STEPHEN BARKER

EVEN, *STILL* AND COUNTERFACTUALS

1. Introduction

Some counterfactuals – conditionals roughly of the form *If P were the case*, *it would be the case that Q*, abbreviated as $(P > Q)$ – are asserted when the speaker believes that the proposition or state of affairs expressed by *P* bears a "connection" of a logical or causal nature to that expressed by *Q*.[1] Thus, *If the United States had used nuclear arms in Vietnam*, *it would have won the war* might have been asserted because it was believed that the U.S.'s using nuclear bombs would have brought about its winning the war. Call such counterfactuals "connection conditionals".

On the other hand some counterfactuals are asserted when the speaker believes that the condition "Sem" obtains:

Sem. *Q* is true and *P*, though bearing no connection to *Q*, would not undermine (causally or otherwise) the fact that *Q*.

Thus, *Even if the United States had used nuclear arms in Vietnam*, *it would still have lost the war* might have been asserted because it was believed that the U.S. lost the war in Vietnam, and this fact would not have been undermined by its using nuclear weapons. Call counterfactuals which are asserted on the ground Sem "semifactuals".[2]

Semifactuals have syntactic features not necessarily shared by connection conditionals. It is generally recognized that certain words are very important in the assertion of a semifactual. Most writers have singled out *even* as the crucial word. Hence, semifactuals have been known as "*even-if*-conditionals". However, it is certainly plain, at least to the intuitions of some writers, that *still* too has a role to play.

Now, whichever one of these words is essential to semifactuals, evidently, at least one of them indicates that the ground of assertion intended is Sem. Thus, take both *even* and *still* away from the semifactual above and the remaining conditional sits very ill with its semifactual ground. Witness, *If the U.S. had used nuclear arms in Vietnam*, *it would have lost*

[1] I will adopt the following convention. *P*, *Q*, *R*, *S* will not only stand for sentences but also propositions and states of affairs. Hence I will say things like, *There is a connection between P and Q*, *but P and Q are false*. I do not think this ambiguity will lead to any confusion.
[2] I have derived the semifactual ground as specified from Stalnaker, (1981: 44), Pollock (1976: 26), and from Kvart (1986: 58–63).

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the war. This suggests a connection quite at odds with the originally intended ground.

There are then two basic sorts of counterfactual: connection conditionals and semifactuals. With respect to the nature of this distinction I dub "the classical view" the following:

> Words which signal the obtaining of Sem, i.e., *even* or *still*, make no contribution to the truth conditions of the conditional in which they feature. Their whole linguistic contribution is merely to impose extra conditions of "felicity" or "satisfactoriness" on the conditional's assertion. Hence, the signalling of Sem is not a logical entailment or presupposition but at most a conventional implication, and, consequently, connection conditionals are semantically identical to semifactuals.[3]

The chief corollary of the classical view is the falsity of the thesis that a necessary condition for the truth of $(P > Q)$ is that a connection hold between P and Q. As a result connection has played no role at all in classical theories of counterfactual truth conditions.[4] And as classical theories have been the dominant approach to counterfactuals, connection has been entirely marginalized in thought about counterfactuals.

Jonathan Bennett's "'Even If'" is a defence of the classical approach (Bennett 1982). Bennett's defence turns on the assumption that *even* is the word which determines that a counterfactual is a semifactual. Semifactuals are then, for him, a subclass of *even-if*-conditionals. I say a subclass for some *even-if's* are not semifactuals. (This fact is illustrated below.)

After providing an analysis of *even* outside conditionals, Bennett argues that a straightforward application of his theory of *even* to counterfactuals shows that a semifactual *Even if P were the case, it would be the case that Q*, or $(eP > Q)$ for short, at most conventionally implicates Q, and that *even* in such conditionals does not weaken $(P > Q)$ so as to make it capable of truth on a non-connection ground which it otherwise would

[3] By "semantic" I mean that part of sentence meaning which contributes to truth conditions. By "presupposition" I shall mean semantic presupposition. If a word sets up semantic presuppositions it contributes to truth conditions such that the failure of the presupposition to be satisfied leads to truth value gaps. See Strawson (1950). I shall use the term "signal" or "indicate" when I want to remain neutral on the question of whether the particular meaning of a word is to introduce a presupposition or a conventional implication.

The concept of conventional implication is discussed in Grice (1975) and Grice (1978).

[4] Some proponents of the classical view are Lewis (1973), Stalnaker (1981), Kvart (1986), Kratzer (1981), and Jackson (1987).

not have been.[5] Hence $(eP > Q) \leftrightarrow (P > Q)$ is valid. Thus, Bennett's conclusion is that the classical view is correct.

I believe Bennett fails to supply convincing arguments for the classical view. It is argued below that his theory of *even* and *even-if* is flawed. In criticizing Bennett's theory a refined theory of *even* will be proposed, later a theory of *still*. The conclusions drawn from these new theoretical perspectives are: *still* and not *even* is the word which determines a counterfactual's semifactuality; *still* contributes to truth conditions; semifactuals are true by virtue of an antecedent/consequent connection. In which case, all counterfactuals are true in virtue of an antecedent/consequent connection. The classical view is false.

2. Bennett's Theory of *Even*

According to Bennett, *even* can be thought of as an operator taking names, predicates, sentences and so on as its "scope".[6] *Even* in a sentence sets up implications rendering that sentence capable of felicitous assertion. In what follows I shall not pursue the question of whether Bennett is right in thinking this, and thus I shall assume that *even* contributes only to felicity conditions.[7] This issue will have no bearing upon the arguments below.

The felicity conditions for an *even*-statement can be expressed using the following nomenclature. Let S be any *even*-sentence. Let S^* be S minus *even*. Let S_j be a sentence got from S^* by replacing the scope of *even* by something else to form a grammatical sentence. Thus, where *Tom* is the scope of *even* in (S) *Even Tom ran*, S^* will be *Tom ran*, and some possible S_j's will be *Jane ran*, *The girl ran*, *Everyone ran*. In which case, according

[5] Bennett's specification of a semifactual ground differs slightly from Sem. He proposes $(Q \,\&\, {\sim}(P > {\sim}Q))$. However, this is not a sufficient condition for a semifactual. Counterexamples to the sufficiency of $(Q \,\&\, {\sim}(P > {\sim}Q))$ are found in Kvart (1986). Kvart considers this sort of case. Say we won a thousand dollars last night at the casino playing poker. It is true that (Q) we won a thousand dollars, but false that $((P > {\sim}Q))$ if we had played roulette, we would not have won a thousand dollars (as we still might have). Yet it is false that ((Even $P >$ still Q)) even if we had played roulette, we would still have won a thousand dollars, as our playing roulette might have ended in our gaining nothing.

It is evident, nevertheless, that Bennett means something very like Sem. And given the failure of $(Q \,\&\, {\sim}(P > {\sim}Q))$ to be a sufficient condition for a semifactual, would rephrase his contentions in terms of Sem.

[6] Bennett uses the term "scope" where most linguists use the term "focus". Nevertheless, I shall follow Bennett in his usage.

[7] The view that *even* does more than contribute to conditions of felicity but is presuppositional is argued for by Horn (1969) and Langendoen (1979).

to Bennett, an *even*-statement S is felicitous, if and only if the conditions below, which I dub C_1, are satisfied;[8]

(i) S_j is true, and mutually believed by the 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.

We could look at a whole range of intuitively felicitous *even*-statements and find in each case that C_1 obtained. For example Bennett illustrates C_1 with the following (1982: 406):

> . . . '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 expectedly true than S^* is.

Such a range of examples would show that C_1 was necessary for the felicity of an *even*-statement, but not that it was sufficient. I have grave doubts, however, about C_1's sufficiency. That these doubts are justified can be seen by considering the following cases (a), (b) and (c). (I shall use bolding to indicate voice stress, stress often being an indicator of scope).

(a) Looking out the window expecting to find only family members in the front yard, I see three figures and remark truly, *There's Pa and Grandma outside and even* ***Ronald Reagan****!* My audience rejoins, *Even* ***Reagan*** *is outside!*

(b) Someone reading the prize winners' list remarks, *Only three people won a prize out of a hundred this year. Brain and Smart won a prize, of course, but last year's worst student was the other, Smith!* To which in reply it is exclaimed, *Even* ***Smith*** *won a prize!*

(c) It is asserted, *Out of a thousand people few died of the disease, two*

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[8] Bennett (1982: 405). It should be noted that the claim that C_1 is necessary and sufficient for felicity is straightforwardly falsified for these reasons. Let us say that *Ted even* ***kissed*** *Reg* is felicitous where the scope is the stressed *kissed*. Take the same sentence and circumstances and place *even* after *kissed*. The resulting sentence, *Ted* ***kissed*** *even Reg* produces infelicity. If C_1 deems the first statement to be felicitous, it will deem the second to be felicitous. This is because C_1 makes no mention at all of what scope (focus) *even* is free to take if it has a given syntactic position in a sentence. Any full account of *even* would have to do this. Such matters are discussed in Jackendoff (1972: 247–254). The concerns in this paper, however, are independent of these considerations. I shall therefore take it that C_1 and the other proposals for theories of *even's* felicity conditions are full analyses, though in fact they are only partial.

old ladies, a child, a young woman, surprisingly, and even the man everyone thought completely invulnerable! To which it is replied, *Even* **he** *died of the disease!*

The *even*-statements in (a), (b) and (c) are clearly infelicitous. However, C_1 is satisfied in each case. I will show this explicitly only for (a). In (a), C_1 is satisfied for (i) (S_j)*Pa is outside* is mutually believed by speaker and hearer, (ii) S_j and (S^*) *Reagan is outside* are parts of the single more general truth, *There are three people outside*, (iii) S^* is more surprisingly true than S_j.

It should be noted with respect to my claim that (a), (b) and (c) are counterexamples to C_1's sufficiency that (i) it could be argued on his behalf that Bennett means the more general truth to be itself an S_j, and that it should also be salient, i.e., known or asserted. It cannot be said, however, that there are no such truths salient in (a), (b) and (c). In (b) *Three of the students won a prize* is an S_j and is surely evident to the speakers. It is also of exactly the same form as the more general truth offered in his example about Max. (ii) Without *even* the same sentences are happy assertions under the circumstances; *S*'s infelicity is not due to some other speech act defect.

Evidently C_1 is not sufficient for the felicity of an *even*-statement. So Bennett has not provided us with an adequate analysis of *even*. This, of course, will put his later claims based on C_1 about *even-if*-conditionals into doubt. However, before we examine these matters I want to consider what theory of *even* we should adopt to replace C_1.

3. Scalar Analyses

Analyses of *even* in terms of scales are the obvious candidates for an adequate replacement for C_1. I want to spend time looking at one such scalar analysis of *even*: Fauconnier's analysis (Fauconnier 1975).[9] Fauconnier has proposed that *even* and "quantifying superlatives" can be understood through "pragmatic scales". Consider first a superlative, (1) below, where there is an implication that my uncle is bothered by any noise at all:

(1) The faintest noise bothers my uncle.

Intuitively, suggests Fauconnier, this implication arises because we believe that if a certain noise bothers my uncle, a louder one will too, and thus,

[9] Another scalar analysis is offered by Karttunen and Peters (1979).

as the faintest noise bothers my uncle, all noises do. Fauconnier's analysis of the thought behind the implication is that a pragmatic scale of noises ranged according to loudness is "associated" with the schema *x bothers my uncle*. Furthermore, the following "scale principle" involving the schema *x bothers my uncle* holds of this loudness scale; if *x bothers my uncle* is true of a noise x_2 on the scale, it is true of a noise x_1 higher up the scale, a louder one. This is not a logical entailment, but merely a probable inference. As *the faintest noise* locates the lowest member of the scale, given the scale principle, (1) implies that *x bothers my uncle* holds for all members of the scale.

In general a superlative *The F-est G is R* implies $\forall xRx$ if the G-scale (a scale of entities x such that Gx and ranked by degree of F), associated with Rx, is such that the scale principle holds of it, i.e., if x_2 is lower than x_1, Rx_2 implies Rx_1.

Fauconnier notes that *even* can be used to modify a quantifying superlative. Thus one might have modified (1) with *even*, asserting *Even the faintest noise bothers my uncle*. Here the same universal quantification implication is retained, but the further implication is added that it is particularly surprising that the faintest noise bothers my uncle. Fauconnier describes the contribution of *even* in modifying superlatives and in non-superlatives, for example (2) below,

(2) Even **Alceste** came to the party

in the following way. "*Even* signals this presupposition: when a context admits a particular pragmatic scale with respect to some logical forms, the low point on that scale may be modified by *even*, if it occurs in the appropriate position in the logical form" (Fauconnier 1975, p. 364). Fauconnier is suggesting that in the case of the modification of (1), the G-scale associated with the open sentence *x bothers my uncle*, of which the scale principle holds, is by virtue of *even* transformed into a "probability scale", i.e., a "probability-of-satisfying-*x bothers my Uncle*-scale"; a ranking of entities according to their probability of satisfying *x bothers my uncle*. *Even* implies that the faintest noise is lowest on the scale, i.e., it is not very probable that it satisfies *x bothers my uncle*.

In the case of (2), S^*, *Alceste came to the party*, has the pragmatic implication in the context that everyone went to the party. That is, the schema *x came to the party* is associated under the context with a G-scale upon which Alceste is the low point. Say the scale is one of people in our class ranked by degree of gregariousness. The scale principle holds of this scale. Alceste is not gregarious at all, but the fact that he went to the party implies people higher on the scale who are more gregarious went. Thus it is implied that everyone went to the party. But by virtue of *even*, this scale is simultaneously a probability scale, i.e., a probability-of-satisfying-x *went to the party*-scale, where the low point is again Alceste.

Thus Fauconnier is proposing that an *even*-statement S (take for simplicity the case where S is *Even Ra*) implies the conditions C_2;

(i) There is a G-scale associated with Rx such that the scale principle holds of this scale, and a is its low point.

(ii) The G-scale is simultaneously a probability-of-satisfying-Rx-scale, and a is its low point.

Note that Fauconnier cannot be proposing that *even* marks merely the existence of a probability scale with respect to Rx. If this were so, then just the existence of a probability scale would be sufficient for the felicity of an *even*-statement. But this is not so. In examples (a) to (c) there is a probability scale associated with Rx obtaining under the circumstances. Thus in (c) there is a probability-of-satisfying-x *died in the plague*-scale where the seemingly invulnerable man is at the low point and the little old ladies at the high point. However, in these examples S is not felicitous. Therefore scalar analyses of *even* which merely require that a probability scale obtain, without thought of whether it is also a G-scale for which the scale principle holds, are not sufficient for the felicity of an *even*-statement, and thus are not adequate.[10]

Before we consider whether Fauconnier's analysis is sufficient for felicity, the following considerations suggest that C_2 is not correct structurally as it stands. Consider Fauconnier's introduction of pragmatic scales with respect to superlatives. In (1) Fauconnier wanted us to see the loudness scale as being associated with the propositional schema *x bothers my uncle*. By "association" I think Fauconnier meant that an audience determines which scale is being appealed to by, in part, grasping the content and structure of *x bothers my uncle*. However, this is rather an implausible proposal (given that many scales will be associated with a given schema) compared with the following. The scale of noises we are appealing to in

[10] For example, the analysis of Karttunen and Peters (1979). Their analysis is roughly the following, where S is *Even Ra*:

(i) (S^*) *Ra* is true.

(ii) There are S_j's, *Rb*, *Rc* etc., known to be true.

(iii) There is a pragmatic probability scale such that a is the low point on the scale, i.e., for all x on the scale, *Ra* is more surprising than *Rx*.

(1) is fixed by the use of the definite description *the faintest noise*. This phrase secures its referent by introducing a scale of noises ranked according to faintness. The denotation of the phrase is the lowest member of this scale. In which case the existence of the scale is a direct result of the semantic material in the definite description and has nothing to do with the sentence schema, *x bothers my uncle*. That is, *the F-est G* indicates a *G*-scale with ranking *F*. *Rx* does not come into it.

In cases of implication of a universal quantification where there is no superlative, like, *Einstein couldn't solve this problem*, the implication that nobody could solve the problem can arise because the name *Einstein* is associated with the description *the smartest person* or something of the like, which determines a scale for which the scale principle holds. Likewise in the case of (2), *Alceste* is associated with *the least gregarious person in the class*, this determining a scale of gregariousness. However, it seems not to be the case that a superlative description is always associated with the relevant term. Consider this case. We are doing an unusual oral mathematics exam. One of the questions involves the performing of a very complex calculation. Afterwards we find that nobody could answer that question. Someone asserts, *It was impossible. (Even) Horace would have stumbled on that one*. Horace is an 'idiot savant' who can perform prodigious feats of calculation but has no other mathematical ablility. We might want to suggest that *Horace* is associated with *the best calculator we know*, under the context. But why should we think that this is the relevant description of Horace in play? We might simply have the description *a very good calculator* in mind. *A very good calculator* will determine a *G*-scale, a scale of calculation ability, with Horace at some point such that from Horace up the scale principle holds. The implication, *Anyone (of Horace's ability or less) would have stumbled on that one*, is implied by the assertion.

If we accept this, and I think we should, C_2 (i) has to be changed to (i)′:

(i)′ There is associated in the context with the scope *a* of *even* a scalar description, usually *the F-est G* and the *G*-scale fixed by this description is such that the scale principle holds of it, and *a* is the lowest point on the scale for the entities under consideration.

Call the new set of conditions C_2^*. Now is C_2^* sufficient for the felicity of an *even*-statement? I want to show that it is not. Although it passes the test of (a), (b) and (c) – here there is no *G*-scale for which the scale principle holds – it fails in the case of (d) below;

(d) Suppose a student rally was held today where the police turned up. In general the police go out of their way to arrest philosophy students. There were three philosophy students at the rally. Consider this conversation;

A: *Who got arrested today?*
B: *Just some philosophy students: Fred, Mary and even* ***Jane***.

B might have asserted her *S* in full knowledge that the above held, and also that Jane is a mild mannered person who would not provoke police, unlike Fred and Mary. In which case there is a *G*-scale known to *B* holding under the circumstances, associated with the description, *the meekest of the philosophy students there*. Moreover, the scale principle holds; that Jane got arrested implies the others got arrested. Note it could have been asserted, *The meekest of the philosophy students got arrested today*, implying all got arrested. C_2^* is satisfied in (d), but *S* is infelicitous.

What is the source of the infelicity in this example? Consider B's sentence. This is a sentence of the same type as that asserted in (b) and (c). The sentence type is T:

(T) *Just some/only some/few/x's were F: (these being) a, b, and even c.*

T is inherently awkward; it could not be used to make a felicitous statement. This awkwardness can only arise because one of the following properties holds of T. The first alternative is that the *even*-sentence embedded in T implies that certain facts obtain, but other conjuncts of T (we can think of T as a conjunction) contradict these facts. However, this cannot be the origin of T's unhappiness. The other conjuncts of T say merely that some *x*'s, three in fact, were F. But *even*-statements can be felicitous when these facts are known. Thus, *All the philosophy students got arrested, even Jane* would be felicitous under the circumstances described in (d).

The other alternative (and now the only option for explaining T's awkwardness) is that *even* implies that we are performing some speech act with *c* in T (*Jane* in B's sentence in (d)) whilst the rest of T implies or presupposes we are performing some other speech act with *c*. Clearly the speech act B is engaged in before inserting *even* into her sentence is stating that there are some entities satisfying a condition, i.e., having got arrested, and then specifying those entities. Call this "existential instantiation". So, on this analysis of the problem with T, B is using *Jane* in an existential instantiation, or rather she should be; however, her insertion of *even* signals that she is using *Jane* in some other speech act. The two types of act are incompatible, so the sentence type T cannot be used to make a felicitous statement.

What speech act will this be? According to C_2^* *even* implies (i)′. (i)′ in turn entails $\forall xRx$. I suggest that the best hypothesis, there seems to be no other, is that the speech act that *even* implies we are engaged in is stating that S is an instance of an implied or asserted universal quantification $\forall xRx$.

Should we propose then that the felicity conditions of an *even*-statement S be conditions (i)′ and (ii) of C_2^* as well as the condition that (S^*) Ra, along with the S_j's, is being asserted as an instance of $\forall xRx$? This is rather a complex set of conditions. One might begin to wonder if all of them are necessary for felicity.

The following thoughts indicate how simplification could be achieved. We have seen that the governing speech act with respect to *even* is universal instantiation. Now audiences may appeal to pragmatic scales to determine the quantification the speaker had in mind. But should we think of pragmatic scales and associated superlative descriptions as part of the meaning of *even*? Surely, rather, we should think of pragmatic implications as merely aids to determine which quantification is intended. If one can assert $\forall xRx$ and then *Even Ra*, as we often do, then cognition of pragmatic scales has become redundant.

I suggest then that the felicity conditions of an *even*-statement are simply the following. Call the universal quantification of which a given S^* is an instance "S_u". The conditions are C_3:

(i) S^* and S_j are asserted as universal instantiation cases of an implied or stated S_u.
(ii) S^* is an extreme instance of S_u.

The conclusion is that Fauconnier is wrong in his perspective of viewing *even* as a modifier of already existing pragmatic inferences. Rather, pragmatic inferences are simply tools we may use in asserting *even*-statements to fix the intended S_u. *Even* is a modifier of the speech act "universal instantiation".

4. *Even* and Universal Quantification

Why do *even*-statements arise with respect to quantification? Quantifier phrases in English are inevitably used in a restricted sense where the extent of the restriction is vague and context dependent and, consequently, sometimes not clear. Now, extreme instances suggest the extent of generalizations. They can be used to test generalizations, falsifying the generalization if taken unrestrictedly, or confirming that some restricted reading is intended. So by using a word that signals the extremeness of a proposed instance, namely *even*, we indicate, or can inquire about, the particular restriction on the quantifier concerned. Someone asserts *Everyone from school was at the party*. But are we to take this to mean that literally everyone went or just the usual party goers or those from our circle of friends. The inquiry *What even **Alceste**?* may arise to establish which of these alternatives is intended. Or, *Even **Alceste*** may be tagged on to the original statement to confirm that we mean literally everyone.

Use of *even* to indicate the extent of a generalization is found in the following cases. These cases are also interesting for they may appear to be counterexamples to the claim that *even* always involves appeal to an S_u.

(e) Someone has an encounter with a yeti. They give an estimate of its awesome height; *It was very tall, eleven, even twelve feet!*

What S_u is being implied here? We need to realize that we cannot interpret the *even*-statement literally. It is not asserted that the yeti was eleven feet and was even twelve feet. Rather the numerical values listed are suggested height estimates. This means we can paraphrase the S in (e) as, *The heights, eleven feet, even twelve feet accord with my impression of the yeti's size*. This statement is implicitly a conjunction, the conjuncts of which are; (S_j) *The height eleven feet accords with my impression*, (S) *even the height twelve feet accords with my impression*. Through S and S_j the speaker suggests that the yeti's height fell somewhere in the range of eleven feet and upward, where twelve feet is the region of upper limit. (The speaker would feel quite vindicated in their estimate if told the yeti was eleven and a half feet). I suggest then that the S_u implied is *Any height falling roughly between eleven and twelve feet accords with my impression of the yeti's height*, instances of which are S^* and S_j above.

Here is a similar case to that in (e).

(f) Someone dismissing the claim that there have been miracles says, *There has never been a miracle. There has never even been **prima facie evidence of** a miracle*. In (f) the speaker implies S_u, *There has never been anything at all to suggest the occurrence of miracles*. By two judiciously placed instances, the first representing the least surprising case, the second S^* being the most surprising, the speaker implies a generalization as well as suggesting its actual extent.

A more difficult case than (e) and (f) is the following

(g) A president orders a general to win a great victory. The general replies, *Half my troops are untrained, even more are over sixty!*

In (g) it would appear that *Half my troops are untrained* is an S_j. No plausible scope proposal with respect to S, however, accords with this. For example, if we take the scope in S to be *more or more than half my troops*, then it cannot be that *Half my troops are untrained* is a sentence got by substitution of some sentence part, i.e., *half my troops*, for *even's* scope. That is, *are over sixty* is not a part of S_j. Matters hold similarly for other parts of S.

What is going on in (g)? I suggest it is this. The sentence prior to S introduces an amount, namely a half, which is used as a standard. With respect to this amount, S is an assertion equivalent to, *The number of my troops that are over sixty is even more than this amount* (*mentioned in the preceding sentence, i.e., a half*). I suggest that the scope of *even* is *half*. Though not in the sentence S itself, it is understood as being there. Furthermore, S_u is *The number of my troops that are over sixty is more than any figure you would plausibly have expected*. S is an instance of this sentence.[11]

Even in Comparatives

Bennett claims his theory of *even* does not account for the function of *even* in comparative sentences of the form,

(3) x is even more F than y

where there is an implication that y is very F (Bennett 1982: 404, 408–10); for example, assertions like, *Their house is even larger than ours*, implying that our house is very large. Bennett sees no way of explaining this implication on C_1 and concludes that this is a distinct use of *even* requiring some other theory. He points out that this concurs with the fact that in French different words are used in sentences which are the translations of comparative as opposed to non-comparative *even*-sen-

[11] For any S_j/S^* the sentence part in it which replaces the scope of *even* is not necessily that term used in deriving it from S_u by universal instantiation. That is, in a given S, scope and instantiating term may not be identical. In *Even **her** children laughed at him*, *her* is the scope, but *her children* is the term used in deriving S^* from S_u *All the children laughed at him*. Likewise in *There has never even been **prima facie evidence of** a miracle* the scope is *prima facie evidence of*, the instantiating term is *prima facie evidence of a miracle*. This fact, far from hindering implication of S_u actually aids it. We gain more information about S_u's structure. In the above S the fact that the stress did not include *a miracle* indicated to the audience that each S_j, syntactically, had *a miracle* in it, thus, semantically, would be about miracles and consequently, as each S^*/S_j is an instance of S_u, that S_u would be about miracles. If scope and substituting term had corresponded, we would have lost this information.

tences. However, this fact of translation aside, we can easily account for the behaviour of *even* in comparatives with C_3.

To show that our analysis can cover comparatives we have to realize first off that all that sentences like (3) can imply is that y is very F **for a y or x sort of thing**. This just follows from how we use and interpret *y is very F*. We have a class of entities in mind which is a comparison class ranked in a scale. Relative to that class y is ranked high. However, there might always be another ranking of entities based on F, in which y is ranked rather low. Thus, Toby is very intelligent (for a dog), but not for a sentient being in general.

Now we can show that by assuming that *even* always implies an S_u and that the scope of *even* in (3) is y, it is implied that y is very F relative to the class of things we are quantifying over, i.e., the restricted domain of S_u. If y is the scope, then an S_u of the form *Most/all z's are such that x is more F than z* is implied. For this sentence to be true, x would have to be very F relative to the class of z's. Moreover, if (S^*) *x is more F than y* is to be true and particularly surprising, it must be the case that y is also very F relative to the class of z's.

We need only show now that the comparison class we, intuitively, have in mind in comparative uses of *even* is indeed a class of things quantified over, the entities of which are denoted by terms substitutable for the scope of *even*. Consider then the following. Someone overhears the statement, (S) *Mr Big is even richer than* ***Kerry Packer***, the implication being that Kerry Packer is very wealthy. The eavesdropper then remarks, *What do you mean. Packer isn't that rich. What about that millionaire in Japan?* The reply might be, *I wasn't talking about all millionaires, just Australian millionaires*. In other words, the original utterance S was made with the comparison class of millionaires in Australia in mind. Moreover, we were suggesting by implication, that Kerry Packer, and thus Mr Big, are some of the richest people in Australia. Hence it was implied that the following sentence was true *All millionaires in Australia are such that Mr Big is richer than they are*. This sentence satisfies the structural conditions for being an S_u for the S above. The simplest hypothesis is that it is the S_u of this *even*-statement.

5. *Even* and Counterfactuals

We have replaced Bennett's theory of *even*, C_1, by C_3. I now want to look at Bennett's original application of C_1 to *even-if*-conditionals and his discussion of semifactuality. I will then show how the replacement of C_1

by C_3 affects the conclusions concerning semifactuals arising from that discussion.

Bennett's analysis of *even-if*-conditionals is centred around his distinction between "Standing-'if'" and "introduced-'if'" *even-if*-conditionals (Bennett 1982: 410–412). Standing-'if's are so named because the S_j's implied are themselves conditionals. This is due to the fact that the scope of *even* is always some part of the antecedent, and, therefore, when we derive S_j's from S^*, we simply replace this antecedent part in S^* with some other part thereby producing conditionals.

An example of a standing-'if' is *Even if he drank an* ***ounce*** *of whisky, he would get drunk*. *even*'s scope is *ounce*. S here implies *If he drank a gallon/pint of whisky he would get drunk*. This is predicted by C_1; the range of conditionals implied are S_j's got by replacing *ounce* with some other, larger amount, and the resultant conditionals are less surprisingly true than S^*.

In contrast, introduced-'if's are *even-if*-conditionals where, unlike standing-'if's, the consequent is implied. Here is Bennett's example (Bennett 1982: 411). I stand by the side of the raging river and a ruined bridge and assert, (S) *Even if the bridge were standing, I would not cross*. Under the circumstances it is clear that I will not cross. Moreover, this latter fact which corresponds to the consequent of the conditional seems to be implied by the asserted S.

Bennett's analysis is this. The scope of *even* is the whole *if*-clause, *If the bridge were standing*. The sentence implied under the circumstances, *I will not cross*, the consequent of the conditional, is an S_j. This S_j is derived from S^* by simply dropping the scope of *even*. Hence, introduced-'if' conditionals, as the name suggests, are *even*-statements where the progression from S_j to S^* involves introducing *if* into a sentence. (Note we have already seen other cases of S^* and S_j where S_j is got just by dropping the scope. See (f) above).

Having identified these two *even-if* types, Bennett homes in on introduced-'if's. These are the *even-if*-conditionals he identifies with semifactuals. In Sections 8 and 9 of his paper he argues for the semantic identity of introduced-'if' ($eP > Q$) with ($P > Q$). The argument is, roughly:

(i) The implication of Q in an introduced-'if' ($eP > Q$) is simply the implication of a certain S_j. It is, therefore, just a fact about the introduced-'if's felicity conditions, and not its truth conditions. Q, therefore, is not logically entailed or presupposed.

(ii) Any belief that *even* in introduced-'if's weakens ($P > Q$) rendering it capable of truth on a "non-connection ground" like Sem, which otherwise it would not have been, results from a confusion of felicity with truth conditions.

(i) and (ii) amount to an argument that the classical view is correct.

6. Introduced-'if' Conditionals and C_3

How does this analysis fare in the light of C_3? It would seem not well at all. For a given S C_3 requires each S^*/S_j to be an instance of S_u. However, this condition rules out Bennett's category of introduced-'if's. No S_u could have Q and $(P > Q)$ as instantiation cases. Let us consider the matter in detail.

We need to see first off how C_3's predictions concerning S_u accord with actual standing-'if' conditionals. Consider the standing-'if' above, (S) *Even if he drank an* ***ounce*** *of whisky he would get drunk*, where the implied S_j's are *If he drank a quart/pint/glass/ of whisky, he would get drunk.* I think we would assert S in a situation where we wanted to communicate that the person referred to was very susceptible to alcohol to such a degree that a pint, a glass, even an ounce would induce inebriation. If so, it would seem we would want to say, *If he drank any amount of whisky, he would get drunk*. This is a sentence suitable from the structural point of view to be the S_u of S above. Its logical form is that of an open *if-then* sentence in the scope of a universal quantifier where we quantify over amounts of whisky. S^* and S_j are instances of it. I submit that this is S_u.

Consider also a standing-'if' where *even* has the whole antecedent as scope; (S) *Even if* ***the president were to get indigestion tonight***, *the cease-fire would end*, with implied S_j's like *If talks broke down/the hard-liners took over, the cease-fire would end*. Here we are suggesting, *If any upset were to occur now, the cease-fire would end*. Again, this sentence satisfies the structural conditions for being the S_u for the standing-'if' concerned. Its form is that of an open *if-then*-sentence in the scope of a universal quantifier.

I now want to show that Bennett's example of an introduced-'if' is not anything of the sort (as C_3 predicts), but is in fact a standing-'if' conditional like the above. Moreover, the signalling of the truth of the consequent which Bennett took to be the sign of a distinct use of *even* can be attributed to a fact unrelated to *even*. Consider the context of assertion of Bennett's introduced-'if'. The elements involved were;

(4) S_j I will not cross the river.

(5) S^* If the bridge were up, I would not cross the river.

(6) S Even if the bridge were up, I would not cross the river.

S is asserted as I stand with dread before a swollen river by a broken bridge. Concerning his proposed S_j, (4), Bennett says (1982: 411);

(ii) it is clearly unified with S^* in the thought that a wide range of conditions is inimical to my crossing the river.

(ii) indicates that the context is one where there is no way that I am going to cross the river. Thus the sentence *I would not cross no matter what means were available* is true. This is S_u, which in an *if-then*-form we can translate as (7);

(7) If any sort of means were available, I would not cross the river.

If (7) is S_u, we can see how (5) is a surprising instance of it. Unsurprising instances are *If I had my flippers/we had a raft, I would not cross.* (Note that I would want to assert such conditionals under the circumstances.) These are all candidates for S_j, being instances of (7). But how is (4) an S_j? Quite simply it cannot be. Furthermore, it follows that the scope of *even* is not the *if*-clause but merely the antecedent; each S_j is got by replacing the antecedent of (5) with another sentence. Therefore, (6) is a standing-'if' conditional.

Moreover, the implication of (4) which attracted Bennett to his scope proposal can be explained without appealing to *even*. (6) implies (7). (7) in turn entails (4). (7)'s logical form is that of an open *if-then*-sentence in the scope of a quantifier. Consequently, (7) does not entail (4) by virtue of its logical form. However, it just happens that because of the meaning of (7)'s non-logical vocabulary, (7) as a whole entails (4). *I wouldn't cross the river no matter what means were available* entails *I won't cross the river* because a necessary condition for my crossing a river is that I will use some means of crossing. As I will not use any means to cross, I will not cross.

The following S is almost identical to (6) but Q is not entailed. Gangsters are discussing a grisly job that the boss wants done. Rocco says, *Money, diamonds, girls don't mean nothing to me.* (*S*)*Even if it were for twenty grand and all the dames in China, I wouldn't do it. But I'll be tempted if he makes me his lieutenant.* In this case Rocco has no absolute intention of not doing the job. So the consequent of S is not true. The obviously implied S_u in this case does not entail the consequent of S because being offered money and the usual rewards of crime is not a necessary condition for doing a job; there are other rewards.

The conclusion is that Bennett has not offered us an instance of his introduced-'if' category. But this was to be expected; C_3 entails their non-existence. In which case, Bennett's arguments in Sections 8 and 9 of his paper for the classical view founder.

7. Connection

I think there may be a residual worry about (6). To one such as I who wants to defend the position that counterfactuals are always true on connection grounds, (6) happily asserted and true as it stands, seemingly as a semifactual, will appear problematic. (6) is equivalent to (5). So in (5) we are apparently faced with a true instance of $(P > Q)$ where P bears no connection to Q. However, we can dispel this worrisome impression. (5) is a connection conditional. Implausible as this claim may seem at first, it can be defended.

As the sort of connection in (5) is widespread, and also very revealing about the nature of connection in general, and, finally, important with respect to real semifactuals to be discussed below, it is necessary to go over the connection in (5) in some detail. I shall appeal to the following theses in the discussion below.

Thesis 1: A state of affairs A bears a connection to B (I symbolize this as $(A \Rightarrow B)$) just in case A and other facts holding in the context can explain, causally or analytically, the necessitation of B.

The notion of explanation appealed to here is a very general one. If A is a necessary condition in a causal explanation of C, we may not want to say that A under the circumstances caused C. For example, a match's being dry may be a necessary condition in an explanation of why it lit. However, the match's being dry will not be called the cause of its lighting; rather its being struck will be. Nevertheless, the match's being dry bears a connection to its lighting. (Here we might want to assert, *As it was dry, it lit*. *As*-statements are statements of connection.)[12]

Thesis 2: Every sentence corresponds to an abstract state of affairs, its semantic value, which may or may not obtain.

Any connectionist theory will exploit either the idea of a proposition or of a state of affairs. There is no other way of formulating a connectionist view. Moreover, as any sentence can be the antecedent or consequent of a conditional we need a unique proposition or state of affairs to correspond to each sentence. My preferred construct is states of affairs. Under this

[12] My concept of connection is structurally akin to Mackie's idea of an "Inus condition". See Mackie (1974).

category I include somewhat against general practice both events and states of affairs in the usual sense. So, corresponding to the imperfective sentence *Grandma was sitting by the fire* is the state of affairs (in the old sense) of Grandma's sitting by the fire. However, corresponding to the perfective *Tina sang rock* is an event type.[13] Nevertheless, I shall call this a state of affairs in my general sense. Note that no event corresponds to the negation of this sentence, *Tina did not sing rock*. Rather, a state of affairs in the old sense does.

In English for a sentence *P* there is always a definite description denoting the corresponding state of affairs. This is built straightforwardly out of the materials of the sentence. Thus, corresponding to *Mick sang yesterday* is *Mick's singing yesterday*, or *the singing of Mick yesterday*, and to *Granny sat by the fire*, *the fact that Granny sat by the fire*.

Such descriptions are used in statements of explanation and causation. Thus, we have explanations like *Mick's singing yesterday made us sick* or *Flipping the switch caused the light's going on*. It is to be expected then that we should appeal to states of affairs in statements of connection.[14]

Thesis 3: States of affairs obtain either "barely" or in virtue of the obtaining of other states of affairs.

The notion of "obtaining in virtue of" is a connexive notion. Thus, if C obtains in virtue of A and B, then A and B bear a connection to C. Moreover, the connection involved is non-causal. If C obtains in virtue of A and B, then A and B do not obtain before C. Thus, paradigm cases of "obtaining in virtue of" are cases such as a logically complex state of affairs obtaining in virtue of logically simpler states of affairs; for example, a disjunctive state of affairs $(A \vee B)$ obtaining in virtue of A. Other cases are instances of obtaining in virtue of constitution; the fact that x is a triangle obtains in virtue of x's having three sides, or the fact that the whole family is here obtains in virtue of the individual members being here. Finally, the state of affairs that a sentence P is true obtains in virtue of the obtaining of the state of affairs P. That is, sentences are true in virtue of the obtaining of corresponding states of affairs.[15]

Thesis 4: Con is valid;

[13] The proposal that imperfective sentences correspond to states of affairs (in the old sense) and perfective to events comes from Galton (1984).

[14] As for the actual formal structure of states of affairs I shall not touch upon this here. Such matters have been treated of elsewhere, for example Barwise and Perry (1983).

[15] That a state of affairs obtains barely, i.e., in virtue of no other state of affairs, is relative to a level of explanation.

Con. If P and Q are not true and $(P > Q)$ is true, then, $(P > Q)$ is true by virtue of a connection between P and Q.

Con, I think, has to be valid. Intuitively, if Q is to be true on the assumption of P, but Q is in fact not true, P must bring it about. How else does it turn up on the assumption of P? If Q was not necessitated by P, then on the assumption of P, Q might not have obtained, hence it is not the case that Q would have obtained.[16]

Thesis 5: Connection is transitive.

Transitivity runs deep in explanation. We cannot understand how we construct complex explanatory chains if transitivity does not hold.[17]

My argument using the above theses is to show that (5) is an instance of the following general type of connection conditional. Let R, S, P and Q be sentences or corresponding states of affairs. Take a situation where S and R are true, and $(S \Rightarrow R)$ holds. P and Q are not true and $(P > Q)$ is true. Therefore, by Con, $(P > Q)$ is a connection conditional. Furthermore, on the assumption of P (in the P-world) R is true, but not because S is, as it is in the actual world, but because of Q. Here we want to say that as $(P \Rightarrow Q)$ and $(Q \Rightarrow R)$ hold in the P-world, $(P \Rightarrow R)$ holds in the P-world by transitivity. $(P > R)$ is a connection conditional.

Here are examples of instances of the conditional type $(P > R)$. We have a cup of water which is heated and boils. So (S) the heating of the water brought about (R) the water's boiling. If (P) the water had been taken into space, then this fact P would have brought about (Q) a lowering of the air pressure, (Q is actually false), and Q in turn would have brought about (R) the water's boiling. So, (P) the water's being taken into space would have brought about (R) its boiling. In which case,

(8) If we had taken the cup into space, the water would have boiled.

is true and what is more a connection conditional.

This case of $(P > R)$ was a causal conditional. Here is a non-causal

[16] Here I am appealing to the generally accepted thesis that *If P were the case, it might not be the case that Q* entails the falsity of *If P were the case, it would be the case that Q*.

[17] The transitivity of $\Rightarrow$ does not necessarily commit us to transitivity for counterfactuals. It is not clear that we necessarily want to say that connection is a sufficient condition for the truth of a counterfactual. On the other hand if we did want a connection to be a sufficient condition for $(P > Q)$, as well as necessary, there is good reason to think we could explain away the seeming counterexamples to transitivity for counterfactuals. See the discussion the last contribution of which is Wright (1984) and Braine (1979).

example. Jan and Tan are best friends. Tan is here but Jan is not. As (*S*) Tan is here, (*R*) either Tan or Jan is here. But if (*P*) Tan's best friend had been here, then (*Q*) Jan would have been here. (*Q* is false, thus brought about by *P*.) But *Q* would have brought it about that (*R*) either Tan or Jan would have been here. Thus

(9) *If just Tan's best friend had been here, either Tan or Jan would have been here is true.*

(9) is of the form of $(P > R)$ and so is true by connection.

I want to show now that (5) above is an instance of the conditional type $(P > R)$ exactly as (8) and (9) are.

Demonstration: The consequent is true, (*R*) *I won't cross*. Under the circumstances this is the case because I am not disposed to use any of the means available to cross and the bridge is ruined. Let us say these means are swimming and canoeing. Thus we can say, *because* (*S*) *I won't swim and won't canoe and the bridge is ruined*, (*R*) *I won't cross the river*. Consider now the antecedent world, the antecedent being (*P*) *the bridge is standing*. What makes the consequent *R* true in this case is not *S* but (*Q*) *I will not swim, canoe and will not use the standing bridge*. *Q* does not obtain in the actual world, i.e., the last conjunct of *Q*, *I will not use the standing bridge*, is not true. Hence as *Q* is not true, it must have been brought about by the antecedent *P*. But then, as (*R*) *I won't cross the river* is true in virtue of *Q*, *R* is brought about by *P*. Conclusion; (5) is a connection conditional of the type $(P > R)$.

Objection: It may be argued by someone disposed towards a Russellian analysis of definite descriptions and negation that it has not been demonstrated that *Q*, i.e., *I will not swim, canoe and I will not use the standing bridge*, is not true in the actual world where the bridge is a ruin. And hence the claim that (*P*) *The bridge is standing* bears a connection to *Q* is put in doubt. That is, the third conjunct of *Q*, *I will not use the standing bridge*, has a definite description *the standing bridge* and negation. If the negation has large scope, then this sentence is true in the actual world, i.e., *It is not the case that I will use the standing bridge*, is actually true because there is no standing bridge. So, *Q* may very well be true. In which case the claim that (5) is an instance of $(P > R)$ is not fully substantiated.

Response: Let us grant the objector that negation has large scope in the last conjunct of *Q*. Rename *Q* here *Q#*, *Q#* being *I won't swim or canoe, and it is not the case that I shall use the standing bridge*. Now the fact that *Q#* is actually true does not undermine the claim that in the *P*-world, the world where the bridge is standing, *Q#* bears a connection to the fact (R) that I shall not cross the river. That is, why do I not cross the river in the world where the bridge stands? Because I will not canoe or swim and it is not the case that I shall use the standing bridge. So ($Q\# \Rightarrow R$) holds.

I want to show now that P bears a connection to $Q\#$, despite the fact $Q\#$ is actually true. That is, in effect, I want to show that ($P > Q\#$) is an instance of the conditional type ($P > R$). If I show this, and thus that ($P \Rightarrow Q\#$), then as ($Q\# \Rightarrow R$), then by transitivity ($P \Rightarrow R$). It will have been shown that (5) is a connection conditional after all.

Consider then $Q\#$. It is actually true because its three conjuncts are true; *I will not swim*, *I will not canoe*, and *It is not the case that I shall use the standing bridge*. But as the latter is true because there is no standing bridge, we can say that $Q\#$ is actually true because (S) *I will not canoe or swim and there is no standing bridge* is true. Consider the world where (P) the bridge is standing. What makes $Q\#$ true in this world? It cannot be because S obtains. For, by hypothesis, the bridge stands, so S is false. What then makes $Q\#$ true? The only answer is that it is true because (Q) *I won't canoe or swim and I won't use the standing bridge* is true, where, as was originally assumed, negation in the last conjunct has small scope. Furthermore, this last conjunct is actually not true because of its existence presupposition, and so Q is not true. In which case in the P world it is the case that ($P \Rightarrow Q$), and as ($Q \Rightarrow Q\#$), ($P \Rightarrow Q\#$) holds. Thus, as it was argued above that ($Q\# \Rightarrow R$), by transitivity again ($P \Rightarrow R$); our conclusion is that (5) is a connection conditional.[18]

In (5) we are dealing with neither a causal nor analytic connection. It is for want of a better description a "causal-analytic connection". We appeal to such laws as the "psycho-causal" *If any means for crossing were available, I would not use it*, and the "analytic" *A necessary condition for crossing a river is employment of a means of crossing*. We also depend upon some basic axioms of non-causal connection. Thus, where B is true

[18] There are those of course who do not subscribe to a Russellian theory of negation and its interaction with definite descriptions. For a discussion of the other theories on the market, see Horn (1989). A holder of any given alternative theory will deem (Q) *I will not swim, canoe, and I will not use the standing bridge* either true, false or lacking in truth value in the actual world. If the verdict is false or lacking in truth value, then (5) is a connection conditional of the type ($P > R$). If the verdict is that Q is true, then, I submit, the same argument just given with respect to a Russellian theory and the disambiguation $Q\#$ goes through. If Q is deemed true in the actual world, by no matter which theory of negation, it can only be so because of the recognition that *the standing bridge* fails to denote. However, this description denotes its object in the P-world, so Q must be true in the P-world in virtue of the actually non-obtaining fact that there is a standing bridge which I will not cross.

the following is valid; $A \Rightarrow (A \& B)$. A in a context where B is already true explains $(A \& B)$.[19]

In detail the steps in the connection in (5) are the following, (I shall drop the step from Q to $Q\#$);

(a) (The bridge is standing) $\Rightarrow$ (The bridge is a means of crossing).

(b) (The bridge is a means of crossing) $\Rightarrow$ (I won't use the bridge (to cross)).

(c) (I won't use the bridge) $\Rightarrow$ (I won't swim, cross and won't use the bridge).

(d) (I won't swim, cross and won't use the bridge) $\Rightarrow$ (I won't use any of the available means of crossing)

(e) (I won't use any of the available means of crossing) $\Rightarrow$ (I won't cross the river)

Each step is one where in the P-world the consequent obtains in virtue of the antecedent; there is a non-causal explanation of the consequent in which the antecedent is a necessary part. Firstly, (a) holds because we explain the capacity of a bridge to be a means of crossing by the fact that it is standing, amongst other facts. (b) holds because the explanation of why I will not use the bridge is that I will not use any means of crossing and the bridge is a means of crossing. (c) is just an instance of the thesis concerning conjunction above. (d) holds because we explain the fact that I will not use any of the available means of crossing by the fact that I will not swim, canoe and will not use the bridge, and these are the only means of crossing available. (e) holds because we explain the fact that I will not cross by the fact that I will not use any means of crossing, and use of a means of crossing is a necessary condition for crossing a river. As I will not use any of the means available, I will not cross.

8. *Even-if*-conditionals

We have argued above that Bennett's category of introduced-'if's do not exist, and Bennett's example of a semifactual, (6), was not really a semifactual. This does not mean, however, that there is not some other

[19] It should be noted that our analytic connection is not a "relevant implication" of the genre of Anderson and Belnap. See Anderson and Belnap (1975). Relevant systems of implication have been thought by some authors to formalize counterfactual *if-then*. See Hunter (1983).

Anderson and Belnap's idea of relevant implication is based on meaning containment category of *even-if's* where, by C_3, Q is implied which could explain real semifactuality. I know of only one sort of $(eP > Q)$ which appears as if it might do so. I want to look at this type now. Discussion of it will naturally lead into a discussion of *still*. The conclusion will be this. Although initially it looks as if we can account for semifactuality by appeal to this sort of *even-if*-counterfactual, we cannot in the end give a satisfactory account and must resort to *still* in order to do so.

An example: a student without having prepared for an exam sits it and fails. We assert;

(10) Even if he **had** studied, he would still have failed.

The implication generated by (10) is that whether he had studied or not, he would still have failed. This suggests S_u; *Either case (his studying or not) is such that in it, he would have failed*. The word *either* often functions as a quantifier, e.g., in *Either woman is right for the job*. We might think of it as a universal quantifier used when the domain has only two members.

The S_u implied by (10) has two instances. The first is S^*, the case where he studies; *If he had studied, he would still have failed*; the surprising case. The other is where he does not study; *If he had not studied, he would have failed*; the less surprising. The choice of scope which explains the implication of S_j, and thus of S_u is *if* or *had*. This is corroborated by the fact that *if* or *had* or *were* (when the latter is present in the antecedent), are stressed in these cases. When *if* is the scope, the replacement is *if . . . not*. When *had/were* is the scope, *had/were not* is the replacement. Thus, $(eP > Q)$, when *if* or *had/were* is the scope, implies (S_j) $({\sim}P > Q)$ and (S_u) *Either case, P or not P, is such that in it, Q*, or more colloquially, *Whether P or not P, Q*.

S_u here entails logically Q. Given the triviality of this inference, we might conclude that as S in these cases implies a sentence which entails Q, S itself implies Q. It would appear we have arrived at the same conclusion which Bennett sought but by a different path. Semifactuality is explained. However, this conclusion is premature.

Here are the results of some empirical investigation. These *even-if's*, call them "*even-if*-conditionals", often do not have true consequents. Suppose someone is very worried about how their party will go. They fear Basil the party wrecker will turn up. To allay their distress we assert, *It's*

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which they spell out as variable sharing. They accept as a thesis $((P \& Q) \rightarrow Q)$ because of variable sharing and necessary preservation of truth. However, $(P \& Q)$ does not make Q true in the sense of being able to explain it. Hence, $((P \& Q) \Rightarrow Q)$ is not an instance of analytic connection.

very unlikely that he will come but, even if Basil were to turn up, he would only stay for five minutes, have a peaceable drink then go. Say this is true. The point is that the consequent of this conditional i.e., *Basil will only stay for five minutes, etc.*, is not true. You might not think that this is an *even-if*-conditional. But heed the emphasis that is appropriate in this context. It is on *were*. Also the paraphrase that encapsulates best our meaning is like that in other *even-if*-conditionals; *Whether Basil turns up or not, the party is going to be fine.*

There are a host of other examples. Having lost the battle and fully aware that the expected reinforcements were tied up elsewhere we ponder, *Even if the reinforcements* ***had*** *come, they would have been too tired after their journey to help us.* About someone's identity crisis it is remarked, *Even if you* ***were*** *a great virtuoso, that would just add to the problem.* It is not true that your being a great virtuoso adds to your problem. You are not a great virtuoso.

According to the theory of *even-if* just described, *even-if's* should never have false consequents as the above do. However, we can explain why these anomalous conditionals arise without changing our theory of *even-if.* Conversational considerations will enable us to do so.

To show this let us consider first conversation which conformed doggedly to our theory of *even-if*. There would be two facets of awkwardness and redundancy in such conversation;

(i) In asserting an *even-if* $(eP > Q)$ we state (S^*) $(P > Q)$, but also imply (S_u) (Whether or not P, Q). Given that S_u has only two instances $(P > Q)$ and $(\sim P > Q)$ which can be deduced from the structure of S_u alone, S_u supplies little information. Half of its import, i.e., $(P > Q)$, has already been stated, and as $\sim P$ and Q would most probably be presumed, $(\sim P > Q)$ would not be of particular interest. Consequently, there is a certain redundancy and lack of informativeness attending our assertion.

(ii) If we assert $(eP > Q)$ with the strong implication that (S_u) (Whether or not P, Q), this obvious question arises. Why does S_u hold? Again, as the general presumption would be that $\sim P$ and Q are true, an explanation of why S_u is true would involve considering the situation where P holds. The asserted (S^*) $(P > Q)$, however, does not furnish us with any explanation of why Q. So, we would need to assert another counterfactual $(P > R)$, for some R, to explain why S_u is true.

(i) and (ii) are eradicated from conversation and a smoother, more efficient transmission of information occurs when in situations where we want to communicate a fact (S_u) (Whether or not P, Q), and $(\sim P > Q)$ is obviously the case, we assert a conditional $(P > R)$ which explains why $(P > Q)$ is true and thus why S_u holds. And in order to show that $(P > R)$

is to have this explanatory role we tag *even* on to it, transforming it into an *even-if*-conditional. Hence, in the case about Basil the overall goal was to convince our audience that either way, whether Basil turned up or not, the party would be fine. In the case of his not turning up it was obvious, or assumed by all, that things would be fine. To convince our audience that this would also be so in the case of his turning up, we asserted, *Even if Basil were to turn up, he would only stay for a five minute drink*, explaining thereby the implied S_u.

It would seem that the general goal of efficient transmission of information and persuasion, subverts *even's* standard implications to its own purposes. This subversion, however, would appear not to go on all the time. The first *even-if* discussed, (10), was one where the consequent was true. However, (10) has the word *still* in it, while in the anomalous cases above *still* is not present. I suggest that when speakers do want to indicate that the consequent is true and that the conditional is a semifactual, the crucial word is *still* (or a word with like function). The following is evidence for this view;

(i) Given the pervasiveness of the use of *even-if* described above, it is not surprising that some explicit indicator is needed to signal that speakers are not asserting an *even-if* whose consequent is false.

(ii) According to C_1 (and C_3) a necessary condition for the felicity of an *even*-statement S is that S^* is surprising. Bennett initially stresses this fact, yet later he appears to forget it. To quote Bennett (1982: 415), "For example, at this moment my right index finger is straight. It seems correct to say that 'Even if that finger were bent, Syracuse would be in New York'". If the corresponding S^* here is true *qua* semifactual, then it is a very unsurprising truth. I assume it is very obvious that my finger bending would not affect the position of Syracuse. But then according to C_1 and C_3, the asserted S is manifestly infelicitous.

Now English speakers might often want to assert correctly unsurprising semifactuals. There is nothing intrinsically surprising about the ground Sem. Moreover, unambiguous speech obliges a speaker to indicate what ground their assertion is made upon. I suggest then that a speaker would not assert an *even-if*-conditional in the situation described by Bennett, rather they would assert, *If that finger were bent, Syracuse would still be in New York*. In this conditional *even* is neither necessary nor desirable and Sem is implied. *Still* must be generating the implication. In which case we can conclude that *even* is not a necessary component in a semifactual.

(iii) Although there is some hope of accounting for an implication of the consequent in *even-if's* by virtue of *even's* felicity conditions, as we noted at the beginning of Section 8, there is no hope of explaining an implication of the second part of Sem which entails that there is no connection between P and Q. This does not follow from the implied (S_u) (Whether or not P, Q). The latter can be true when both P and $\sim P$ bear some connection to Q. Nor does it follow if in addition (S^*) *If P were the case, Q would be the case* is surprising. We can, however, explain the signal that P bears no connection to Q as well as the signalling of Q by appeal to *still*. (Whether this signalling is an implication or presupposition will be discussed below). To this end I offer the following theory.

9. A Theory of *Still*

What Bennett sought with respect to *even* I shall seek, at least in outline, with respect to *still*; a unified theory of the word both inside and out of conditionals. My particular interest is to describe a certain class of *still's* non-temporal uses; this kind of use will be that found in semifactuals. So I shall be concerned to show that this use of *still* is a special case of *still's* more general meaning according to the theory to be presented.

I shall examine first König's theory aiming to provide a uniform account of both temporal and non-temporal *still*.[20] König deals primarily with the rough equivalent of *still* in German, *noch*, but we can take his theory (as he does) as applying on the whole to *still*. The core meaning that König attributes to *still* is what I call a "scalar meaning". *Still* in a sentence sets up presuppositions concerning a scale of elements ranked in some way. Temporal and non-temporal senses of *still* are special cases of this more general abstract function. Temporal uses involve linear orderings of times, whilst non-temporal uses involve orderings of objects, places, etc.

My description of König's theory will not go into the details of the formal framework employed, or the intricacies of the various sorts of scalar *still*. These matters are not pertinent to my concern here which is to show that the scalar model of *still* cannot explain all of *still's* uses. It breaks down in the case of *still* in comparatives and "adversative" *still*. I shall assume for the moment, following König, that *still* is presuppositional.

Temporal Uses
Consider (11);

(11) The Pyramids are still standing, (after thousands of years).

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[20] See König (1977). See also Löbner (1989), who also provides a roughly scalar analysis. Löbner will not concern me here, for his analysis is not as broad as König's. He does not discuss adversative or concessive *still*.

Here the presupposition that *still* determines is that the Pyramids have been standing uninterruptedly over a stretch of time from some point in the past right up to the present moment. We can characterize (11) and *still's* function as follows. *Still* is an operator taking a sentence P with reference time t as its scope, and the reference time t itself as its argument. We can symbolize this as *still*(t, P). The presupposition introduced is that of a temporal scale or ordering of times (ordered by the relation *before than*) such that the argument of *still*, t, is an element in the ordering. Finally, it is presupposed that P holds at every time t', from a time t_0 before t, up to t. There is no presupposition that P will continue, or not continue, to be true at points in time after t.

Non-temporal Uses

There are many instances of *still*-sentences which are open to non-temporal interpretations. In these cases the presupposed ordering is one not of times but of objects. For example;

(12) Paul is still moderate, Mary is already radical.

To see how (12) can have a non-temporal reading consider the following. Suppose we are comparing various people with respect to their politics. Someone says that Paul is an ultra-conservative and that Mary is not far to the left of him. The reply is, *Paul is not ultra-conservative. Of course, he is still moderate, but he is not a right-winger like Fred, nor is he completely middle of the road like George. As for Mary, she is already radical.* The signal given by (12) is that Paul is a marginal case of moderateness whilst others are more clearly moderate. We analyse *still's* function in (12) in direct parallel with the temporal case. In (12) the argument of *still* is Paul; (12) is symbolized as *still*(N, P), where N is Paul. Paul is an element on a scale of people ranked according to degree of radicalness. He is at a point on the scale at which *x is moderate* holds. Moreover, it is indicated that Paul is a marginal case of *x is moderate*. Paul is just within the moderate region.[21]

[21] König does not discuss why non-temporal scalar uses of *still* all signal that *still's* argument is a marginal case of satisfaction of the sentence schema concerned. However, it may be that this signal is the analogue of the signal in temporal *still*, which König identifies merely as a generalized conversational implication (König 1977: 192), that the sentence P does not hold for times after t, when it is presupposed that P holds at times up to t. That is, in the case of (12) there is an implication, though this is not presupposed, that *x is moderate* does not hold of individuals after Paul in the scale.

Comparatives
König's scalar analysis breaks down in the case of comparatives and "adversative" *still* below. Consider first comparatives. (13) is a rather common use of *still* in a comparative sentence;

(13) Peter is tall, but Fred is taller, and Paul is taller still.

One might reply with (13) to the statement that Peter is very tall. The assertor of (13) is conceding that Peter is tall, but not **that** tall. For Fred is taller (than Peter) and Paul taller still (than Peter). (13) indicates strongly that the ranking in terms of height is Peter . . . Fred . . . Paul. So Paul is several notches higher up on the tallness scale than Peter, with Fred, and perhaps others in between. How would König's scalar analysis account for this use of *still*? In (13), intuitively, our scale of people is based on the open sentence; *x is taller than Peter*. This is confirmed by the fact that the other sentences in mind, involving satisfaction cases, are of the form *a is taller then Peter*, suggesting, if we are to take a scalar analysis, that *still's* argument is Paul. On this analysis we would have a ranking of people according to height, a significant proportion of the members of which satisfy *x is taller than Peter*, and such that Paul is a **marginal case** just as the argument of *still* in (12) was a marginal case) of satisfaction of this schema. But then the indication is that compared with all the others taller than Peter, Paul is only just taller than Peter. Thus, the ranking in height goes; Peter, Paul . . . Fred . . . others.

Such an analysis does not fit (13). Not only is the relative ranking of Peter, Fred and Paul incorrect, the overwhelming implication in (13) is that Paul is not merely a marginal case of being taller than Peter. Moreover, no other scalar analysis would seem to be workable. Taking Peter as *still's* argument does not accord with the fact that in (13) we are interested in people satisfying the schema *x is taller than Peter* and not *Paul is taller than x*. As this is the only other possible candidate for *still's* argument, (I cannot see how *taller* could be the argument, for we have no other relations in mind), it would appear a scalar analysis cannot explain (13).[22]

[22] I do not mean to suggest that all comparative sentences with *still* are inexplicable form a scalar analysis approach. See König (1977: 188–190).

Adversative still

Konig's discussion of adversative still revolves around examples like;

(14) Even if Bill pays me \$200, I'm **still** not going to do it.

(15) He has treated you badly. **Still**, he's your brother and you ought to help him.

(16) No matter what he pays me, I'm **still** not going to do it.

In grappling with these cases, König points out that stressed *still* has "evaluative implications". To quote König, "the stretch of the scale to which the property denoted by part of the sentence applies and for which it is valid is evaluated as large and thus the sentence implies that one would not expect the state of affairs described to hold for the entity denoted by the element in construction with *noch*..." (König 1977: 194). (Or in our case stressed *still*).

König begins with (14) (his 65a). He says that *still* in (14) has the whole sentence as scope where the antecedent is the argument of *still*. König assumes the sentence (14) is equivalent to a negated conditional $\sim(P > Q)$ and then suggests that we have a scale of such sentences, or the states of affairs corresponding to them, ranked according to surprisingness such that the equivalent of (14) is ranked high on this scale, i.e., as rather unexpected. However, there are problems with this analysis.

König's assumption that (14) is equivalent to a conditional of the form $\sim(P > Q)$ is false.[23] In which case the scale of sentences which (14) indicates cannot comprise sentences of the form of $\sim(P > Q)$. Moreover, as there evidently is a ranking involved here, König has no alternative but to say the ranking is of conditionals of the form of $(P > \sim Q)$. In the case of (14) this is fine. (14) without *still* and *even* is assertible.[24] Being assertible and true we can take up an attitude of surprise with respect to it. So (14) without *even* and *still* can be ranked in terms of surprisingness against other conditionals. However, although this proposal seems to work in the case of (14), it will not work with other cases. Take *Even if she had drunk four pints of whisky, she would still have been sober.* On our revised version of König's theory there must be a ranking with this

[23] König is appealing to the view that semifactuals are really equivalent to negated counterfactuals. This is false. See footnote 5, above.

[24] This is a conditional like (5) above: a connection conditional. It should be noted that both (5) and (14) are apparently assertible with *still* in their consequents, but also assertible without *still*. This needs explaining. However, the explanation involves appealing to the meaning of adversative *still* on the theory to be presented below. So the explanation is left till the next footnote.

conditional without *even* and *still* as the most surprising case, i.e., *If she had drunk four pints of whisky, she would have been sober*. But this is unassertible on the ground we have in mind; her resistance to alcohol. It suggests a connection between antecedent and consequent where there is none. What we really want to call surprising here is the conditional with *still*, i.e., *If she had drunk four pints, she would still have been sober*.

Now all this suggests that *still* has nothing to do with setting up the ranking either in (14) or in the case above. *Still* is a component of the conditionals ranked. Moreover, it is evident from our preceding discussion that *even* is the likely source of the indication of a ranking. These conditionals are standing-'if' *even-if*-conditionals. So the conclusion seems to be that in (14) *still* has no scalar function, but some other function.

König recognizes that there are uses of *still* where we apparently have no ranking in mind – (15) and (16) fall into this category as does now apparently (14) – and he wants to explain these. He suggests that such cases are indeed cases of rankings, but the ranking comprises only one entity, namely, the sentence itself in the scope of *still*. It is not exactly clear, however, how König's idea is to work. If the unexpectedness of the state of affairs in the scope of *still* is to arise from its being late in the ranking, how is this to be preserved, if there is no comparison with other cases?

But apart from this concern there is another problem. As far as I can see in adversative uses of *still* unexpectedness is not a necessary feature. Consider, *As it only rained a tiny bit, naturally, the game still took place*. Here it is no unexpected matter that the game still took place. (Note that we can say, *It was an unexpected matter that the game still took place*.) In which case König cannot explain this sentence even if we concede to him his proposal about single entity rankings. (It should be noted that *still* here cannot be interpreted as temporal.)

10. A New Theory

I suggest that this is enough for the calling forth of a new theory that will link adversative, comparative and the scalar uses of *still*, the later including both temporal and non-temporal. The theory I shall propose will not affect in any significant way what König has said about scalar *still*. I shall simply show how scalar meanings of *still* are special cases of a more general non-scalar meaning.

The core meaning of *still* is this. (Still *P*) is true just in case the state of affairs *P*, or some component of it, has "withstood", or "persisted against" some condition. What the condition is and the nature of the persistence will depend on what part of the sentence *still* has as its argument. This idea will become clear through examples.

Take temporal cases. We can paraphrase assertion of (11) as; *The standing of the Pyramid's has persisted since their construction thousands of years ago right up to the present moment.* This will be true just in case the presupposition attributed to temporal *still* by König obtains. A state of affairs P has persisted through time from some point in the past t_0 up to time $\boldsymbol{t}$, just in case, P is true at every time t' such that $t_0 \leq t' \leq \boldsymbol{t}$.

What persists is a state of affairs without a temporal component. In the case above it is not the standing of the pyramids now or at any other time that persists, but there standing as such. I shall register this fact in the theory proposed here by having *still* in temporal cases take P minus its temporal component as its argument. In temporal uses a *still*-sentence has this form (still P)$\boldsymbol{t}$, i.e., the sentence part outside the brackets is not part of *still's* argument.

In general then the element of the sentence which is *still's* argument is that element whose corresponding semantic value is to persist in some way (that way depending on the semantic nature of the element). And if argument and scope do not coincide, the rest of the sentence in the scope of *still*, but not in the argument, will be an element in the dimension along which the argument persists. This was time in the temporal case. In non-temporal scalar uses *still* has that part of the sentence as its argument excluding the part which denotes the entity on the intended scale. Hence, (12) is to be interpreted as having the form (still Px)$\boldsymbol{n}$, where Px is an open sentence and $\boldsymbol{n}$ is a name. Note that the analogue of temporal persistence holds here. Px persists in being satisfied along the scale of objects up to the object $\boldsymbol{n}$.

This is not an entirely artificial notion if we remind ourselves of the fact that scales, graphs and functional relations (and it will be shown in a moment that scales are special cases of functional relations) are often interpreted "dynamically". Thus, we consider a variable x of a function Fx as "moving along" the x-axis as it takes up successive values in picturing functional dependence. This very picture is used in illustrating the notion of limits in calculus. We talk of y "approaching" a value N as x approaches another value. Similarly, in the case of (12) we can picture the function *x is moderate* persisting in taking true as value as x moves along the scale taking in succession values up to Paul.

It does not seem implausible that analogical ties unify different uses of a word. König was in effect already committed to this with his distinction of temporal and non-temporal *still*. To link these two scalar uses he had to think of time as a linear ordering of points. However, it is not true that time is such an ordering. Time is merely analogous to such an ordering.

Comparative still

It is the dynamic interpretation of a graph or ordering which is also behind the comparative *still* in (13). What is an ordering of entities according to a given property *F*, i.e., height, weight, age or half-life? Supposedly it is (paradigmatically) a spatial array of objects, *a*, *b*, *c* . . . etc., such that the degree to which an object has the property *F* is proportional to its distance from a spatial origin. Thus, when we say that *c* is more *F* than *b*, this means, literally in terms of the spatial model we are appealing to, that *c* is *further away* from the origin than *b* is.

However, this translation of what we mean employs a comparative, *further away*. So we have not explicated comparative statements in a non-circular way in terms of our spatial model. However, we can if we interpret the spatial model dynamically. A sentence *c is more F than b* can be translated as *c is arrived at* (*literally by physically going along the array*) *by moving R-wards from b*, where direction *R* is away from the origin.

I suggest that comparative uses of *still* can be understood by paraphrasing in the terms just described. Consider the general form of a comparative statement like (13);

(17) *a* is *F*, but *b* is more *F* (than *a*), and *c* is more *F* still (than *a*).

The second conjunct of this statement is translated as (18), the third, the *still*-statement, is translated as (19);

(18) *b* is reached by going *R*-wards from *a*.
(19) *c* is reached by persisting in going *R*-wards from *a* at *b*.
(20) *c* is reached by still going *R*-wards from *a* at *b*.

In (19) we specify *c*'s position on the array relative to *a* by appeal to *b*'s position; namely, you reach *c* by not stopping the movement that reaches *b*. If we were literally driving along the array, then when we reached *b*, the call would be to keep on driving, not to stop, in other words, to persist in driving. The notion of persistence, (not stopping) in (19) is a sign of *still's* presence. Unsurprisingly, (19) is equivalent to (20). Note that the use of *still* in (20) is a natural one. We might say, if we were looking down on the people driving along our imaginary array, *They were still going R-wards at b*, *just as we might say*, *They were still going west at Tombstone*, which means they went further west than, drove through Tombstone. *Still* here has its temporal meaning.

The translations (19) and (20) explain why in comparative uses of the form (17) there is a signal that the ranking is *a*, *b*, *c*. *c* is further down the array than *b*. Or in the case of (13) Paul is further down the height scale, (taller than), Fred, and both are taller than Peter.

I submit that in comparative uses of *still*, *still* takes the comparative predicate *more F than a* as its argument. So in (13) the argument of *still* is *taller than Peter*. This would seem to follow from the fact that *more F than a* corresponds to *going-R wards from a* in our paraphrase, and in (20) *still* takes this part of the sentence as argument.

It should be noted that our analysis is corroborated by a use that the word *again* can be put to that is very similar to *still's* comparative use. We may assert sentences like;

(21) *a* is *F*, but *b* is more *F*, and *c* is more *F* again (than *a*).

as in, *Misha is smart but Tanya is smarter, and Masha is smarter again*. We can paraphrase (21) as, *C is got by* (*when you get to b*) *moving R-wards again*. This suggests that the argument of *again* is *more F than a*.

Adversative still

I want to consider non-conditional adversative *still*-statements. Conditionals will be considered in the next section. Adversative *still*-statements are ones where *still* takes the whole sentence as its argument; argument and scope coincide. This is corroborated by the fact that *still* can come before the whole sentence as in (15). The proposal here is that, (where *P* is a sentence corresponding to a proposition with a time component, and *still* takes *P* as its argument), *S* holds:

S. (still *P*) is true iff the fact of *P* is not undermined by the fact of *C*. (where *C* is contextually indicated)

S is supported by the following. Consider,

(22) Although he is terribly dull, she still went out with him last night.

(23) There are no spices in this meal. But it still tastes nice.

We can paraphrase these adversative *still*-sentences without loss of meaning as, in the case of (22); *His dullness did not prevent her going out with him last night*, (23) *The lack of spices has not undermined the meal's tasting nice*, and the case of (15) above, *The fact that he treats you badly does not undermine the fact that he is your brother and you should help him*.

Note that it is necessary in adversative *still*-statements that C should be something that has to be withstood. One could not say; *He was delightfully amusing to her. Still she liked him.* As his being so amusing to her would have induced her to like him in itself, it fails to qualify as a suitable *C*. *C* must be non-sufficient for the truth of the sentence which is the argument of *still*. That is, there must be no connection between *C* and *P*.

Now, how does adversative *still* appeal to the same core of meaning as the other uses; persistence? There are two conceptual/analogical links.

(i) One of the ways we picture temporal becoming is as a flow; hence the often used analogy of a river. When a state of affairs persists through time, this is, in terms of the flow analogy, *P*'s withstanding the flow of time. So when *P* has persisted, *P* has withstood, not been undermined by, the passage of time. In adversative *still* we take this basic idea, but *P* is a temporalized state of affairs and the condition is not the flow of time but some state of affairs in time.

(ii) We can think of temporal persistence as continued resistance to causal undermining. In the temporal use we are implying the truth of a whole class of statements of the form *The fact that P at t has not been causally undermined by some fact or other*. This sentence is just the right-hand side of *S*; the condition for an adversative *still*-statement to be true.

That there should be an analogical link behind temporal and adversative uses of *still* as here described is corroborated by our use of the phrase *It remains the case*. We can use this in both temporal and non-temporal senses in direct parallel with *still*. We might assert, *It remains the case to this day that Pam despises Fred*, meaning that Pam's scorn for Fred has persisted through time down to this day; Pam still despises Fred. On the other hand one can say, *It remains the case that Pam abused Fred at dinner today!* Here we are not suggesting that Pam's abuse has persisted through time. Rather we are suggesting that the fact that she abused Fred at dinner has not been undermined or annulled by some fact (perhaps proposed as an extenuating circumstance). So it is true that despite this fact, Pam **still** abused Fred at dinner today!

It seems to be no coincidence that *It remains the case* and *still* overlap in the fashion above. We can explain this by appeal to our theory of *still* in terms of persistence and the analogical links (i) and (ii). In general then what unifies the various uses of *still* is analogy. *Still* will take any part of a sentence *P* as its argument to whose semantic value the concept of persistence can be applied; either directly, in the temporal case, or by analogy, in the atemporal, both scalar and adversative, or finally, directly but to the underlying dynamic metaphor, as in comparative *still*.

11. *Still* and Semifactuals

We have assumed so far along with König that *still* sets up presuppositions, and thus contributes to truth conditions. I want to drop this assumption for the moment. Let us take it as given only that (still P) signals the obtaining of certain facts involving P, and in particular, adversative *still* signals that P has not been undermined by a fact C. Granted this we can show how on the hypothesis that *still* has its adversative sense in a semifactual Sem is signalled. Consider the case of *If my finger were bent, Syracuse would still be in New York*. The sentence in *still's* scope is *Syracuse is in New York*. Hence, the consequent is *Syracuse is still in New York*. Our semifactual is of the form, ($P >$ still Q). Here the consequent sentence signals, on the assumption of P, *The fact that Syracuse is in New York has not been undermined by the fact that* C, where C obtains in the P-world. What will C be in this case? The answer is P, i.e., *my finger is bent*. This must be so if the ground of the conditional is to be Sem. With P as C, we are indicating that (24) is true;

(24) If my finger were bent, then the fact of my finger's being bent would not undermine the fact that Syracuse is in New York.

(24) is true only when a condition of the structure of Sem holds, i.e., (i) Syracuse is in New York, (ii) bending my finger is causally benign with respect to this fact without being in the circumstances a sufficient condition for it. We have explained how Sem is signalled.[25]

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[25] We need to explain why adversative *still* can be part of the consequent of (5) and (14) above, even though without *still*, they are true connection conditionals (as I argued in Section 7. with respect to (5)). The explanation is this:

A semifactual is a conditional of the form ($P >$ still Q), where *still* has its adversative sense, and where P is the condition C which (still Q) signals that Q withstands. On the other hand there are many conditionals, which are of the form ($P >$ still Q), where *still* is adversative, but where C is not P. Rather it is a state of affairs B which obtains in the P-world, and which itself may or may not be brought about by P. These are not semifactuals. (5) and (14) with *still* in their consequents are examples of this latter sort.

For example, we might paraphrase, (5) with *still*, i.e., *If the bridge were up, I still would not cross the river*, as, *If the bridge were up, despite the bridge's then being a safe and good means of crossing, I still would not cross the river*. Likewise we might paraphrase (14) as, *If he were to offer me 200, despite this being a big sum, I still would not do it*. These are natural paraphrases. That is, the reason why (5) with *still* is surprising, and (5) itself is surprising, is that a bridge being up is a fairly safe way of getting across a river. What is surprising is that despite this fact, I still do not cross the river.

We see that the condition C in the *still*-conditionals above is not P but another state of affairs. Thus these conditionals are not semifactuals. Of course, what makes it doubly difficult to determine that they are not semifactuals is that the sentence in the scope of *still* is actually

Still and truth conditions

What, however, is this signalling, a conventional implication or an entailment or presupposition? Most writers take it that *still* sets up presuppositions, and hence contributes to truth conditions. I do not want to enter into a general discussion here about whether they are right. Instead I shall argue that consideration of counterfactuals and in particular semifactuals supports strongly the view that *still* sets up presuppositions.

This, of course, is tantamount to arguing that the classical view is false. If the classical view is false, then $(P > Q)$ is always true on connection grounds. Moreover, given that we are taking it here that *still* is a truth contributing part of the consequent, a semifactual $(P > \text{still } Q)$ is equivalent to a counterfactual of the form $(P > R)$, where $R = (\text{still } Q)$. But then embracing a connectionist thesis means we are committed to semifactuals being connection conditionals.

Indeed, it has to be by virtue of a connection that a semifactual is true, if *still* is presuppositional. For, given a true semifactual $(P > \text{still } Q)$ where P is false, the presupposition of (still Q) that there is a fact P not undermining Q fails to obtain. In which case we have a true counterfactual the antecedent and consequent of which are not true. Hence, by Thesis 4 above, the counterfactual is a connection conditional. In the case of $(P > \text{still } Q)$ the connection amounts to this; P is a necessary condition for the truth of *the fact that P has not undermined Q*. In a context where Q is the case and the requisite causal relations hold, P's obtaining will bring about non-causally *P has not undermined Q*. That is, in the P-world, a necessary component of the non-causal explanation of why *P has not undermined Q* is true will be P's truth, i.e., *P did not undermine Q* will obtain, in part, in virtue of P. It should be noted that (24) is a connection conditional. It is equivalent to a semifactual, and, moreover, Thesis 4

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true. Clearer cases of these non-semifactual adversative *still*-conditionals are ones where the sentence in the scope of *still* is actually false. Here is an example. Let us say we have not played a game of cricket because it rained heavily. We can assert, *If it had not rained, we would have played, indeed, if it had rained only moderately, we would still have played.* The second counterfactual is one where *still* is adversative, and the sentence in *still's* scope is false. We did not play.

This is a case where P brings about both a state of affairs B and a state of affairs Q, and thereby a state of affairs (Despite B) *still* Q. That is, in the case above, (P) *it rained only moderately* brings about (B) *it rained*. I assume *only* is a truth condition contributor. P also brings about (Q) *we played*. The following is a true conditional, *If it had rained only moderately, we would have played*. This is a connection conditionals as its consequent is false. Finally, given that its raining bears no connection to our playing, P brings about *Despite its raining, we still played*.

entails that it is a connection conditional. When (24) is true but its antecedent is false, its consequent will not be true.[26]

I now want to give a reason why the connectionist view just outlined where *still* is truth-condition-contributing is to be preferred over the classical view where *still* is not truth-condition-contributing. The following cannot be denied by a classical theorist. ($P >$ still Q) signals the truth of a conditional ($P >$ (P does not undermine Q)). (24) is an instance of this type of sentence. We have just seen that this is a connection conditional. This counterfactual has Sem as its truth condition. But this means that both grounds of a counterfactual are equivalent to a connection ground. But why is this so? This is a profoundly mysterious fact for the classical view of things. Nevertheless, it seems we should explain it. However, there would appear to be only one answer; the connectionist view is right. *Still* contributes to truth conditions and a counterfactual is always true on connection grounds.[27]

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[26] I am assuming again that the scope of negation is small. But even on the assumption that it is large, (24) is still a connection conditional. In such a case, where the antecedent of (24) is false and (24) is true, (24) will be a connection conditional of the sort ($P > R$) discussed in Section 7.

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Dept. of Philosophy
University of Melbourne
Parkville
Victoria
Australia 3052