Conditionals and Explanation

Jonathan Bennettt

[This is chapter 22 of *A Philosophical Guide to Conditionals*. It is a somewhat improved version of the content of 'Conditionals and Explanation', *Fact and Value: Essays on Ethics and Metaphysics for Judith Jarvis Thomson*, edited by Alex Byrne, Robert Stalnaker, and Ralph Wedgwood (Cambridge, MA: M.I.T. Press), pp. 1–26.]

132. Bases for accepting indicative conditionals

Through twenty-one chapters I have respected the traditional line dividing supposedly subjunctive 'would' conditionals from indicative 'would'-less ones. In §6 I sketched the 'relocation thesis', which challenges this classification, presenting two reasons that have been given for putting Does-will indicatives such as 'If it rains tonight, the roads will be slippery tomorrow' into the same category as the subjunctives. I undertook to disprove the relocation thesis, which I shall now do.

My disproof starts with a set of facts about bases one may have for accepting an indicative conditional. Someone who regards A→C as probable has a belief system which, after being adjusted to admit and assimilate P(A) = 1, accords a high probability to C. That is the Ramsey 'test' or procedure for evaluating indicative conditionals. It worked hard throughout chapters 3 and 5-6 above; but now we must dig into it, *under* it, considering what goes on when your adoption of P(A) = 1 elevates your value for P(C).

The materials out of which your value for P(C) must emerge are these:

> A, the antecedent of the conditional;
> E (for 'evidence'), conjoining all that you believe about particular matters of fact, minimally adjusted to assimilate A;
> P (for 'principles'), containing whatever basic doctrine you use in inferring C from A&E.

The principles always include some logic, taking this broadly to cover mathematics, abstract probability theory, and other *a priori* aids to the mind. Sometimes they contain nothing else: 'If the child lived, the family now has as many boys as girls' could be accepted on the strength of (P) simple arithmetic together with (E) the belief that the child was a boy and the remainder of the family consists of one boy and two girls. More often P also includes causal doctrine ('If you put one more block on the girder, it will bend') or moral principles ('If he paid for the child's upkeep, that was noble of him') or both ('If you give him the injection, you will be behaving wrongly'). From here on, I shall be silent about P, audible about A and E.

Sometimes E is not needed, because C follows purely from A and general principles. These are independent conditionals

(§7), which I again set aside.

In many and perhaps all cases where someone accepts A→C, through the thought that certainty for A, when combined with her E, yields a high probability for C, this movement of her mind involves the makings of a thought about something's explaining or being a reason for something else, a thought with a *because* in it. Unpublished work by Mark Lance, years ago, first gave me the idea of asking with regard to any given conditional 'What is being thought to explain what?' My answers are mainly my own work, but I had to be prodded towards the question.

One might think that explanations have nothing to do with the likes of these: 'Even if I study from now until the time of the exam, I'll fail'; 'Even if the inspector didn't check it out, the work is up to code'. In such non-interference conditionals, it seems, the speaker accepts C unconditionally, giving no reason or explanation for anything. But perhaps not so. It is reasonable to think that the speaker bases 'I'll fail' upon (E) his not having worked all semester long, and bases 'The work is up to code' upon (E) the workers' being competent and conscientious; so in each case some elements in E give a reason or explanation for C. This rescue fails, however, if the person accepts C as a *basic* truth, not supported by any E and thus not explained by any. An example might be: 'Even if an omnipotent Deceiver is at work, I exist.' If there are such basic acceptances of propositions that can then be used as consequents in non-interference conditionals, then in those cases the basis for A→C does not support any explanation. Another possible class of exceptions will be mentioned in §133.

All I need is that bases for indicative conditionals *often* support explanations. I now observe that the latter are of three types:

A and E explain C.

C explains A.

C explains an element in E.

In the first case, if E were not helping A to explain C, it would have no role; then the person would be accepting the conditional as an independent one. E also has a role in the second case, and A in the third; I shall explain these shortly. At the outset, the main thing to be grasped is that the basis for accepting A→C may include an explanation for C, for A, or for E. Please note: *I do not assert that indicative conditionals are explanations*, but only that in many cases the basis for accepting such a conditional includes the makings of an explanation.

This tripartite scheme of bases for A→C turns out to have power, enabling us to bury the relocation thesis and to do much more. I shall now offer some examples, to put flesh on the abstract bones, and also to exhibit complications which I have so far suppressed.

133. Three patterns of explanation

Explaining C. Here the thought is of A and E leading to and explaining C. Example: 'If Checkit Inc. conducted the audit, the audit report is accurate', said by someone whose E includes propositions about Checkit's competence and honesty. Another: 'If Stauffenberg used his bomb, Hitler is dead', said by someone whose E includes propositions about the power of the bomb and the layout of the room. In each of these, the speaker envisages a state of affairs in which A and E explain C: the report's being accurate because E and Checkit wrote it; Hitler's being dead because E and Stauffenberg used his bomb. Cases will vary in how natural it is to pick on A, rather than on some elements in E, as 'the explanation' for C; but I need not go into this.

Explaining A. Here C explains A's supposed truth better than anything else would. 'If my umbrella is not in the coat

closet, then I took it to campus this morning.' Here, A has no tendency to explain C; but C helps to explain A. This supports A→C only if C is (essential to) *the best* available explanation for A.

The role of E is to help the C-involving explanation of A to be the best one available. It may do this in either of two ways. One is to enter into the explanation, making it stronger: part of my basis for 'If my umbrella is not in the coat closet, then I took it to campus this morning' might be my belief (E) that I did not bring my umbrella home from campus today. That combines with C to yield a nice strong explanation for A. The other way E can help the C-involving explanation to be the best is not by improving it but by eliminating rivals to it. Thus, part of my basis for the umbrella conditional might be my belief (E) that the umbrella was in the closet this morning. This does not contribute to any explanation for (A) its not being there now; but it helps C to be the best explanation for A by knocking out a rival explanation, namely that I left the umbrella on campus yesterday.

Here is another example of E's two possible roles. You might accept 'If (A) Joe died last week, (C) he had an accident', partly on the basis of your belief (E) that Joe has been climbing the north face of the Eiger. Add *that* to 'Joe had an accident' and you get a strong explanation for 'Joe died'. But your basis might (also, or instead) include your belief that Joe has recently been in excellent health and that he has no enemies. These happy aspects of Joe contribute nothing to explaining his death or his accident, but by eliminating two rival explanations they increase the likelihood that his death arose from an accident.

The two roles that elements in E may play in explaining-A bases are not both open to C. For an explaining-A conditional to be acceptable, C must be involved in explaining A, not merely in eliminating a rival. That is because C is the consequent: it is what one is pushed to, not what helps in the pushing.

When you accept a conditional on an explaining-A basis, you can properly use some cognate of 'must' in the consequent: 'If the umbrella is not in coat-closet, I must have taken it to campus this morning'; 'If Joe is dead, he must have had an accident.' This 'must' expresses a sense of being forced to accept a C-involving explanation because no other is as good.

Now for one of the suppressed complications. I have expounded only *straight* explaining-A bases for conditionals; there are also *V-shaped* ones, in which C does not help to explain A but is a consequence of whatever explains A. James Thomson (1990: 64) invented this beauty:

> If there is a copy of *Moby Dick* on that table, then there was at least one very large Great Dane with a solid gold collar in Paddington Station yesterday.

This could be accepted on the grounds that the best explanation for (A) the book's being on the table is (X) that Mary came here from London yesterday and left it there, which would probably involve (C) her coming via Paddington and bringing her Great Dane which. . . etc. This speaker thinks that A is best explained by X which in turn leads to and explains C. This has an explaining-C element in it, but it gets to C through an explaining-A move; so we can classify it as explaining-A, with the special feature that C is a consequence, rather than a part, of what does the explaining. I call this a V-shaped explaining-A basis for A→C. In it the thought runs from (A) the book on the table *to* (X) Mary's having come from London, and then off at an angle *from* X to (C) the dog at Paddington. One half of this is a straight explaining-A basis for the A→X, the other a straight explaining-C basis for X→C. These jointly yield A→C because *in this case* Transitivity holds (as it often does; it

takes ingenuity to devise cases where it fails). Elements of E can be involved in either part of this; in two different ways in the move from A to X, and in one way in the move from X to C.

Notice that like other explaining-A bases, the V-shaped one also involves a thought of being driven to something (Mary's trip from London) as the best explanation, so again 'must' is appropriate: 'If there is a copy [etc.], then there must have been at least one Great Dane [etc.].'

What about V-shaped explaining-C bases? They exist too. In them, C is explained by E in conjunction not with A but with something back-inferred from A. Someone might accept 'If (A) Smith was fired, (C) so was Wilson' on the grounds that 'Wilson definitely was or will be the first to be fired. If anyone was fired, Wilson was fired' (Sanford 1989: 192-3). In this case, the thought is that (A) Smith's being fired will have arisen from (X) some state of affairs—perhaps a down-sizing—which also leads to and explains (C) Wilson's being fired. One half of this is a straight explaining-C basis for X→C, the other half a straight explaining-A basis for A→X.

As those two examples show, if the basis for an indicative conditional is V-shaped, it can be classified as explaining-C or explaining-A; given a V, there is no difference between these. In the case I called explaining-A there is also a thought about what explains (C) the dog's presence at Paddington; and in the case I called explaining-C there is also a thought about what explains (A) Smith's being fired.

]Explaining E. Here, what is explained is an element in E, something that makes no appearance in the conditional itself. In the simplest case, what explains the E item is just C; what enables an explanation to figure as the consequent is that it is thought of as *the best* explanation for the E item. And the role of A is to help C to have this status by knocking out possible rival explanations of the E item. 'If the umbrella is not in the closet, my memory is failing.' In accepting this I have no thought of explaining either A or C. Rather, I think this: I have (E) a seeming memory of putting my umbrella in the closet and no memory of removing it; this could be because I put and left it there; but the hypothesis (A) that it is not there now eliminates that, and the best surviving explanation is (C) that my memory is failing. In my initial account of the three kinds of basis, explaining-E was the only one that did not mention A. That was because here, and only here, A neither explains nor is explained, though it makes a vital contribution to C's being the best explanation for the E item.

It may take more than one step to get from A to the elimination of the rival explanations of the E item. For example: I feel the cold ashes of what has been an enormous fire, and say, pointing to some drab plants growing nearby, 'If those are desert verbena, then this fire is many days old'. Initially the best explanation for the coldness of the ashes is that there has been heavy rain; but when rain falls on desert verbena they flower immediately, which those plants have not done. If they are desert verbena, therefore, there has not been rain recently; this rules out that explanation, leaving standing the cold-because-old one. This squarely falls within the explaining-E category: the only item that is explained is (E) the fact of the cold ashes; there is no thought of explaining either A or C.

Here again the knocking out of a rival makes it idiomatic to use 'must' in the consequent: 'If the umbrella is not in coat-closet, my memory must be failing'; 'If those plants are desert verbena, this fire must be many days old'.

A second suppressed complication is this. In explaining-E bases, C may enter the story dependently, not as helping to explain the E item but as an explained consequence of

whatever explains it. 'If those plants are desert verbena, we'll have no trouble crossing the stream': the plants have no flowers, as desert verbena always do soon after rain; so if they are desert verbena there has not been recent rain, in which case the stream will be low and we'll have no trouble crossing it. Here the E item is the flowerless state of the plants; the hypothesis (A) that they are desert verbena knocks out their being of any species that can remain flowerless even after rain; and that leaves standing the explanation that they are flowerless because there has been no rain recently; from which C follows.

When in an explaining-E basis C is a consequence rather than a part or aspect of what explains E, there is an explaining-C element at work also. In the last example, two things are thought of as explained: the flowerless state of the plants, and the ease of crossing the stream. But it suits me to classify all these as explaining-E because, as will appear in §135, the line of division that interests me has all the explaining-Es on one side of it, whether or not they also involve the explaining of C; on the other side are the bases in which C and/or A is explained and E is not.

C's dependence on the explained E item could be a lengthy, twisty affair. Someone might think 'If those plants are desert verbena, we'll have a European holiday next summer', on this basis: if the plants are etc., there has been no rain recently; so we'll have no trouble crossing the river; so I'll get home tonight; so I'll just have time to beat the deadline for joining the class-action suit; so I'll get money from the suit; so we'll be able to afford a European holiday; so. . . It would be risky to venture such a thing in conversation, but it is a possible *thought* for someone to have.

Some familiar examples fit snugly into the explaining-E frame. Being pretty sure that the gate was locked either by the porter or by the bursar, I accept 'If it was not locked by the porter, it was locked by the bursar'. In this case, (C) the gate's being locked by the bursar is my best explanation for (E) the evidence I have for my disjunctive belief, on the supposition that (A) it was not locked by the porter. I can have this thought without remembering what the evidence was.

'What if the whole story is that you believed someone who told you "Either the porter or the bursar locked the gate"?' If I believed him because I trusted him to have good evidence for what he said, that trust could lead me to think of C as the best explanation, given A, for that evidence of his, whatever it was. 'What if you believed him absolutely, for no reason, with no lurking thought of his being believable because he would have evidence for the disjunction's truth?' In such a case I would, indeed, be accepting A→C on a basis that did not support any explanation. Such cases, if they exist, form a second set of exceptions to my generalization that bases for indicative conditionals support explanations. From now on, I shall focus on acceptances of conditionals that do fit into my tripartite scheme, ignoring any there may be that do not.

In every explaining-E basis for an indicative conditional, the thought goes from A to an element of E and then off at an angle (so to speak) to C; but I shall not call such bases 'V-shaped', reserving that label for the ones I have associated with explaining-C and -A. The V-shaped bases are quite different from the explaining-E ones, despite the latters' back-and-forth aspect. In the former, the item at the angle of the V helps to explain C and A, but there is no thought about what explains *it*—about why Mary came from London, or why there was a down-sizing. In contrast with that, in an explaining-E basis the driving force is precisely an explanation for the item that is neither A nor C, the item

that could be said to lie at the angle of the V if 'V-shaped' were not being reserved for the other two kinds of basis.

134. Different bases for a single conditional

So we have three species of case in which someone accepts A→C. His basis may be of any one of the types: explaining-C, explaining-A, explaining-E. (Or it can be a V-shaped basis which is *both* explaining-A *and* explaining-C; but I shall not go on about that.) His basis for A→C cannot be read off from the conditional itself, for a single conditional might have one basis for one person and another for another. The following might be accepted on any of the three kinds of basis, by three people:

S: If Booth didn't shoot Lincoln, someone else did.

Christopher accepts S on the grounds that, while not knowing whether Booth succeeded, he believes that reliable plans were made for someone else to take over if Booth failed. His basis for S is of the explaining-C type. **Al**bert accepts S for reasons of the explaining-A type. He thinks that nothing could have deterred Booth from his assassination attempt except finding that Lincoln had already been shot by someone else. Albert gets from A to C on the grounds that C would best explain the truth of A. **E**dgar accepts S because of all the evidence he has (E) that Lincoln was shot by someone. His basis for the conditional is then of the explaining-E type: C is his best explanation for that E element, given the hypothesis A which eliminates the chief rival.

Every indicative conditional that could have a basis of one of the three kinds could instead have a basis of at least one of the others. Not always of both: when A and C are precisely enough dated, explaining-A and explaining-C cannot both be eligible unless we invoke backward causation. What enabled me to slide bases of each of the three types under the Booth-Lincoln conditional S was its silence about *when* Booth didn't shoot Lincoln and *when* someone else did. We need not struggle on with this topic, however. My focus will be on the fact that any instance of the form A→C that could have an explaining-C or explaining-A basis could instead have an explaining-E one.

The conditional 'If I touch that stove, I shall be burned' may look as though it could only be accepted on an explaining-C basis, and it and its kin have figured in the literature with that assumption tied to them. Here, for example: 'If one says "if you step on it, it'll break" one has already described its breaking as a causal consequence. . . of stepping on it' (Morton 1981: 139). In fact, though, Step → Break could be accepted on an explaining-E basis by someone who does not think of the stepping as causing the break; just as Touch → Burned could be accepted on an explaining-E basis by someone who knows the stove to be cold. Given how naturally one sees each as having an explaining-C basis, an example showing an explaining-E one has to be pretty fanciful; I need not apologize for that. Here goes.

The protagonist K is undergoing a series of mysterious ordeals at the hands of unknown tormentors. He has (E) a strong seeming-memory of being told that he will be subject to a horrible burn; he is sure that whatever he has been told is true; but he thinks the best explanation of this seeming-memory is that it was hypnotically induced in him, in which case he has no reason to think it to be veridical and thus no reason to expect to be burned. K is also sure that any hypnotism he has undergone has included the notorious *noli id tangere* procedure, which causes the subject to be invincibly unwilling to touch any household items. His touching the stove would knock out the hypnotism explanation for (E) his seeming memory, leaving it best explained by the hypothesis that it is veridical, which he thinks implies that he will be

burned. So he accepts Touch → Burned, on grounds that have no taint of the idea that touching will cause or explain burning. The core of this basis for the conditional is the explaining of (E) the seeming memory.

Another old favourite is 'If it rains tonight, the roads will be slippery tomorrow'. In the following story, Rain → Slippery is accepted on an explaining-E basis. In my locality, rain does not make the roads slippery; they have been treated so that water increases their coefficient of friction. I have here a document that includes weather predictions (including a prediction of rain tonight), local-government plans (including a plan to oil the roads tomorrow), and other stuff. It looks official; if it is, the weather forecasts are apt to be reliable, and the announced plans are apt to be carried out. But there are some signs that the entire thing may be a hoax, in which case I should not trust it for anything. If it rains tonight, however, that will incline me to accept the document as genuine: to the untrained eye, rain looks unlikely, so a true prediction of it is apt to come from the official meteorologists. If the document is genuine, the local government will probably carry out its plan to spread oil on the roads tomorrow. Thus, I give a fairly high probability to *If it rains tonight, the roads will be slippery tomorrow* on a purely explaining-E basis. On the supposition that there will be rain tonight, the best explanation for the existence of this document is that official government sources produced it, and one consequence of this is that the roads will be slippery tomorrow.

This unlikely story could be true; and if it were, Rain → Slippery would be acceptable on a basis of the explaining-E kind. There is nothing semantically, syntactically, or conceptually suspect about such a basing of this conditional.

A correspondent has told me that in the case as envisaged it is clearly all right for me to think

> (1) If it's going to rain tonight, the roads are going to be slippery tomorrow,

but that I ought to be 'a little doubtful' that

> (2) If it rains tonight, the roads will be slippery tomorrow;

and that some others have the same pair of intuitions. He also says that the doubt about 2 comes from doubt about

> (3) If it were to rain tonight, the roads would be slippery tomorrow,

which is doubtful, he says, since there is a suspicion that this is a hoax. I report the existence of these intuitions, out of respect for their owner. But I do not myself have them, and indeed cannot connect them with any thoughts that I find natural.

135. Indicatives and corresponding subjunctives

Does the important line dividing conditionals correspond to that between indicative and subjunctive conditional sentences? Relocators answer No, because of conditionals with a present-tense antecedent and a future-tense consequent, such as:

> Does-will: If the rouble falls below twenty to the dollar, the government will intervene in the market.

This has been classified as indicative—it has no 'would' in the consequent—and yet, the relocators say, any adequate basis for asserting it would also support:

> Had-would: If the rouble had fallen below twenty to the dollar, the government would have intervened in the market

at a later time, if in the interim the rouble did not fall below twenty. This thesis, which I have called 'Stand or Fall', encouraged some of us to think that Does-will differs

from Had-would only in tense (and perhaps in the speaker's attitude to the truth value of the antecedent), from which we inferred that Does-will belongs along with Had-would in the hopper containing all the subjunctives. The other bin was to contain only indicatives lacking the Does-will distribution of tenses.

In §94 I pointed out three repairs that must be made to Stand or Fall if it is not itself to fall. In the present chapter I shall filter those out by tackling a version of Stand or Fall that is silently restricted so as not to be asserted of cases where there are Gibbardian stand-offs, nearby forks, or appeals to indeterministically produced outcomes at the actual world.

With all that set aside, *now* can we say that Does-wills stand or fall with subsequent Had-woulds? No. That comes far short of the truth, because of these two facts:

- Does-will conditionals can have bases of any of the three types; so can indicative conditionals that are not of the Does-will form.
- The basis for an indicative conditional also supports the corresponding subjunctive if it is of the explaining-A or explaining-C type (whether V-shaped or not), but not if it is of the explaining-E type.

These imply that many supports for Does-will conditionals do not support the corresponding subjunctives, and that many supports for indicatives that are not of the Does-will form do also support the corresponding subjunctives. The announced reason for reclassifying Does-will conditionals, therefore, does not apply to all of them and does apply to many others.

Before examining what my two theses imply for the relocation thesis, I shall try to satisfy you that they are true, starting with an indicative conditional of the Does-will form.

We are watching a black earth-to-sky pillar of cloud approaching your villa outside Marrakesh; I ignorantly remark 'I hope it doesn't rain—that would make our picnic uncomfortable', and you—knowing more—reply sardonically:

If (A) it doesn't rain, (C) the picnic will be impossible.

Here are two stories about your basis for accepting this conditional.

Explaining-E: Your E is what you see to the east, and some general views implying that the two best diagnoses of what you see are that a rain-cloud approaches and that a sandstorm approaches; that, conjoined with (A) the hypothesis that it will not rain, implies that the best explanation for the cloud part of E is that a sandstorm approaches, which implies that (C) we cannot have a picnic. (Here, as always in Does-will conditionals with explaining-E bases, C is a consequence of what explains E, not a part of it.) In this case, the corresponding subjunctive conditional has no support. If it does rain, none of us will think 'If it hadn't rained, the picnic would have been impossible'. Given that it does rain, the closest worlds at which it doesn't rain contain no dark cloud with that trajectory; they don't contain one with that trajectory but carrying sand. If at the relevant time the weather god had been flipping a mental coin to decide whether to afflict us with a rain-storm or a sand-storm, and it did rain, it *would* have been true that if it hadn't rained the picnic would have been impossible because of the sand-storm. But what would make that true is not the basis on which you accepted your indicative conditional. My thesis is not that if the indicative is acceptable the corresponding subjunctive is false, but rather that an explaining-E basis for the indicative does not support the corresponding subjunctive.

Explaining-C: You believe that unless some cooling rain falls it will be too hot for a picnic. You think that (A) the

non-occurrence of rain would contribute to, and in that sense explain, (C) the impossibility of the picnic. If this is how things stand, and it does rain, you will be entitled to think 'If it hadn't rained, the picnic would have been impossible'; and you can base this on the same beliefs as were the basis for your indicative conditional.

Now let us look at an indicative conditional that is not of the Does-will but rather of the Did-did type. Last night I heard party noises from the beach; they didn't keep me awake, but this morning I wonder how long the party went on. I thought I saw a police car heading that way at about 8 p.m., and I think:

> If (A) the police arrived at the party at 8 p.m., then (C) then it was over by 9 p.m.'

Here are two stories about my basis for this conditional.

Explaining-E: I believe that on our island the police almost never visit parties except (for public relations purposes) ones for elementary school children, and I also think that such parties nearly always end by 9 p.m. because school officials think that by then young children should be heading for bed. So, given the supposition (A) that the police were there, the best explanation for (E) the noises I heard is that elementary schoolers were having a party, which makes it probable that (C) the party was over by 9 p.m. Thus I accept Police $\rightarrow$ Early. If it turns out that the police were not there and teen-agers partied on into the small hours, my basis for Police $\rightarrow$ Early does not entitle me to accept 'If the police had been there, the party would have ended by 9 p.m.'. This subjunctive may be true; I may even believe it to be true; but my belief in it could not rationally arise from the beliefs on which I based the indicative conditional.

Explaining-C: I think that if the police intruded into the party, they closed it down before 9 p.m.; they nearly always do. This explaining-C basis for Police $\rightarrow$ Early plainly supports the corresponding subjunctive.

Finally, I offer an example in which the choice is between explaining-E and explaining-A. I am surveying a mountain from below, wondering how the climbers are getting on. As I start to unlimber my telescope, I think:

> If there is a flag on the summit, Edwards got there.

As before, two stories.

Explaining-E: I have (E) visual evidence that either Edwards or Gilson has been climbing the mountain; I am not sure which; not both. I believe that whoever it is will have reached the summit; and I know that when Gilson reaches a summit he celebrates by removing any flags he finds there, not replacing them with others. Thus, given (A) that there is flag there, the best explanation for (E) the evidence of my eyes is that (C) Edwards has been climbing the mountain, and so I accept Flag $\rightarrow$ Edwards. There need be no thought of him as planting the flag. Now, suppose that when I look through my telescope I see the summit to be flag-free, and I later learn that Gilson got there and Edwards spent the day at home. In this eventuality, my explaining-E basis for Flag $\rightarrow$ Edwards gives me no basis for accepting 'If there had been a flag there, Edwards would (have to) have reached the summit'. A better rival to that is 'If there had been a flag there, Gilson would (have to) have omitted his usual cleansing chore'.

Explaining-A: I think that Edwards is the only person who has been attempting to climb the mountain today, and that there was no flag on the summit this morning. This gives me an explaining-A basis for accepting Flag $\rightarrow$ Edwards, which clearly supports the corresponding subjunctive: 'If there had been a flag there, Edwards would (have to) have got there.' Quite generally, explaining-A bases for indicatives support temporally backward subjunctives.

There is nothing wrong with the latter. I stand by my §110 theory about their truth-conditions. Edwards didn't get there, and there is no flag. The closest worlds at which there is a flag are ones that fork from the actual world at about noon, with Edwards having slightly better luck in negotiating the ice-fall, and reaching the summit. Compare: 'If Stevenson had been President in February 1953 he would have to have won the election in the previous November'. (Backward subjunctives sound better with the 'have to' or the like in the consequent. See §108 and §133 for the reason.)

An explaining-E basis for accepting A→C usually or always supports some subjunctive conditionals, but never the corresponding one, the one with the same A and C. You and I accept 'If Booth didn't shoot Lincoln, someone else did', because of the evidence we have that Lincoln was shot by someone. Our explaining-E basis for accepting this conditional supports *some* subjunctives—perhaps 'If there had been a conspiracy to fake Lincoln's death, it would have been revealed by now'—but it could never support 'If Booth hadn't shot Lincoln, someone else would have'.

Summing up: a forward subjunctive conditional makes a claim about A's power to lead to and explain C, which connects it with the explaining-C basis for A→C; a backward subjunctive makes a claim about C's power to lead to and explain A, which connects with the explaining-A basis for A→C. The explaining-E basis is squeezed out of this story, because in it there is no explanatory relation *between* A and C, which there must be in subjunctive conditionals—except for non-interference ones, where the message is that A's truth would not interfere with whatever facts explain C's truth (§91).

When philosophers adduce examples to show how greatly indicatives differ from subjunctives, they always illustrate the former with ones whose most natural and likely bases are of the explaining-E sort. Now we can see why. While not explicitly aware of the three types of basis, these philosophers have been subliminally guided to examples where the most likely basis for acceptance is of the kind that does not support the corresponding subjunctive.

136. The anatomy of explaining-E bases

The relocation thesis is in trouble right across the range of indicative conditionals, but most acutely with explaining-E Does-wills. Their form is its central topic, yet they refuse to behave as it demands.

A friend of mine who likes the relocation thesis better than I do has put it to me that Does-wills with explaining-E bases are too rare and peculiar to count as a serious obstacle to the relocation thesis. Not so. My stove and road examples in §134 are indeed contorted affairs, but those are special cases—conditionals that I tackled precisely because philosophers have confidently thought they *must* have explaining-C bases. When in a general way we inquire after explaining-E Does-wills, we find that they are neither strange nor sparse. There is nothing exotic, except geographically, about my sandstorm example in §135.

Here is a recipe for constructing plausible conditionals with explaining-E bases:

> Take an E for which there are two or more plausible diagnoses, and an A whose truth knocks out all but one of them. Choose as C either the surviving diagnosis or something that would be a consequence of the truth of the surviving diagnosis.

There you have it: A→C on an explaining-E basis. Here is the recipe for explaining-E bases for *Does-will* conditionals:

> Take an E for which there are two or more plausible diagnoses, an A *about the future* whose truth knocks out all but one of them, and a C *about the future* whose

> truth would result from the truth of the surviving diagnosis.

This differs in twice requiring futurity, once each for 'does' and 'will'; and in requiring C to be a consequence of the surviving diagnosis rather than being identical with it (also because of 'will'). Let us apply it to the sandstorm example. E is the presence of a black cloud, diagnosable either as rain or as sand; A is the proposition that there will not be rain tonight, which knocks out the rain diagnosis; and C is the proposition that the picnic will be impossible, which is a consequence of the truth of the sand explanation.

This humdrum stuff reveals no reason why Does-wills with explaining-E bases should not be as common as blackberries. Such bases are, at any rate, squarely within our conceptual repertoire and are at least sometimes of interest to us; and the Does-will form of indicative conditionals accommodates them beautifully. We should not flirt with any theory of conditionals that requires us to push these ones out of sight.

My examples have supplied evidence that explaining-E bases for Does-will and other indicative conditionals do not support corresponding subjunctives. Now I am in a position to say *why* they do not do so.

It is not because of their back-and-forth aspect, because that is also possessed by V-shaped bases for explaining-A/C conditionals. (Recall that when the basis is V-shaped, explaining-A and explaining-C are one.) In a V-shaped basis we have an A that is best explained by supposing X, and a C that X would lead to and explain, with Transitivity holding along this short chain. In such a basis, the belief in X comes from the acceptance of A, which it explains; and the belief in C comes from the belief in X, which explains it. If in fact A does not obtain, we still have here a structure making it reasonable to suppose that at the closest A-worlds X obtains (to explain A), and C obtains (in consequence of X). There was in fact no copy of *Moby Dick* on the table; but if there had been, it would have been because Mary had come from London bringing a dog through Paddington Station.

In a zigzag explaining-E basis, on the other hand, what connects A with C is something that *does* obtain, not merely something postulated to explain A if *it* obtains. Consider 'If it doesn't rain, there will be a sandstorm'—said on the strength of a big black cloud coming our way. What is inferred from the no-rain supposition is a diagnosis of the cloud, an account of what sort of cloud it is; and that diagnosis leads to the (conditional) prediction of a sandstorm. Now, suppose that rain falls, showing that the cloud contained rain, not sand, and consider what we can think of the form 'If it had not rained. . . '. Such thoughts concern worlds at which this cloud does not appear at this time and place, or where it shows up but retains its moisture. It would be absurd to think that at such worlds there is a different big black cloud—one full of sand—at this place and time. Sand entered the picture only through a *thought of ours* about the cloud. It was a sound thought: the cloud-appearance that we saw was bound to portend either rain or a sandstorm. But there is no time in the world's history at which a slight shift in events would have led to—instead of this rain-cloud—a sandstorm at the same time and place.

As I feel the rain falling, I may think: 'Thank God the other diagnosis was wrong! If it hadn't been—if the cloud hadn't been bringing rain—we would now have sand flaying the skin off our faces.' That, though, is playing with a fantasy, not asserting a subjunctive conditional about what would have ensued if the world had gone differently. The nearest it can come to respectability is as a directly grounded conditional (§113), a non-historical affair derived immediately from a Trusted generalization about the effects of sandstorms.

137. Rebuilding the relocation thesis[1]

The relocation thesis says that the Does-wills among indicative conditionals ought to be classified with the subjunctives on the grounds—first and foremost—that each such indicative stands or falls with the corresponding subjunctive: "'If P were the case, Q would be the case" is true if and only if at some earlier date. . . "If P is the case, Q will be the case" was assertible' (Woods 1997: 84). This bold biconditional has turned out to be false in each direction. The 'nearby forks' phenomenon yields Does-wills that do not go with Had-woulds (§94), and an even richer harvest is provided by the multitude of Does-wills that have explaining-E bases. And Had-woulds that do not go with Does-wills are provided by the 'indeterminacy and actual truth' phenomenon (§94). Further trouble is made for the relocation thesis, though not for Woods's biconditional, by the existence of indicatives that stand or fall with the corresponding subjunctives but are not of the Does-will form. The relocation thesis lies in ruins.

Dudman accepts the thesis, using 'hypothetical' to cover (roughly) indicatives other than the Does-will ones, and 'conditional' for Does-will indicatives and subjunctives. He bases the line he draws on grammatical considerations that I am not persuaded by; I glanced at some of them in §§2–3, and shall not return to them. He also offers this: 'Hypotheticals and conditionals are. . . products of quite different styles of reasoning. A hypothetical is arrived at by arguing from proposition to proposition, a conditional by envisaging a developing sequence of events' (Dudman 1984b: 153). I remark that one basis for arguing from proposition to proposition is how one envisages a developing sequence of events; to which I add the reminder that in this chapter I have shown that plenty of Does-wills (supposedly conditionals) do not envisage such sequences, and that plenty of other indicatives (supposedly hypotheticals) do envisage them.

The only way to rescue *some* relocation thesis is by shifting to the position that what should be lumped in with the subjunctives are not the Does-wills but rather the explaining-A and -C subsets of them.

But the members of these sets are not conditional sentences, but rather *bases for the acceptance of* such sentences. The relocator will have to say he is classifying *propositions*—meanings of sentences—and that an indicative conditional sentence means different things when accepted on different bases. Thus, for example, 'If I touch that stove, I will be burned' has one meaning in the mouth of someone who accepts it on an explaining-C basis and another for someone—like my Kafkaesque victim in §134—whose basis for it is of the explaining-E kind. In one of its meanings it goes in with the subjunctives; in the other, not.

Because any indicative conditional (sentence) could be accepted on an explaining-E basis, this new relocation thesis implies that *every single indicative conditional is ambiguous*. I cannot believe this.

Suppose you have good evidence that someone has shot Lincoln, which leads you to accept 'If Booth didn't shoot Lincoln, someone else did', on an explaining-E basis. I on the other hand am one of the conspirators; without yet knowing exactly what happened, I believe plans were in place for someone else to take over in the event of Booth's failing. So I too am in a position to assert: 'If Booth didn't shoot Lincoln, someone else did', but on an explaining-C basis. Now, if either of us asserts the conditional and asks 'Don't you agree?', it would be excessively odd for the other

[1] This section refers to topics discussed earlier in the book, using some technical terms that were introduced back there. It is included here in case you want a glimpse of the further implications of the line of thought presented in the rest of this chapter.

to say 'It depends on what you mean'. It is more natural to take the sentence as the vehicle for an agreement between us and to think that we differ only in our reasons for accepting it—just as two people might agree that *Lincoln has been shot*, one because he believes that people planned to shoot Lincoln and trusts them to have succeeded, the other because he found the bullet in the body. I am indebted here to Dorothy Edgington, who pulled me back from the precipice at a time when I *was* disposed to postulate ambiguity—a fact which now embarrasses me.

Here is another argument against ambiguity. The sentence 'If Booth didn't shoot Lincoln, someone else did' certainly has *one* sense in which it implies nothing about the speaker's basis for it. We must be giving it that neutral sense when we understand any of these:

- 'They both accept, though on different grounds, that if Booth didn't shoot Lincoln someone else did',
- 'Why do you think that if Booth didn't shoot Lincoln, someone else did?'
- 'Unless you have good grounds for it, don't accept that if Booth didn't shoot Lincoln, someone else did'.

If there is an ambiguity, then, some instances of this form must *also* have stronger meanings, in each of which their asserted content speaks of the basis on which they are accepted. What could make it reasonable for a speaker to expect to communicate such a stronger meaning—an explaining-C one, for instance?

He would have to be relying on some feature of the context: he and his friends have been discussing reliable causal structures; or his conditional needs an explaining-C basis if it is to answer a question he has just been asked; or nobody in his society would normally accept this conditional on any basis but an explaining-C one because any other basis would be weird (like my 'stove' and 'roads' ones); or the like. The speaker who knows such facts can rely on them to help him communicate that he accepts his conditional on an explaining-C basis. But this help is contextual, which removes any need to load extra meaning onto the sentence itself; and because we *can* handle the data without postulating ambiguity, we *ought to* do so. I say this on the strength of the semantic Occamism that Grice defended by argument and made irresistible by his best uses of it (§10).

This argument threatens to imply that no sentence in any natural language is ambiguous through having two conventional meanings of which one is stronger than the other. That is somewhere near the truth, I think.

Sometimes a conditional's content implies something about its basis. When A pertains to a later time than C does, this pretty well settles it that the speaker does not have an explaining-C basis for accepting A→C; and when A pre-dates C the basis can hardly be of the explaining-A type. Far from showing the conditional to be ambiguous, however, this reinforces the idea that it has only one meaning and that further news about what the speaker has in mind can be gathered from further facts about it. Analogously, George is Helen's uncle if he is a brother of either her mother or her father; some contexts could make clear which ('George is Helen's uncle; having never had any sisters, he feels especially close to her'); but in those contexts 'George is Helen's uncle' does not have a narrowed meaning.

Objection: 'Whatever you may say about ambiguity, isn't it just obvious that someone might assert Rain → Slippery and *mean by it* that if it rains tonight that will result in the roads' being slippery tomorrow? If so, that puts into the meaning of what he says its explaining-C basis and thus also its likeness to a subjunctive. So there is *some* such ambiguity. Perhaps there is a lot of it.'

Well, when someone wants to communicate that if it rains tonight that will result in the roads' being slippery tomorrow, he can do this explicitly in augmented conditionals using 'as a result' or 'that will lead to' and the like. No doubt, someone who asserts the *un*augmented 'If it rains tonight, the roads will be slippery tomorrow' might want by that to communicate that the slipperiness will result from the rain, and he might succeed. But it does not follow that the unaugmented sentence has as one of its conventional meanings the message that if it rains, the roads will be slippery as a result. The speaker can reasonably expect to get that across through the unaugmented conditional because neither he nor his hearers are within miles of thinking of any explaining-E basis for accepting it. But that, far from including the 'result from' part of the message in the meaning of what he says, is a reason for excluding it.

Compare this with something Grice taught us. You ask me when the meeting will be held, and I say 'They scheduled it either for Monday or for Wednesday'. Seeing no reason why I should withhold information (I seem not to be joking, teasing, making a philosophical point, or conducting an intelligence test), you infer that I am not sure of the day. You may even think I have told you so; and so I have, in a way, but not in a way that puts my indecision into the meaning of my sentence. Some philosophers used to think otherwise, but Grice's work on pragmatics, and his use of it to defend semantic Occamism, has cured everyone of this error (§§10–11). All the facts that might be explained by attributing that rich meaning to *some* occurrences of 'either. . . or. . . ' can be perfectly well explained by combining a thin truth-functional meaning to 'either. . . or. . . ' and attending to what generally goes on in civilized discourse.

Renewed objection: 'But what if he asserts Rain → Slippery and *thinks that* he is not merely *conveying somehow* that his conditional has an explaining-C basis but is actually *saying* that it does so?' I am sceptical about this person who has such a theoretical opinion about what he is doing. People have views about what they mean to get across, but few outside philosophy seminars draw lines between conventional meaning and conversational implicature. However, if there is a person such as I am here challenged with, he is in error about what his utterance conventionally means. Similarly with someone who says 'I could care less' to express indifference, or who says 'No head-injury is too trivial to ignore' meaning that every head-injury, however minor, should be taken seriously. Mistakes like these can be widespread yet still be mistakes, and we know how to show this.

I have argued that the relocation thesis is shipwrecked on the facts about bases for indicative conditionals. It has other troubles as well; see especially the compact and powerful battery of them in Edgington 1995b: 317–20.

Before dismissing the relocation thesis, I should confront an argument recently offered in its defence by Dudman. Here is the whole of it:

> (1) It is a key tenet of 'the traditional way' [of classifying conditionals] that Doesn't-will, as it might be *that if Oswald doesn't shoot Kennedy someone else will*, is logically indiscernible from Didn't-did, *that if Oswald didn't shoot Kennedy someone else did*, the former merely formulating about the future what the latter formulates about the past. (2) A tenet no less central to the tradition has *that someone will shoot Kennedy* is logically indiscernible from *that someone shot Kennedy*, the former merely formulating about the future what the latter does about the past. (3) Didn't-did follows from the proposition *that someone shot Kennedy*. (4) A conspirator espousing the

> not untenable view that Oswald will shoot Kennedy in a plot that includes no back-up killer obviously maintains *that someone will shoot Kennedy* but need not accept Doesn't-will. Q.E.D. (Dudman 2000)

Dudman's title for this piece is 'Classifying "conditionals": the traditional way is wrong'. That is what *erat demonstrandum*.

Consider Dudman's claim (3) that (iii) 'If Oswald didn't shoot Kennedy someone else did' follows from (ii) 'Someone shot Kennedy'. He offers this, presumably, as a classically valid entailment, as though iii were a proposition with a truth value. Even within that false framework, this entailment claim is indefensible. There can be no denying that ii is entailed by (i) 'Oswald shot Kennedy', and no denying that entailment is transitive. Presumably there can be no affirming that i entails iii.

When we move to the more realistic and well defended view that iii does not have a truth value, and must be evaluated in terms of conditional probabilities, Dudman's (3) disappears and his argument collapses in a different way. It is true that someone *might* regard (A→C) 'If Oswald didn't shoot Kennedy, someone else did' as highly probable because he thinks it probable that (E) someone shot Kennedy; but if his only reason for thinking E to be probable is that he thinks it probable that (¬A) Oswald shot Kennedy, that will not lead him to attach a high probability to A→C. In short, the move from ii to iii is not probabilistically valid (§53).

Something similar occurs in one of Lycan's arguments against NTV, the thesis that indicative conditionals lack truth values. 'Many indicative conditionals are logically equivalent to briefer non-conditional sentences', he writes, challenging the friends of NTV to explain this (2001: 77–8; see also page 147). He gives this example:

(a) John murdered Sandra if anyone did.

(b) No one other than John murdered Sandra.

If these are logically equivalent (I reply), then any evidence for either counts also in favour of the other. But evidence that nobody murdered Sandra counts in favour of *b* without counting much in favour of *a*. The non-equivalence of the two shows in how they behave in contexts of imperfect certainty. Suppose I have pretty good evidence that nobody murdered Sandra, tempered only by a few slight pointers to Henry's having done so. This should make me pretty sure of *b* and very *un*sure of *a*—so the move from *b* to *a* is not probabilistically valid, and the two are not logically equivalent.

Lycan is not entitled to object that probabilistic validity is a concept to which he owes no allegiance. Even without accepting Adams's whole theory about it, everyone must agree that if *a* and *b* are 'logically equivalent', any rational person must accord the same level of credence to both. Furthermore, anyone who contends that 'Nobody murdered Sandra' entails *a*, perhaps hoping to explain away our contrary intuitions somehow, must concede that 'Nobody murdered Sandra' entails *every* statement that can be derived from *a* by replacing 'John' by some other name—for example, it entails that *you* murdered Sandra if anyone did. The only way to defend that is by construing the latter conditional as meaning 'Somebody murdered Sandra ⊃ You murdered Sandra', which is true because its antecedent is false. But that defence involves accepting the horseshoe analysis, which Lycan rightly rejects.

Here is Lycan's other 'logically equivalent' pair:

- If Reagan is a Russian spy, no one knows he is.
- No one knows that Reagan is a Russian spy.

These two also behave differently under uncertainty. You could be pretty sure that no one knows that Reagan is a Russian spy, simply because you are confident that he is not one, while at the same time hesitating to agree that if he is one, no one knows.

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