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'EVEN IF'

In the analysis of corner conditionals – meaning, roughly, ones with a 'would' in the consequent – there are two obstacles to progress which can be cleared away by a proper understanding of the meaning of the word 'even'. In sketching these, I use $(P > Q)$ to abbreviate 'If it were the case that P, it would be the case that Q' and $(eP > Q)$ to abbreviate 'Even if it were the case that P, it would be the case that Q'.

Firstly, Pollock contends that there is a certain way of using 'even if' in which $(eP > Q)$ entails Q.[1] Faced with examples such as 'Even if he drank just a little he would be fired', in which the consequent's truth is not even implied, let alone entailed, Pollock says that his thesis holds for "what is in some sense 'the standard use' of 'even if'", implying that the 'Even if he drank . . .' sentence is not a standard use of 'even if'.

Against this I shall argue that quite generally $(P > Q) \supset (eP > Q)$, from which it follows, since $(P > Q)$ does not entail Q, that $(eP > Q)$ doesn't either. My contention will be that at most $(eP > Q)$ sometimes *implies* Q, meaning that Q's truth is never required for the truth of $(eP > Q)$ but is sometimes required for its being satisfactory, felicitously asserted, or the like. That is a not uncommon view; but it is less common to argue for this, as I shall, on the basis of an account of the meaning of 'even' which unifies the 'even if' sentences which do with those which do not imply the truth of the consequent, and unifies both of those with many non-conditional sentences containing 'even'.[2]

Secondly, some writers on corner conditionals, including Bigelow[3] and myself, have argued that a certain proposition which is in fact sufficient for the truth of $(eP > Q)$ is not sufficient for the truth of $(P > Q)$. My account of the meaning of 'even' will entail that $(eP > Q) \supset (P > Q)$, which means that you can't weaken a corner conditional by putting 'even' at the start of it. It follows that the Bigelow thesis, if I may call it that, is false: something which suffices for the truth of $(eP > Q)$ must suffice for the truth of $(P > Q)$ also.

Putting the two announced theses together we get the biconditional: $(eP > Q) \equiv (P > Q)$. So far as truth conditions are concerned, there is no class of 'even if' conditionals.

In Sections 3–4 I shall present the analysis of 'even' as it occurs in certain kinds of non-conditionals; then I shall re-apply it first (Section 6) to 'even if' sentences which don't imply their consequents and after that

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(Section 7) to ones which do. This will be brought to bear on Pollock in Section 8, and on Bigelow in Section 9. Taxonomy will be discussed in Section 2 and Section 5.

2. What the analysis covers

The way of using 'even' which I shall describe is gestured towards in Oxford English Dictionary's entry for 'even' as an adverb, Section 9: "Intimating that the sentence expresses an extreme case of a more general proposition implied (Fr. *même*)". We can also get something of a fix on the use in question by looking at four of the OED's five groups of examples, which include: (a) 'Even this stupid gardener is as useful to society as I am'; (b) 'Even on that memorable occasion, his stay did not exceed two months'; (c) 'Even if there were no other evidence, we would still be justified in assuming...'; (d) 'He maintained a strict reserve, and even shunned her presence'. All of these come under the analysis I shall offer.

The analysis will not cover the OED's fifth species, exemplified by (e) 'My wife's satisfaction was even greater than my own'. In putting this with the others, the OED made a definite mistake in which it has been followed by some linguists.[4] I have no firm pre-theoretic account of what the others have in common that (e) lacks; but I expect my analysis to satisfy the reader that there is a semantic natural class which includes (a) through (d) and cannot be enlarged to take in (e).

I am here taking (e) to stand for all uses of 'even' to emphasize a comparative – uses of it, while saying that x is more F than y, to imply that y is also very F. My wife's satisfaction is describable as "even greater" than mine because mine was great. The OED's own formula about "an extreme case of a more general proposition", vague as it is, doesn't fit (e) stressed comparatives as well as it does (a) through (d). Another bit of preliminary evidence that (e) doesn't belong here is the following. The OED takes the French word *même* to be equivalent to the use of 'even' which is here in question, and implies that it is under the influence of *même* that English, uniquely amongst Teutonic languages, has any one word which does this particular work; but in translating the OED's examples into French one can use *même* for every example in (a) through (d), while to translate (e) what is needed is not *même* but *encore*.

3. The basic analysis

Let us start with a mildly famous example: 'Even Max tried on the trousers'. One thinks of this as felicitously said in a situation where Max

did try on the trousers, and so did someone else, and it is more surprising that Max did than that the other person did. It is plausible to suppose that the first of these is asserted, and the other two merely implied; i.e. that the first is required for truth and the others only for felicity of utterance; but at present I am ignoring that distinction. I shall speak of what is needed for the uttering of a sentence token to be felicitous, taking it that truth is one part of felicity, which I am not distinguishing from any other parts there may be.

Let us try to generalize that account of 'Even Max tried on the trousers', so as to get a formula which covers all our territory.

Firstly, in each case one part of the sentence constitutes what I shall call the *scope* of 'even' in that sentence token. Think of the scope of 'even' as that part of the sentence on which 'even' acts as an operator; that gives the general idea, and I shall refine it in my next section.

Given any sentence S containing 'even', used in the manner I am concerned with, a *simplified* sentence S^* can be formed by dropping 'even' from S. Thus, if S is 'Even the children laughed at him' then S^* is 'The children laughed at him'.

From S^* we can form countless *neighbours* of S, as I call them. To form a neighbour of S you take S^*, delete from it that part which constituted the scope of 'even' in S, and replace it by something else which yields a sentence. Thus, if in

(S) 'Even the children laughed at him'

the scope of 'even' is 'the children', then we have

(S^*) 'The children laughed at him'

as the simplified sentence, and

(S_1) 'Everybody laughed at him'

(S_2) 'Nobody laughed at him'

(S_3) 'His grandmother laughed at him'

and so on, as neighbour sentences to S.

Now, if S is one of the sentences we are interested in, an asserting of S is fully satisfactory – that is, what is asserted is true and the asserting of it is felicitous in other ways – if and only if S^* is true and there is a neighbour S_j of S such that:

(i) S_j is true, and mutually believed by speaker and hearer, and salient for them (e.g. it has just been authoritatively asserted);

(ii) the truth of S^* and that of S_j can naturally be seen as parts of a single more general truth;

(iii) it is more surprising that S^* is true than that S_j is true.

For brevity, let's express condition (i) as 'S_j is known' – but remember that that is only short-hand. Then the whole story is that S is happily asserted if and only if (1) S^* is true and (2) there is a neighbour sentence which is known, related, and less surprising.

For example, 'Even Max tried on the trousers' looks true and felicitous if it has just been said that Peter tried on the trousers, this being more in character than that Max should try them on. In such a case, the relevant S_j is 'Peter tried on the trousers', which is (i) known, (ii) related to S^* in the truth that two of the party tried on the trousers, and (iii) more expectably true than S^* is. Don't underestimate (iii): if it is not satisfied, the utterance of S is a mishap. "Paul wasn't on form in the tennis tournament last week. His grandmother beat him. Even Jimmy Connors beat him."

Try it now with 'Max even tried on the trousers', where the scope of 'even' is 'tried on'. This will be felicitous if someone has just said that Max looked at the trousers, asked about their price, held them up against himself etc., and all of that is more expectable than is his trying them on, though he did try them on.

Or try it with 'Max tried on even the trousers', where the scope of 'even' is 'the trousers'. (Incidentally, although one can help make clear what the scope of 'even' is by putting the word in front of its scope and as close as grammar permits, or after it separated by a comma, there are no hard and fast rules about this. The scope of 'even' in a given sentence token depends on the intentions of the speaker, and our means for conveying what those intentions are are quite flexible. Spoken and written stress can be a help: we can easily see the intended differences in the scope of 'even' in 'Even *her* children laughed at him' and 'Even her *children* laughed at him' and 'Even *her children* laughed at him'.)

Of my conditions on the neighbour sentence S_j, the unity condition (ii) will often be automatically satisfied because of the large verbal overlap between S^* and S_j – their having in common everything in S^* that does not fall within the scope of 'even'. But sometimes there is no overlap; and even where there is one, what matters is not that but the natural conceptual unity which it brings with it.

How could S^* and S_j fail to overlap? Well, the scope of 'even' in S might be the whole of the rest of S, and in that case, by my definition of 'neighbour', every sentence whatsoever is a neighbour of S. It's not important that that is a funny use of 'neighbour'. What matters is that 'even' can have as large a scope as that, as in the rather stilted

It is even the case that Max tried on the trousers,

or the stylistically better, and perhaps sufficiently clear,

Max tried on the trousers, even.

That could be satisfactorily said if it were already known (S_j) that John examined the trousers and Harry tried on the coat and Robert tugged at the buttons and Mary argued with the salesman (so that the truth of S_j and S^* come together in the general fact that the party investigated the suit thoroughly), and if Max's contribution to the inquiry was more surprising than the others.[5]

4. THE NOTION OF SCOPE

I define 'scope' in terms of the analysis in which it is used. According to the analysis, a true sentence S of the kind I am interested in is felicitously asserted just in case there is a sentence S_j which differs from S^* only in respect of the scope of 'even' in S and which satisfies a certain triple condition $\emptyset$. Now I say that the basic way to identify the scope of 'even' in a given sentence S is to find an S_j whose being $\emptyset$ would suffice for S's felicity, and to identify the smallest continuous part P of S^* such that the whole difference between S^* and S_j is that where S^* has part P S_j has a continuous part P_j. Part P is the scope of 'even' S. (That doesn't apply if there is another neighbour S_k which is equally eligible and pin-points a different part of S^* as the scope of 'even' in S. In that case, S is ambiguous with respect to the scope of 'even' in it, and my analysis is silent about it.)

Notice that I say "part" and not "proper part". In the case of 'Max tried on the trousers, even', the scope of 'even' is the whole of S^*, and the corresponding part P_j of the relevant S_j will in fact be the whole of S_j.

Not only can one of these "parts" be the whole of the sentence in question; it can also be null, empty, a mere absence from the sentence. Consider these examples: 'Conflicts of interest make him angry. Indeed, even *allegations of* conflicts of interest make him angry.' 'The Soviet authorities put dissidents into mental hospitals. They put even *the relatives of* dissidents into mental hospitals.' 'There has never been a miracle. There has never even been *prima facie evidence* of a miracle.' In each of these, one could insist on making the scope large enough so that some of it occurs in S_j as well, e.g. saying in the first case that the scope of 'even' in S is 'allegations of conflict of interest' and that in S_j this is replaced by 'conflicts of interest'; but I choose not to say that, but

rather to allow that the move from the relevant S_j to S^* is sometimes not a switch but a sheer enlargement, a replacement of a null part P_j by a non-null part P. I imagine one could contrive cases which worked the other way, where the scope of 'even' in S was, so to speak, the absence of some part of S_j. But I predict that it would be hard to manage this successfully in conversation, and for my purposes it's not important, whereas the converse case which I have been discussing will matter later on.

Something else which will matter is a slight change in the account, which I now introduce. Consider: 'Mary hopes that the game will be postponed. Even Jim and Helen hope that the game will be postponed.' What is the scope of 'even' in the latter sentence? The natural answer is 'Jim and Helen', which is put in the place of 'Mary' in S_j. But there is another change as well: where S^* has 'hope' S_j has 'hopes', which commits me saying that the scope of 'even' in S is not 'Jim and Helen' but rather 'Jim and Helen hope'. I would rather not say this. Guided by my informal hunches about scope, and by the form of the theory which I find most serviceable, I stipulate that S^* can differ from S_j in respect of the scope of 'even' *and in other ways which are linguistically required by the former difference*, and that nothing is to be included in the scope of 'even' if it can be accounted for in the latter way.

Changes may be linguistically required in various ways. Sometimes the requirement is syntactic: I presume that most theories will classify as syntactic the wrongness of '(Even) Jim and Helen hopes that the game will be postponed'. In other cases it is semantic: "John cuts his own hair. Even his wife cuts her own hair." The switch from 'his' to 'her' is required because of a fact about the *conventional* meaning of 'wife'. In yet other cases, a change will be required by what *the speaker* means by something in the scope of 'even'. For example, 'John cuts his own hair. Even Pat cuts her own hair' – where 'her' is required because the speaker means 'Pat' as the name of a female person.

5. An aside on "even" with comparatives

The analysis I have given obviously does not fit stressed comparatives like the (e)-type 'John was even taller than Bill' and 'My wife's satisfaction was even greater than mine'.

There are, however, uses of 'even' which do fall under my analysis while also involving comparatives. For example: "His psycho-therapy has made him happier than he used to be, as well as calmer, better tempered, more loving towards his wife, and more efficient at work. *He*

is better looking, even". Here the scope of 'even' is 'good looking' (I am pretending that 'better looking' is written 'more good looking'): we have the salient S_j that he is more F than he used to be for such and such values of F, and now it is added that, surprisingly, 'good looking' is also one of the values. In this case, S_j and S^* are united in the general thought that the person is much improved in many ways.

Notice how different that is from the (e)-type 'He is even better looking than he used to be', which implies that he used to be very good looking – an implication not carried by the other. And the *même* test also separates the two. If you want to put 'He is even better looking than he used to be' into French, you should say '*Il est encore plus beau que*...'; but to render 'He is better looking, even, than he used to be', as in the example about the benefits of therapy, you should say '*Il est plus beau, même, que*...'. They order these things better in French.

You might think that the (e)-type uses of 'even' could be brought under my analysis by letting the scope of 'even' be the name of the second compared item, i.g. taking it that in

(1) 'Bill is even taller than John'

the scope of 'even' is 'John', thus making (1) in every way equivalent to

(2) 'Bill is taller even than John'

and thus to

(3) 'Even John is shorter than Bill'.

But my analysis implies, and intuition loudly confirms, that (2) and (3) are fully satisfactory only in a context where something has been said or thought of of the form (S_j) 'Bill is taller than...' or '... is shorter than Bill'. But it is clear that (1) is most satisfactory when the topic of discussion has been not Bill's height but John's.

Perhaps, then, we can make my analysis apply by supposing that in (1) the scope of 'even' is 'Bill'? That is an even worse proposal, for it makes (1) entirely equivalent to

(4) 'Even Bill is taller than John',

which implies that both men are short by ordinary standards, whereas (1) plainly implies that they are both tall! There is no escaping it: stressed comparatives don't belong here.

A final note on 'Even' and comparatives: One can construct cases where the scope of 'even' is the word 'more' (or 'less'). "He's a real egalitarian. He doesn't want to be less wealthy than others are. He

doesn't even want to be more wealthy." My analysis covers that, and it's quite different from such stressed comparatives as 'He doesn't want to be even more wealthy than others are'.

6. STANDING-'IF' CONDITIONALS

The analysis nicely fits conditionals which contain 'even if' but do not imply or signal the truth of the consequent. For example: "His boss is so puritanical that (S_j) if he drank a lot she would fire him. Indeed, (S) even if he drank just a little she would fire him." Here the scope of 'even' is 'just a little', a fact which could be highlighted by rewording the sentence a bit: "If he drank even just a little...". This sentence (S) is felicitously asserted if (S^*) 'If he drank just a little she would fire him' is true, and there is a neighbour sentence S_j, namely 'If he drank a lot she would fire him', which is (i) known and (ii) naturally related to S^* and (iii) more expectably true than S^* is.

That example, which involves a perfectly routine application of my analysis, involves a standing-'if' conditional. I mean by that that its S_j is also a conditional, so that the move from S_j to S does not introduce conditionality – the 'if' is there all along. This contrasts with the 'even if' conditionals, to be described in my next section, where the relevant S_j is not a conditional, the move from S_j to S is a move into conditionality, and 'if' falls within the scope of 'even'.

Although in our present class of conditionals the scope of 'even' never includes 'if', it sometimes consists in the entire antecedent rather than merely some word or phrase within it. For example: "My employer is so puritanical that he would fire me if I behaved in what he considered a libertine manner. Even if my wife smoked cigarettes, he would fire me." Here the scope of 'even' is 'my wife smoked cigarettes', and the relevant neighbour sentence comes from replacing that by 'I behaved in what he considered a libertine manner' within the whole conditional. The two are united in the thought that if I were associated with certain sorts of behaviour I would be fired.

My analysis handles these standing-'if' conditionals without noticing that they are conditionals. In each case, 'if' stands there in S_j and S^* while 'even' dances around it. The sentence 'Even if he drank just a little he would be fired' differs from its simplified sentence in exactly the way that 'Even the children laughed at him' differs from *its* simplified sentence. It's presumably a merit in the analysis that it handles 'even' and 'if' separately, not taking 'even if' as an idiomatic lump.

7. INTRODUCED-'IF' CONDITIONALS

Now at last I come to the 'even if' conditionals which imply or signal the truth of the consequent. For example, I stand looking at the raging waters of the river, and the ruins of the bridge, and I say (*S*) "Even if the bridge were standing I would not cross".

My analysis applies to this example, if we take it that the scope of 'even' is 'if the bridge were standing' and the salient S_j – the truth which is clearly before my mind and yours as I speak – is 'I will not cross'. This is one of the cases where S^* is formed from the relevant S_j by sheer addition, rather than by replacement, and it also involves a linguistically required change – from 'will' to 'would' – outside the scope of 'even'. Here are the elements, then:

(S_j) 'I will not cross.'

(S^*) 'If the bridge were standing I would not cross.'

(S) 'Even if the bridge were standing I would not cross.'

The uttering of S will be felicitous if (i) S_j is "known", i.e. true and mutually believed and salient; for (ii) it is clearly unified with S^* in the thought that a wide range of conditions is inimical to my crossing the river, and (iii) the truth of S_j would normally be less surprising, more expectable, than that of S^*. Notice that (iii) is still important. It would not normally be acceptable for me, when surveying the raging waters and the standing bridge, to say "Even if the bridge were down I would not cross", even if S^* were true and there was a neighbouring S_j ('I will not cross') satisfying conditions (i) and (ii).

Thus, in these introduced-'if' conditionals, 'even' still has exactly the same meaning as in the standing-'if' ones and as in the non-conditionals I analysed earlier. It is a completely uniform account all through – a fact which accords nicely with the intuition that there is much in common between the non-conditionals and the standing-'if' conditionals, and between the latter and the introduced-'if' ones. At the same time, the analysis helps to explain the sense we have that the two sorts of 'even if' differ in a non-trivial way. It's the difference between a sentential vehicle for 'even' which happens to be a conditional, and one whose conditionality is itself a result of the operation of 'even', i.e. where the iffiness is linked with the evenness, so to speak.

They are not however, so intimately linked that 'even if' is an unstructured idiom in these sentences. On the contrary, my analysis explains what the link is between them with the aid of a very general account of 'even', taken on its own. What binds them together, it says, is

the fact that 'if' falls within the scope of 'even'; and to explain properly what *that* means one has to bring in other sentences – including non-conditionals – in which the same meaning of 'even' is at work and to which the same concept of "scope" is applicable.

The only other attempt I know of to relate the two sorts of 'even if' is Pollock's: he takes the introduced-'if' uses of 'even if' as an unstructured idiom, and then defines the standing-'if' kind in terms of it.[6] This gives those two classes of sentence some unity, but only at the price of utterly divorcing them both from non-conditionals containing 'even'. I claim to have shown that any account which does that must be imperfect.

8. 'EVEN' IS NOT A STRENGTHENER

If I am right about what is required for the uttering of S to be entirely felicitous, it seems plausible to suppose that the requirements break into two, as follows. For S to be true, (S^*) the sentence you get by dropping 'even' must be true; so in asserting S you assert S^*, or the proposition expressed by S entails the proposition entailed by S^*; and that's all there is to S's *truth*. For an uttering of S to be *felicitous in other ways* as well, however, the other condition must be satisfied, i.e. there must be a neighbour sentence S_j which is known, related and expectable. In asserting S you do not assert that there is such an S_j but you signal this; the proposition you express through S does not entail that there is such an S_j but it implies that there is. The main evidence for this is the fact that when someone asserts S where S^* is true but the other condition is not fully satisfied, hearers do not usually treat him as having asserted a falsehood, though they do find his performance unsatisfactory.

This kind of signalling or implying is more problematic than the kind which Grice has made familiar to us.[7] When Grice says that someone who asserts 'P or Q' implies but does not assert that she does not know which disjunct is true, he supports this by an account in which the whole conventional meaning of 'or' is given by the truth-table for the logical vel; and the extra implication of indecisiveness comes from combining that sparse account of the meaning of 'or' with some general principles of conversational propriety – principles which, without saying anything about 'or' in particular, imply that a competent speaker probably won't say 'P or Q' if he knows that P or knows that Q. But my suggestion about what is signalled or implied by someone who says ($eP > Q$) cannot be given a Gricean basis. If the suggestion is right, it is because it's *a fact about the meaning of the word 'even'* that what is implied by

($eP > Q$) is different from what is implied by ($P > Q$): indeed, the claim must be that the whole force of the word 'even' is to introduce those extra implications. There are other words whose conventional meaning affects conditions of felicity as distinct from truth: for example, it's a fact about the meaning of 'but' that 'He was poor but honest' implies or suggests an opposition between these two states, an implication not carried by 'He was poor and honest'. There is controversy about what exactly is going on here, and about how widespread the phenomenon is, but those are tangled thickets which I shall stay out of.[8] Even in the absence of firm, Gricean, structural reasons for distinguishing what is asserted from what is implied – i.e. reasons which take something to be only implied because it has no part in the conventional meaning of the sentence – it does seem intuitively clear that someone who says 'He was poor but honest' has spoken truly just so long as the person referred to is poor and honest, and that opposition between the two states is indicated more weakly than by outright assertion. And, I submit, it seems intuitively fairly clear that the whole of my second condition for 'even' – i.e. the existence of a neighbour S_j which is known and unifiable with S^* and more expectable than it – is required for complete felicity of utterance but that none of it is required for S to be true. In short, S is true if and only if S^* is true, which is to say that $(eP > Q) \equiv (P > Q)$.

In these remarks I am opposing Pollock's view that ($eP > Q$), in those instances where it somehow indicates the truth of Q, actually entails Q. But I can retreat a long way and still have a case against Pollock. Let's pretend that the *truth* of S requires that there be a neighbour S_j which is known and unifiable and more expectable; it follows that if S is true there must be a true neighbour S_j; but it still doesn't follow that any 'even if' conditional entails its consequent. We are pretending that when I say (S) 'Even if the bridge were standing I would not cross the river' I am saying that S^* is true and *saying* that there is a neighbour S_j which is true etc. That still doesn't mean that I am saying that I won't cross the river. To get that conclusion we must cram into what I am asserting – what is entailed and not merely implied – not just that there is an S_j which is true etc., but further that this S_j is 'I will not cross the river'. Nobody would say this, I think, who had accepted the broad outlines of my analysis up to the end of Section 7. It would be absurd to suppose that the speaker of S *always* says what the relevant S_j is, e.g. that in saying 'Even Max tried on the trousers', against the backdrop of Peter's having more expectably tried them on, one actually asserts that Peter tried them on. And I see no prospect for successfully arguing that, although many uses of 'even' do not identify the relevant S_j, its uses in

introduced-'if' conditionals do identify the S_j: there seems to be nothing on which that could be based. I conclude, therefore, that S_j is *never* assertively identified in the asserting of S, and thus introduced-'if' conditionals do not entail their consequents. There remains the option of throwing out the whole account, rejecting my attempt to bring standing-'if' conditionals together with other kinds of 'even if' and with non-conditional uses of 'even'. I cannot comment on that without seeing the proposed rival treatment of the data.

From the biconditional $(P > Q) \equiv (eP > Q)$ something else follows for Pollock's general theory of corner conditionals. He distinguishes three basic kinds of "subjunctive conditional", as he calls them.[9] (Actually, he lists four, but one is just the disjunction of two of the others.) One of the three is the 'even if' conditional. But if $(eP > Q)$ is biconditionally linked to $(P > Q)$, then from the standpoint of Pollock's interests – which are addressed to conditions for truth and not for other sorts of felicity – there is no species of 'even if' conditional. That reduces the three (or four) kinds to two. Of those two, one is the 'If ... might ...' conditional, in which Pollock treats 'if ... might ...' as an idiomatic lump, just as he does 'even if'. Stalnaker has recently argued powerfully that that is a mistake, and that the meanings of 'If ... might ...' conditionals should be explained as applications to ordinary corner conditionals of an all-purpose epistemic 'might' operator.[10] If Stalnaker is right about that, then another of Pollock's kinds of "subjunctive conditional" is also non-existent. What remains is what most of us thought we had all along, namely the single kind of conditional which Goodman and Lewis and others have sought to analyse. Pollock's interesting and challenging discussion of that would be more accessible if it weren't accompanied by the belief that it is one of three (or four) all of which must be discussed. Anyone who has wrestled with this difficult material will welcome the conclusion that it can be simplified because the other two (or three) kinds of conditional don't exist.

9. 'EVEN' IS NOT A WEAKENER

The thesis that $(eP > Q)$ entails Q makes 'even' a strengthener, in one respect, of conditionals; and it is opposed by my thesis that $(P > Q) \supset (eP > Q)$. I now bring the converse, namely $(eP > Q) \supset (P > Q)$ to bear against a certain position which implies that 'even' can in one way weaken a conditional to which it is added, sometimes resulting in truth where before 'even' was added there was falsity.

It seems undeniable and will be generally agreed that something very

like this:

$$(SE) \quad (Q \,\&\, \sim(P > \sim Q)) \supset (eP > Q)$$

correctly states a sufficient condition for the truth of an 'even if' conditional. That is, it seems near enough to correct to say that if Q is true and P's being true wouldn't rule out Q's being true, then we can truthfully say 'Even if P were true, Q would be true'. Now, if I am right that 'even' never weakens a conditional to which it is added, anything which suffices for the truth of $(eP > Q)$ also suffices for the truth of $(P > Q)$, and so we have the result that

$$(SI) \quad (Q \,\&\, \sim(P > \sim Q)) \supset (P > Q)$$

correctly states a sufficient condition for the truth of a corner conditional which doesn't use 'even'. But some writers reject (*SI*); and against them I bring the claim that (*SE*) is indisputable and that, since 'even' is never a weakener, (*SE*) entails (*SI*).

Probably, strictly speaking, (*SE*) *is* disputable: it can probably be made to come out wrong by taking a Q which is true but wasn't caused to be, or by certain manipulations of dates contained in P and Q. But the details don't matter, and I'll pretend they don't exist; for we shall see that (*SI*) is sometimes denied – and not implausibly – for values of P and Q for which (*SE*) is undeniable.

For example, at this moment my right index finger is straight. It seems correct to say 'Even if that finger were bent, Syracuse would be in central New York', but to some philosophers it seems false to say 'If that finger were bent, Syracuse would be in central New York'. One of the conclusions of this paper is that those philosophers are mistaken. Having been of their number, however, I want to give them a hearing.

Goodman seems to have been one of them, but his *kind* of approach to corner conditionals is not intrinsically biased either for or against (*SI*). It is easy to modify Goodman's conditions so that something like (*SI*) comes out as true.

On the other hand, the Lewis type of approach, according to which $(P > Q)$ is true if Q is true at the P-world which is "closest" to the actual world, with closeness understood in terms of similarity, is under pressure to accept (*SI*). All that is needed to validate (*SI*) is the seemingly tame thesis that no other world is as similar to the actual world as the latter is to itself.

If "closeness" is defined in terms of similarity *in certain respects*, however, one can make the tame thesis false and thus be free to reject (*SI*). Lewis remarks, of a certain consequence of (*SI*), that he could

stop it from being a theorem by supposing that some non-actual worlds are, in the respects relevant to closeness, as similar to the actual world as it is to itself.[11] But that technical manoeuvre doesn't give the enemies of (*SI*) anything they want. Let Q be some actual fact which *is* relevant to closeness of worlds, so that no $\bar{Q}$-world is as close to the actual world as the latter is to itself: we can still find values of P such that $\sim(P > \sim Q)$ where those who reject (*SI*) will say that $(P > Q)$ is false. For example, Lewis suggests that what are irrelevant to closeness are merely those "small differences" which "fail to register" on our minds when we are evaluating corner conditionals. That won't comfort the typical opponent of (*SI*). *He* wants a theory which doesn't accord truth to 'If this lemon were a bit longer than it is, Antarctica would not be made of gold'; and he cannot be expected to believe that that conditional is false because some worlds where Antarctica is made of gold are as close to our world as it is to itself, the difference between golden and icy Antarcticas being too small to register on our minds!

The most impressive attempt to make (*SI*) false, within the broad framework of Lewis's kind of theory, is John Bigelow's. I shall sketch a certain simplified version of this: Bigelow wants something still more complex, and still more niggardly in awarding truth to corner conditionals, but the extra complexity and strength are irrelevant to my present concerns.

I shall expound Bigelow's theory in terms of "closeness". This can be thought of as similarity in some respects; and it doesn't matter exactly what they are, since it's not by limiting them that Bigelow provides an obstacle to (*SI*).

Let us say that $(P > Q)$ is true* at world w if and only if Q is true at the P-worlds which are closest to w. Then Bigelow's theory, in my simplified version of it, says that $(P > Q)$ is true if and only if it is true* at every world belonging to *the PQ sphere of resonance around the actual world.* The emphasized phrase means: the smallest set of worlds (i) which contains at least one $\bar{P}\bar{Q}$-world and (ii) every member of which is closer to the actual world than any non-member of it.

The upshot is that $(P > Q)$ is to be evaluated by seeing how things look not just from the actual world but also from the worlds we meet as we move outwards, stopping only when we first come to worlds where P and Q are both false. If $(P > Q)$ is a genuine counterfactual, i.e. if P and Q are both false, then the PQ sphere of resonance contains only the actual world, and so $(P > Q)$ is true if and only if it is true*. Thus, where P and Q are both false, my version of Bigelow's theory is equivalent to more conventional theories. But where the consequent is true, Bigelow's

truth-conditions differ from those of all previous theorists. For example, Bigelow won't decide on the truth-value of 'If my finger were bent Syracuse would be in central New York' until he knows how it fares at the closest worlds at which Syracuse is not in central New York; and you can guess what the inhabitants of *those* think of that conditional!

It is an elegant structure, and Bigelow's informal remarks attempting to motivate it philosophically are persuasive. In particular, Bigelow helps his case by saying philosophical things against (*SI*) and then embodying *them* in his theory in which (*SI*) comes out false. This is better than merely finding *some* technical manoeuvre which stops (*SI*) from being a theorem but doesn't block it at the places where it is intuitively objectionable.

But Bigelow's theory, for all its virtues, tries to do something which ought not to be done. I have already said why: it's an attempt to make (*SI*) false where (*SE*) is true; and I have argued that the two stand or fall in the same places.

There is another objection to Bigelow's position – an objection which, being independent of my account of 'even', indirectly tends to confirm that account. Last year I wagered that Mt St Helens would erupt last month, and it didn't, so I lost. Now consider:

(1) If I had bet that it wouldn't erupt, I would have won.
(2) If I had bet that it wouldn't erupt, it wouldn't have erupted.

It seems clear that (1) is true, and Bigelow's theory agrees: since the *PQ* sphere of resonance for (1) contains only the actual world, (1) is true at the actual world because it is manifestly true* at the actual world. But the *PQ* sphere of resonance for (2) is not the unit set of the actual world, but rather a set containing at least one world where Mt St. Helens erupted last month; and there is no reason to think that (2) is true* at every world in that set. So according to Bigelow's theory, although (1) is true (2) is false. Yet doesn't it seem intuitively very appealing to suppose that the truth of (1) depends upon the truth of (2)?

As for the intuition on which Bigelow is relying, namely that (2) is not true: we do have it, and in general people will tend to be uneasy about instances of $(P > Q)$ whose only warrant is $(Q \ \& \sim(P > \sim Q))$. But we can explain that uneasiness as an awareness that someone who sincerely asserts such a conditional is probably in error about *something*. The mistake is to infer that what he is asserting – the corner conditional itself – is false. An example which I once used against (*SI*), and which Bigelow cites with approval, is obviously based on that mistake.[13] I took a case where $(P \ \& \ Q)$ – and hence $(Q \ \& \sim(P > \sim Q))$ – and invited the

reader to agree with me that ($P > Q$) was false, on the ground that the truth of P did not contribute to the truth of Q. But I went further, stipulating that on certain information P's truth made Q's downright improbable. The point I was trying to make required only the lack of a positive flow from P to Q, and the extra detail about a negative flow had no valid work to do. I ruefully suppose that I included it so as to reinforce the impression that the speaker of the conditional must be up to his neck in error, muddling that with the thesis that the conditional itself was false.[14]

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NOTES

[1] John Pollock, *Subjunctive Reasoning* (Dordrecht, 1976), pp. 29–31.

[2] My account owes a lot to Bruce Fraser, 'An Analysis of "Even" in English', C. J. Fillmore and D. T. Langendoen (eds.), *Studies in Linguistic Semantics* (New York, 1971), pp. 150–178. But with his help I describe the surface facts about 'even' more accurately than he does, I think. As for his concern with deep structure: my account of the meaning of 'even' will make it an utterly surface affair. Chomsky has an argument to show that this is right, in his *Language and Mind*, enlarged edition (New York, 1972), p. 109. I am not sure about the argument, whose details don't fit with the account I shall give; but I have no doubt about the conclusion.

[3] John Bigelow, 'If-then Meets Possible Worlds', *Philosophia* **6** (1976), 212–35.

[4] For example Fraser, *op. cit.*, p. 155.

[5] In devising this example and some others, I have been helped by discussions in Ruth M. Kempson, *Presupposition and the Delimitation of Semantics* (Cambridge, 1975), pp. 200–202.

[6] Pollock, *op. cit.*, p. 31.

[7] H. P. Grice, 'Logic and Conversation', P. Cole and J. Morgan (eds.), *Syntax and Semantics*, Vol. 3 (New York, 1975), pp. 41–58.

[8] Kempson, *op. cit.*, pp. 215ff, thinks that 'but' and 'even' may be the only examples, though she acknowledges that there seem to be more – e.g. the difference between 'deprive' and 'spare'.

[9] Pollock, *op. cit.*, Chapter 2.

[10] Robert C. Stalnaker, 'A Defense of Conditional Excluded Middle', W. L. Harper *et al.* (eds.), *Ifs* (Dordrecht, 1981), pp. 87–104, at pp. 98–101.

[11] David Lewis, *Counterfactuals* (Cambridge, Mass., 1973), p. 29.

[12] Bigelow, *op. cit.*

[13] Jonathan Bennett, 'Counterfactuals and Possible Worlds', *Canadian Journal of Philosophy* **5** (1974), 381–402, at pp. 387–8.

[14] This paper owes a lot to Mark Brown, Mark Heller, Paul Hrycaj, Carl Matheson, Sara Scott and David Sedlock.