I, working at Microsoft, innocently coin a term—let's say 'nerd'—to refer to some really expert computer buffs (perhaps they are the guys working on the secret, frontier-breaking *N*etwork *E*xploitation *R*esearch and *D*evelopment project). The term catches on in our circle. Actually, though, you and I and our mates are the whizz-kid financial managers, and we are more than a bit contemptuous of those computer buffs (they don't have much of life, as we see it). So the term is used in association with certain attitudes. It is easy to see how that the term could come to be tied to the associated attitudes. To join in using our in-word in itself becomes a statement of shared attitude. Eventually, the word becomes common currency, the dictionary entry in the update to the OED reads 'A computer expert (derogatory)', and the attitudinal component has become part of the conventional meaning, not readily cancellable. And if initially non-semantic associations can become conventionally tied to an expression in this way, why can't this happen to what were once-upon-a-time conversational implications? E.g. …

Imagine that once upon a time we spoke a sparse Truth-functional English (without a conditional or disjunction). We found we often want to make the inference P, ¬(P & ¬Q) hence Q. And in a spirit of streamlining, to expedite the making of this inference, we officially introduced 'if P then Q' as a shorthand for ¬(P & ¬Q) and use it when modus ponens is in the offing. Now, that expression might be *introduced* as mere shorthand, but if its whole *point* is to smooth the path of modus ponens inferences, and that is how it is typi-

cally used, and mutually understood to be used, then the selection of 'if P then Q' rather than ¬(P & ¬Q) will soon be taken as signalling a willingness to engage in modus ponens should P turn out true—and that it will be so taken is mutual knowledge between speaker and hearer. Which looks like the emerge of a *convention*, something more than a mere conversational implication, that the use of the form 'if P then Q' signals a willingness to engage in modus ponens.

Jackson on conditionals

This leads precisely us to Frank Jackson's view of the indicative conditional. We use 'if P then Q' when we want conventionally to indicate a willingness to engage in modus ponens on discovery that the antecedent is true. i.e. are prepared to undertake not to *take back* the conditional 'if P then Q' should P turn out true. In other words, the condition form is a conventional signal that 'if P then Q' is *robust* with respect to the truth of the antecedent.

We can put the difference between Grice and Jackson like this, then.

- Both hold that the truth-conditions of the indicative conditional are those of the material conditional. Both agree that asserting a conditional at least typically implicates that the judgement won't be taken back if and when the antecedent is found to be true.

- But Grice thinks that this is a conversational implicature (like 'or' judgements' typical implication of ignorance of the disjunctions); Jackson holds that it is a conventional implication (like the implication of a contrast or tension between the components of 'but' judgements).

How to decide between Grice and Jackson? From some perspectives, the distinction here is a very small one: but the debate is perhaps the key one *if* we buy the basic Weak Equivalence Thesis—for then the issue is whether the equivalence with the material conditional gives the whole semantic story, or whether there is some conventional (but not truth-condition affecting) supplement, and Jackson's seems the best story about what that supplement is.

Jackson (I suggest) scores on two fronts, general and specific. The general one is the one I've already indicated. Regular pragmatic implications will have an inevitable tendency to get fixed as conventions, understood and exploited by speakers. Given the availability of the Jacksonian position (the implication becomes, so to speak, semantically bolted on to the use of 'if'), and the tendency of regularly occurring implications to get thus bolted on, it looks as if we need positive evidence to favour the weaker Gricean position.

Turning to specific considerations: Grice will be right if the implication of robustness with respect to the antecedent can be cancelled. But interestingly, Grice's own main examples of cancellability are different. His concern is usually with the common implicature of a non-truth-functional connection between antecedent and consequent, and *this* he argues can be cancelled (recall the Schubert example again). But Jackson can happily agree with *that*. His claim is only that in all cases, anyone who asserts a conditional should be prepared to stick by it even on discovering the antecedent is true; and that applies to the Schubertian cases as well as ones where there is a stronger (counterfactual sustaining) connection between antecedent and consequent.

To repeat, to decide the issue between Grice and Jackson, we need a case where the robustness implication itself is cancellable. If it were, I should be prepared to say something of the form

'If P, then Q—but mind you, I'd take that back if I came to believe that P'

and this really does seem pretty odd in the general case. The only cases where we *would* happily be prepared to say anything like this are with so-called Dutchman conditionals, as in

> 'If Tony Blair is a real socialist, then I'm a Dutchman'.

But these hardly seem standard cases, on which to base a theory of indicative conditionals (indeed the conspicuous unpreparedness of the utterer to countenance a modus ponens seems to be exactly why Dutchman conditionals strike us as 'unserious', as a bit of a *joke*).

Compare conditionals with disjunctions. In uttering a disjunction, a speaker may often be heard as setting herself up for a disjunctive syllogism—that is to say, someone who claims 'P or Q' should, we often take it, be prepared to accept Q if it is discovered that not-P, or accept P if it is discovered that not-Q. Why so? Well, someone who asserts P or Q will normally be taken to have grounds other than belief in P or belief in Q (for if she was in a position to assert the stronger and more informative proposition, she would have done so). And grounds for asserting P or Q (independently of our knowledge of the truth-value of the disjuncts) will be grounds for believing Q given independent grounds for not-P and so forth.

Still, suppose someone explicitly says

> 'P: so a fortiori it is the case that either P or Q'

Then in this case, given the clear indication of why P or Q is believed in this case, the implication is plainly *cancelled* that the speaker would be prepared to go on accept a disjunctive syllogism, given independent grounds for not-P, and there seems nothing odd about this cancellation. Likewise, if (in a logic class) someone explicitly asserts

> 'Not-P: so a fortiori P ⊃ Q'

then again, any implicature of willingness to engage in modus ponens with P ⊃ Q will be cancelled. Maybe (by conversational implicature) we would normally expect someone who asserts a material conditional to be prepared for infer Q given evidence that P: but in this cases, given the indication of why P ⊃ Q is believed, the implication is quite unproblematically cancelled that the speaker would still be prepared to accept Q if persuaded that P.

Now, on Grice's account, the case of the unwanted inference

> 'Not-P: so a fortiori if P then Q'

should be exactly analogous. In other words, on Grice's story, this should seem a perfectly happy inference, with any conversational implicature of a readiness for modus ponens cancelled. But it assuredly doesn't: the inference retains its bizarre aspect. Which is what *Jackson*'s story predicts—the implication of readiness for the inference is conventionally fixed and not overridden without semantic oddity, and it is because we shouldn't be ready to make the modus ponens in this case that the conclusion 'if P then Q' seems odd in this case.

So on cancellability, the evidence seems rather to support Jackson rather than Grice.