

## EVEN AND EVEN IF

The expression *even if* is very troublesome, raising special and difficult questions in the semantics of conditionals. It is not often discussed by linguists and is generally either ignored or mishandled by philosophers. But serious progress can be made once one acknowledges the fact that the word *even* in *even if* means “even”, just as *only* in *only if* means “only” (Lycan, 1984b). In consequence, a theory of *even if* should fall out of a plausible general theory of the semantics of *even*, if one can be obtained. To my knowledge, only Hazen and Slote (1979) and, following them, Bennett (1982) have self-consciously pursued this strategy;<sup>1</sup> I shall discuss Bennett’s subtle theory and compare it to one of my own.

1. THREE VIEWS OF *EVEN*

Everyone knows that *even* carries a strong connotation having to do with contextual presumptions or expectations and events’ contravening those expectations:

- (1) Even Grannie was sober.
- (2) Not a creature was stirring, not even a mouse.

(1) suggests that the level of sobriety of some gathering was so great that Grannie, whom one would not expect to be sober, was sober; (2) suggests that the stillness on the occasion in question was so great as to include all the mice—animals that one would normally expect to be moving about. Further examples illustrate that *even* just as easily applies to constituents other than NPs:

- (3) For you, my dear, I would even eat haggis. [At least three-ways ambiguous.]
- (4) It is fast, it is durable, it is even low in price.
- (5) She won steadily, in large sums, and even graciously.

Indeed, everyone knows that the main function, probably the only func-

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<sup>1</sup> But Vic Dudman has advocated it for many years. It is to Dudman that I owe the immortal example (1) below.

tion, of *even* is to carry that expectation-contravening connotation. But as with all "connotations", dispute arises over whether the somehow communicated contrastive content is entailed by the sentence containing *even*, or is *only* implied or implicated by it in some less formal way. Let us set out some alternative general views of *even* that illustrate such differences, in ascending order of semantic respect for *even*.

1. *The Minimal view.* At an extreme of "radical pragmatics", one might hold that *even* makes no semantical contribution whatever to a sentence in which it occurs and no contribution to anything that one might call locutionary meaning. It is semantically null, and serves only to express an attitude of mild surprise on the speaker's part (though the topic or focus of the surprise is marked by the syntactic scope of *even*). Thus, (1) would be understood as something like, "Gosh, GRANNIE was sober!"

2. *The Conventional view.* This view posits conventional implicature (or what Lycan (1984a) calls "lexical presumption"), which implicature originates precisely in the choice of the word *even*. (Cf. *but, too, either*.) Though *even* contributes nothing to truth-conditions strictly construed, a sentence containing it is inappropriately lexicalized if the implied unexpectedness does not really obtain. (Bennett defends the Conventional view.<sup>2</sup>)

3. *The Semantic view.* This view eschews all attempts to write off *even*'s "connotation" as merely emotive, conversational, conventional or otherwise pragmatic. The Semantic view is that *even* does affect truth-conditions, in some way that the Semantic theorist would have to go on to specify; the addition of *even* to a sentence creates new genuine entailments that the original sentence did not have. But to my knowledge, no one has ever taken the Semantic view.

I doubt anyone would take the Minimal view seriously. Ordinary speakers insist that

(6) Grannie put on her coat

and

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<sup>2</sup> It was earlier enunciated by Karttunen and Peters (1979), and I know of no one who has contested it.

I suppose there is room for a "Conversational view," which would agree that *even* serves to express an attitude of counterexpectation, but substitute conversational implicature (*à la* Grice) for conventional. I have never heard of anyone's holding the Conversational view. It is totally implausible, since conversational implicatures are calculated on the basis of whole propositional content, not triggered without calculation by special single words. I mention it only because it is a taxonomic possibility.

- (7) Even GRANNIE put on her coat

differ in “meaning”, to say nothing of

- (8)a. Grannie even PUT ON HER COAT  
b. Grannie put on even her COAT

and

- c. Grannie put on even HER coat.

Though we professionals may care nothing for the ideas of ordinary speakers, even would-be “rad-prag” linguists (who enshrine as little in truth-conditional semantics as possible) would feel some obligation to explain the contrastive implications generated by *even* in specific pragmatic terms of some sort, presumably Gricean. Finally, as we shall see, there are both syntactic and semantic reasons to assimilate *even* to the obviously semantically valued quantifier *only*.

As I have said, the connotation seems specifically to be supplied by the meaning of the word *even*, and that intuitive feature is the mark of conventional implicature, lexical presumption, or semantic albeit lexical entailment outright. The Conventional view is attractive. It combines the healthy semantic skepticism of the Minimal and Conversational views with the Semantic view’s concession to common sense that the word *even* itself actually means something and contributes a specific component of locutionary meaning to sentences in which it occurs. The Conventional view is also impressively fleshed out by Bennett, who specifies in elegant detail what he thinks the choice of the word *even* implicatively adds to a sentence into which it is inserted, and more recently as well by Kay (1990), ditto. Any defender of the Conventional view must specify that, of course, as well as the mechanism by which the “conventional implication” is delivered.

One would hold out for the Semantic view only if one is dissatisfied with the Conventional account as a view of the perceived difference that *even* makes to “meaning”, or if one has actual syntactic or semantic evidence that *even* affects truth-conditions. And of course there is more than one possible truth-conditional theory of *even*.

Let us take a look at Bennett’s account. I shall then go on to argue that there is some evidence for the Semantic view as against the Conventional, and that my own general theory of conditionals offers some semantical advice regarding *even* generally.

## 2. BENNETT'S THEORY

Bennett contends that *even* does not affect truth-conditions, comparing it to the contribution of *but* over and above *and*. But he insists that it does make a highly systematic contribution to pragmatic assertibility. Whether true or false, a sentence containing *even* will be assertible only if "there is a neighbour sentence which is known, related, and less surprising" (p. 406). This shorthand formulation needs considerable unpacking.

If *S* is a sentence containing *even*, let *S*\* be the result of deleting *even* from *S*, and let *S*'s "neighbors" be other sentences that differ from *S*\* only in the constituent that is intuitively the focus of *even* in *S* (bar whatever superficial grammatical changes may be required by the substitution).<sup>3</sup> To take Bennett's own example: If *S* is

- (9) Even the children laughed at him,

then *S*\* is simply

- (10) The children laughed at him,

and neighbors include

- (11)a. Everybody laughed at him  
 b. Nobody laughed at him  
 c. His grandmother laughed at him  
 d. Dick and Jane laughed at him  
 e. The dog laughed at him

and so on. Now, Bennett's assertibility condition for the sentence *S* is that there exist a neighbor *S<sub>j</sub>* of *S* such that

- (i) *S<sub>j</sub>* is true, and mutually believed by speaker and hearer, and salient for them (e.g. it has just been authoritatively asserted);  
 (ii) the truth of *S*\* and that of *S<sub>j</sub>* can naturally be seen as parts of a single more general truth;  
 (iii) it is more surprising that *S*\* is true than that *S<sub>j</sub>* is true. (pp. 405–406)

(9) will thus be assertible only if there is some salient truth of the form "X laughed at him" that can be seen as part of the same more general truth and is less surprising.

<sup>3</sup> Instead of the linguists' term 'focus', Bennett uses the word 'scope' in a way he carefully defines (p. 407). So far as I can tell, his notion of scope differs from that of focus only in one way, that I shall describe shortly. It is sharply distinct from the logicians' use of 'scope'.

Bennett's bare existential quantification – there need be *only* one salient neighbor – leaves his analysis open to an obvious sort of counterexample, in which there are two or more salient neighbors, still conspicuously less surprising than the relevant  $S^*$ . But that objection does not immediately affect my own enterprise, and so I shall postpone consideration of it till late in this paper. For now let us move on and apply the analysis to conditionals containing *even*. Bennett says that *even if* conditionals can be generated in each of two ways, depending on the focus of *even* (he explicitly considers only subjunctive conditionals). In particular, *even* has different effects when its focus contains an entire conditional from those it has when its focus is merely a conditional antecedent or smaller constituent.

The first way of generating an *even if* conditional is to apply *even* to an  $S^*$  whose  $S_j$  is already a conditional. Let  $S^*$  be

- (12) If he drank just a little she would fire him,

said of a puritanical boss (p. 410). The relevant  $S_j$ , which licenses the assertion of the resulting  $S$ ,

- (13) Even if he drank just a little she would fire him,

would probably be

- (14) If he drank a lot she would fire him,

the focus of *even* in  $S$  being *just a little*. When the  $S_j$  is already a conditional in this way, Bennett calls  $S$  a “standing-‘if’” conditional.

But sometimes, Bennett says, “the relevant  $S_j$  is not a conditional, [and] the move from  $S_j$  to  $S$  is a move into conditionality” (p. 410). When the  $S_j$  is not in this way already a conditional, Bennett calls  $S$  an “introduced-‘if’” conditional. (In such a case the *if* falls within the focus of *even*, as Bennett says it does not in standing-‘if’ conditionals.) Here things get a bit tricky, for at first it is hard to see how a nonconditional  $S_j$  could be related as a “neighbor” to a conditional  $S^*$ ; the “neighbor” relation works by substitution of grammatical constituents. Bennett's answer is that sometimes for his purposes a constituent is “null, empty, a mere absence from the sentence” (p. 407). His example is one in which “I stand looking at the raging waters of the river, and the ruins of the bridge, and I say ( $S$ ) ‘Even if the bridge were standing I would not cross’”. Here  $S^*$  is of course

- (15) If the bridge were standing I would not cross,

and Bennett says the relevant neighbor  $S_j$  is simply

(16) I will not cross.

$S^*$  results from  $S_j$  by substitution of the conditional antecedent for a (I suppose, the) null constituent; it is “formed . . . by sheer addition, rather than by replacement” (p. 411).

Two questions arise immediately. (i) How is Bennett’s “relatedness” condition satisfied? (ii) Since the idea of a “neighbor” sentence is based on comparative judgments of expectedness, how can a conditional and its own free-standing consequent be related as neighbors, when there is no comparison between a conditional antecedent and nothing at all?

Question (i) is that of how (15) and (16) “can naturally be seen as parts of a single more general truth.” Bennett says (p. 411) only that “a wide range of conditions is inimical to my crossing the river”. If that is the “single more general truth”, I do not offhand see how either a counterfactual,  $S^*$ , or the categorically factual  $S_j$  are “parts of” it, at least not in the way that the children laughing and the grandmother laughing are parts of the general fact of everyone’s laughing. I suppose the counterfactual may be counted by courtesy as “part of” the inimical conditions because its categorical basis lies in them, but the fact of my not crossing is part of the inimical conditions only if we deliberately assume that it *is* a fact and that I do not cross despite the inimical conditions. (To assume that would doom Bennett’s main explanatory project to circularity – see below.)<sup>4</sup>

Question (ii) is more pressing. The idea of a “neighbor” sentence is intuitively grounded in that of a natural reference-class of items. In Bennett’s example, (10) has as its true neighbors all and only sentences of the form *X laughed at him*, where ‘X’ is replaced by names of people or groups who did laugh at him, the idea being that from among the people or groups who did laugh, the children had been less likely to laugh than were the others. (12), when the focus of *even* applying to it is still *just a little*, defines a reference-class of amounts he might drink, and so forth. But there seems to be no such reference-class defined by (15) and (16). The conditional antecedent certainly suggests a natural reference-class of conditions under which I would not cross, but the categorical (16) does not differ from the conditional by substitution of another member

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<sup>4</sup> Perhaps what “unifies”  $S^*$  and  $S_j$  is natural law: the conditions are so inimical that crossing is a physical impossibility. Fine, but we want my treatment of *even if* to apply to conditionals that are not fully nomically necessary, as well.

of the same reference-class; it states what it states unconditionally.<sup>5</sup> Bennett seems to intend that the “null condition” should be counted as a member of the reference-class of conditions. But how might that be understood? We need, remember, to compare degrees of expectedness, which is easy enough with conditional antecedents; it is more expected that if he drank a lot she would fire him than that if he drank just a little she would fire him. But which is more expected, that if the bridge were standing I would not cross or that I would not cross, period? (Perhaps we should understand

- (17) I would not cross

as elliptical for

- (18) I would not cross under any conditions,

which at least gives us “no conditions” as an explicit member of the relevant reference-class of envisioned conditions. But my categorically not crossing under any conditions is a priori LESS likely than is just my not crossing if the bridge were standing, and so Bennett’s condition (iii) would not be satisfied.) Let us call this general difficulty of understanding the “neighbor” relation for “introduced-‘if’” conditionals the “Problem of Comparison”.

The Problem has its roots in a decision made earlier by Bennett in formulating his general theory of *even*. Consider

- (19) Conflicts of interest make him angry. Indeed, even *allegations of conflicts of interest* make him angry.  
 (20) The Soviet authorities put dissidents into mental hospitals. They put even *the relatives* of dissidents into mental hospitals.  
 (21) There has never been a miracle. There has never even been *prima facie evidence of a miracle*. (p. 407)

Intuitively, to me, the respective foci of *even* in (19)–(21) are *allegations of conflicts of interest*, *the relatives of dissidents*, and *prima facie evidence of a miracle*, and the *S*\*’s underlying the respective second sentences result from substituting those phrases for the corresponding simpler constituents in the respective first sentences, the *S*<sub>j</sub>’s. Bennett denies this. He stipulates instead that the second sentences result from the first sentences by “sheer enlargement” (p. 408), substitution of *allegations of*, *the relatives*

<sup>5</sup> Nor, as Michael Hand has reminded me, is there any syntactic trace of a deleted or otherwise inexplicit conditional antecedent.

of, and *prima facie* evidence of for “null parts” of the  $S_j$ ’s. He gives no reason for making this choice, save to note that it “will matter later on”.

The reason I find the choice counterintuitive is again that I think of *even* as expressing a comparison of expectedness within a contextually indicated reference-class, and the  $S_j - S^*$  “neighbor” relation as grounded in the same. But Bennett’s interpretation of the relation abandons that idea: We cannot compare the expectednesses of allegations, of relatives, or of *prima facie* evidence with that of nothingness. What we are comparing is allegations of conflict with conflict, the relatives of dissidents with the dissidents themselves, and so on.

If we try to respect that idea and restore it to Bennett’s analysis, what happens to the Problem of Comparison regarding conditionals? (15) and its genuine neighbors would have to be seen as grounded in a reference-class whose members were being compared as to expectedness. And, as above, it is easy to see what sorts of items those members would be: CONDITIONS which might or might not have obtained. The spirit of Bennett’s analysis of *even if* conditionals is unimpaired, for these conditions form a unified class, of circumstances under which I would not cross the river; and of the members of that class of circumstances, some are less expected or more surprising than others, and so the more surprising ones rate an *even*.<sup>6</sup>

An important qualifying note: Though all this talk of “expectedness”, “likelihood”, “surprisingness” etc. is standard in the literature, beginning perhaps with Fillmore (1965), it is misleading. Whatever scalar notion really is in play here is not always so forthrightly epistemic. Kay (1990) has produced clear counterexamples to the idea that the focus of *even* must denote something unexpected or unlikely in the ordinary epistemological sense. Indeed, sentences containing *even* can be pragmatically ambiguous as regards what scale is assumed. Certainly, extremity relative to some scale is required, but the question of what sorts of scale are mobilized in what contexts remains complicated.

For short though perhaps perniciously, I shall continue to use the vague epistemic terms. The issue does not in particular affect the application of *even* to *if*.

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<sup>6</sup> A referee has sensibly expressed some disquiet about the notion of a “reference”-class in a case where *even*’s scope is an entire clause. I am assuming the intuitive antiFregean idea (cf. Barwise and Perry (1983)) that even if sentences strictly denote truth-values, there is also a sense in which at least embedded sentences refer to conditions, situations, or states of affairs. My general theory of conditionals embodies this presupposition, as we shall see.



## 3. THE CONSEQUENT-ENTAILMENT QUESTION

We have seen that the idea of *even*'s generating a reference-class is consonant with the main points of Bennett's analysis. What, then, is impaired by my rejection of Bennett's unintuitive notion of "scope" as comprehending "null parts", and why did he say his choice would "matter later on"? The answer is important for my own forthcoming theory of *even if*. It is that a main purpose of his paper is to explain an oddity or puzzling phenomenon concerning *even if*, which oddity will be causing trouble for my own account as well.

The oddity is that, although *Q even if P* has the superficial aspect of a conditional and although it seems grammatically to be simply the result of applying *even* to an ordinary conditional, it does not seem intuitively to be conditional in meaning. A speaker who asserts *Q even if P* is typically felt to have asserted that *Q* – unconditionally. Mackie (1973), Pollock (1976) and Lycan (1984b) have claimed, more aggressively, that on its standard use *Q even if P* entails *Q*, though there seems to be a less central use on which it does not. What, then, is the role of *even if P*? This I take to be a pretheoretical puzzle for any theory of conditionals of either mood. I have my own view of the matter and shall expound it shortly, but for now let us continue to study Bennett's analysis.

Bennett points out, following Pollock's own concession (pp. 29–31), that the example of the puritanical boss is one in which the consequent is (obviously) not entailed. (13) can be true whether or not the employee ever does drink or ever does get fired. Notice that this is a focus phenomenon. Its intended reading is that on which *even* operates on *just a little* as opposed to *a lot*, but if we take the whole conditional antecedent as the focus, there is also a reading that seems to entail or imply his being fired: not even a (tee-)totally unexpected act on his part of drinking-just-a-little would save him from being fired (by an ANTIPURITANICAL boss). What distinguishes *even if* conditionals that entail or imply their consequents from those that uncontroversially do not?

Bennett's ingenious answer is that the former are INTRODUCED-'IF' conditionals and the latter are not. Recall that on his view an *even if* conditional is on strict lexical grounds properly assertible only if there is a relevant *S<sub>j</sub>* that is true, and on his problematic account of introduced-'if' conditionals the relevant *S<sub>j</sub>*'s are simply the conditionals' consequents. Thus one cannot say *even* unless the consequent is true, even though the relevant *S\** does not itself semantically entail the consequent. That is why some *even if* conditionals, the introduced-'if' ones, are felt to imply their consequents uncancellably even though in fact they never entail them.

This explanation is marred by our problems (i) and (ii) aforementioned. (i) was the difficulty of seeing how Bennett's bridge case exemplified "relatedness". We saw that it might do so if we hamhandedly assumed it to be a "general fact" that inimical conditions simply prevent me from crossing the bridge no matter what. But as I predicted, that particular assumption would be useless in the present explanatory context, for it begs the question: our only motive for accepting it is our desire now to make the bridge case one in which the consequent is uncancellably implied.

(ii) was the Problem of Comparison. Bennett's answer to the Consequent-Entailment Question depends unfortunately on his idiosyncratic stipulation about the "neighbor" relation, and it turns out that that stipulation was motivated only by its ability to yield that answer to the Consequent-Entailment Question. Thus despite its ingeniousness Bennett's theory gets us no forwarder on the Consequent-Entailment Question in particular.

It us turn to the account that falls out of my own general theory of conditionals. Only the shallowest acquaintance with that theory is needed to see how it applies to *even if* and then illuminates *even* generally.

#### 4. MY THEORY OF CONDITIONALS

The basic idea is that like *when* and *where*, *if* is an operator that forms an adverbial clause containing a universal quantifier.<sup>7</sup> Just as

(22) I'll leave when you leave

is paraphrased by

(23) I'll leave at  $\left\{ \begin{array}{c} \text{the} \\ \text{any} \end{array} \right\}$  time at which you leave,

and

(24) I'll live where you live

is paraphrased by

(25) I'll live in  $\left\{ \begin{array}{c} \text{the} \\ \text{any} \end{array} \right\}$  place at which you live,

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<sup>7</sup> I owe this insight originally to Michael Geis. He provides a wealth of syntactic argument and detail in his half of Geis and Lycan (1990).

so

(26) I'll leave if you leave

is paraphrased by

(27) I'll leave in  $\left\{ \begin{smallmatrix} \text{the} \\ \text{any} \end{smallmatrix} \right\}$  event that you leave,

or equivalently

(28)a. I'll leave in  $\left\{ \begin{smallmatrix} \text{the} \\ \text{any} \end{smallmatrix} \right\}$  case in which you leave.

b. I'll leave in  $\left\{ \begin{smallmatrix} \text{the} \\ \text{any} \end{smallmatrix} \right\}$  circumstance that you leave.

c. I'll leave on the condition that you leave.

Somewhat more formally, (22) and (24) can be represented by means of universal quantifiers; respectively

(22\*)  $(t)(\text{You leave at } t \supset \text{I'll leave at } t)$

and

(24\*)  $(p)(\text{You live in } p \supset \text{I'll live in } p).$

Similarly (26) can be represented as

(26\*)  $(e)(\text{You leave in } e \supset \text{I'll leave in } e),$

the variable '*e*' ranging over "events", "cases", "circumstances" or "conditions" as may be stylistically appropriate. Such items will then be understood as possible states of affairs.

Naturally the quantifier is restricted; otherwise all conditional consequents would be held to be LOGICALLY implied by their antecedents. The restriction class varies widely with context; I call it the class of "events" or circumstances that are "real and relevant possibilities" in the context – real in the sense of being epistemically envisionable rather than idle, and relevant in the sense of . . . relevant. My official analysis for *Q* if *P*, *If P, Q* or *If P, then Q* will be

(A)  $(e \in R)(\text{In}(e, P) \supset \text{In}(e, Q)),$

read roughly as *In any relevant event that is a "real" possibility relative to this occasion and in which P, Q.*

The contextual variation of my parameter '*R*' is my analogue of Stalnack-

er's selection function and of Lewis' similarity relation; it is the means whereby a conditional antecedent directs us to a set of possible situations that differ minimally from the actual state of affairs. The contents of the restriction class *R* on an occasion of utterance are controlled by several requirements, two of which will be of use here:

**The Weak Relevance Requirement:** *R* must contain at least one "event" in which the conditional antecedent itself is true. [Intuitively, because uttering or hearing the antecedent forces us to envisage a state of affairs in which it holds, however outlandish it may be.]

**The Reality Requirement:** All *actual* relevant events are members of *R*, envisioned or not. [Otherwise, Modus Ponens fails.<sup>8</sup>]

Requirements like these account for the various distinctive failures of inference exhibited by English conditionals as opposed to material or strict conditionals (the failures called to our attention by Stalnaker and by Lewis). For example, Antecedent Strengthening fails because the antecedent of our conclusion forces us (via the Weak Relevance Requirement) to envision a possibility that had not been envisaged until after the premise had been tokened:

If Smedley finishes his book, I'll be happy.

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∴ If Smedley finishes his book and concludes it with a vicious and totally unfair personal attack on me, I'll be happy.

Now, to *only if* and *even if*. I contend that contrary to every logic text I have ever seen, *only* in *only if* means simply "only," and *even* in *even if* means simply "even". Thus I paraphrase *I'll leave only if you leave* as

$$(29) \quad \text{I'll leave only in } \left\{ \begin{array}{l} \text{the event that} \\ \text{events in which} \\ \text{circumstances in which} \end{array} \right\} \text{ you leave,}$$

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<sup>8</sup> Perhaps Modus Ponens *should* fail. That is a contention I take very seriously; see Ch. V of Geis and Lycan (1990). And before the reader gags in horror, he/she should consider the question of what *non-question-begging* reason anyone might have for insisting on the validity of Modus Ponens while joining the mainstream in rejecting Antecedent-Strengthening.

As might be expected, a number of interesting issues stand or fall with the Reality Requirement and Modus Ponens. As a referee has observed, there are also some interesting questions to be faced in regard to the Requirement's behavior under embedding.

i.e.,

(30) I'll leave in no event other than one in which you leave,

and I paraphrase *I'll leave even if you leave* as

(31) I'll leave even in  $\left\{ \begin{array}{l} \text{the event that} \\ \text{events in which} \\ \text{circumstances in which} \end{array} \right\}$  you leave;

(31) in turn seems equivalent to

(32) I'll leave in any event including  $\left\{ \begin{array}{l} \text{that} \\ \text{events in which} \end{array} \right\}$  you leave.<sup>9</sup>

Formal rendering of (30) and (32) are

(30\*)  $(e \in R)(f \in R)(\text{In}(f, \text{You leave}) \supset f \neq e) \\ \supset \neg \text{In}(e, \text{I'll leave})$

and

(32\*)  $(e \in R)(\text{In}(e, \text{I'll leave}) \& (f \in R)\text{In}(f, \text{You leave}) \\ \supset \text{In}(f, \text{I'll leave})).$

(Each of these formulas is of course redundant.)

## 5. THE CONSEQUENT-ENTAILMENT QUESTION IN LIGHT OF MY THEORY

Though I had no such intention in devising it, this “event” theory of *even if* supports the Consequent-Entailment claim. And if correct it explains a good deal.

The theory explains (a) why *Q even if P* is felt to assert that *Q*, (b) wherein *Q even if P* is conditional in form despite seeming to embody a flat assertion, (c) the uneasy feeling of redundancy or superfluity that accompanies recognition of the foregoing two facts, and (d) the actual positive role of *even if P* – all at one stroke. (a): *Q even if P* is felt to assert that *Q* because (on the “event” analysis) its first conjunct says in effect that in any (“envisioned”) event, *Q*. (b): *Q even if P* is conditional

<sup>9</sup> This was Geis' (1973) initial intuitive paraphrase of *Q even if P*.

in form in that its other conjunct is a conditional (to which *even* is applied). (c): The feeling of superfluity is brought on by the fact that the conditional conjunct posited by the “event” theory is redundant, being entailed by the previous conjunct.

The “event” theory’s explanation of (d) turns on the function of the parameter ‘*R*’. Suppose the speaker were merely to assert some reflection of

$$(B) \quad (e \in R)(\text{In}(e, Q)).$$

Now, what the speaker had asserted (what specific proposition he or she had expressed) would depend on the exact value of ‘*R*’, since the formula as displayed is an open sentence until the parameter has been assigned a denotatum in the context. And a hearer who is concerned to grasp the speaker’s meaning exactly must know the correct value of ‘*R*’. But that value is something that that hearer would have to work out from the context, employing the almost inarticulate pragmatic rules (whatever they may be) that we use in computing the valuation function for demonstratives and other indexicals. Those rules are irreparably vague. Now suppose the speaker is anxious that the hearer fully understand what proposition is being expressed: It would be a good idea to save the hearer the trouble and risk of this pragmatic guessing, by making EXPLICIT, if he or she can, what had been left merely implicit in the context. And to do this, I submit on behalf of the “event” analysis, is the function of *even if P*.

My analysans for *Q even if P*,

$$(C) \quad (e \in R)(\text{In}(e, Q) \ \& \ (f \in R)(\text{In}(f, P) \supset \text{In}(f, Q))),$$

is equivalent to

$$(D) \quad (e \in R)(\text{In}(e, Q)) \ \& \ (e \in R)(\text{In}(e, P) \supset \text{In}(f, Q)),$$

whose second conjunct ensures that among the “events”  $\in R$  are at least one in which *P* and at least one in which  $\neg P$ . Thus, the redundant conjunct serves to assure the hearer more explicitly that “events” in which (= “the event that”) *P* ARE ENVISIONED BY the speaker in the context in question. Thus, rather than letting his or her utterance go at (heuristically) *In any relevant event that is a “real” possibility relative to this occasion, Q*, the speaker is saying the more explicit *In any relevant event that is a “real” possibility relative to this occasion, and I specifically count the event that P as such an event, Q*. The redundancy of *Q even if P* is just the price

that the speaker and hearer pay in extra time and computation for the advantage of greater clarity and ease of communication.<sup>10</sup>

All that is splendid, but so far it ignores the datum of Pollock's that started Bennett off in the first place. What has our account to say of (13), on its intended reading? My official analysans would be

$$(13^*) \quad (e \in R)(\text{In}(e, \textit{She fires him}) \ \& \ (f \in R)(\text{In}(f, \textit{He drinks just a little}) \supset \text{In}(f, \textit{She fires him}))),$$

which is equivalent to

$$(13^{**}) \quad (e \in R)(\text{In}(e, \textit{She fires him})) \ \& \ (f \in R)(\text{In}(f, \textit{He drinks just a little}) \supset \text{In}(f, \textit{She fires him})).$$

This is fine for the unintended reading pointed out above, but will not do for Pollock's. Our analysis must somehow be modified to afford focus distinctions like Bennett's.

One further feature of my "event" theory of *even if* ought to be noted. Unlike Bennett, I have bought into the Semantic view of *even*, since the truth-condition I assigned to *Q even if P* differs sharply from that which I assigned to *Q if P* alone. And I did this without special argument, offering only the plausibility of a paraphrase.

My tasks, then, are two, if the spirit of the "event" theory is to be preserved in our theory of *even if*: I must make room for focus, in the manner of Bennett. And I must either defend or abandon my allegiance to the Semantic view of *even*.

## 6. A PENULTIMATE THEORY OF *EVEN IF*

Let us begin by reconsidering my original analysans as a manifestation of the behavior of *even* in general.<sup>11</sup> I paraphrased *Q even if P* as *Q in any*

<sup>10</sup> This explanation substantively assumes that the values of '*R*' as it modifies both of the quantifiers in my analysans for *Q even if P* are one and the same, i.e., that '*R*' does not take one value for the first quantifier and then a second, distinct value for the second quantifier. But I see nothing objectionable about this; we should expect that the speaker would be envisioning one and the same set of relevant "events" throughout his or her utterance. It ought also to be acknowledged that the explanation depends on a slightly stronger Relevance requirement than the Weak one stated above: It needs to be stipulated that the reference-class *R* mentioned in the analysans of *Q if P* contains events in which *P*, since otherwise that analysans might be VACUOUSLY satisfied due to the absence from *R* of any such events.

<sup>11</sup> Despite my boasts then and now that on my view, *even* in *even if* means "even", Lycan (1984b) did nothing to show that my original analysans is *only* a special case of *even*'s normal behavior.

*event*, including any in which *P*, while the simpler *Q* if *P* comes from the correspondingly simpler *Q* in any event in which *P*. What has *even* semantically added? Seemingly, it has added (i) implicit reference to a contextually specified WIDER CLASS (here, of real-and-relevant “events” generally, not just those in which *P*), and (ii) a universal quantification over the members of that class. That suggests a Semantic analysis of *even* generally, based on our earlier intuitive idea of a “natural reference-class” within which we distinguish degrees of expectedness:

Where *S* is a sentence containing *even*, *C* is the constituent<sup>12</sup> of *S* and of its corresponding *S\** that is the focus of *even* in *S*, unsaturated dashes “---- ----” indicate the result of subtracting *even* and *C* from *S*, and *G* is a contextually determined class containing at least one member  $\neq C$ : *S* is true iff every member *x* of *G* including the referent of *C* is such that ----*x*----.

As in our original analysis of *even* if, the point of the otherwise redundant “including the referent of *C*” is to make explicit the fact that the referent of *C* is indeed a member of *G* also.

*G* is the “natural reference-class” I have urged upon Bennett, within which comparisons of expectedness are being made. But like Bennett, I do not build the comparisons themselves into our official truth-condition, but consider them as conventionally implicated or lexically presumed by the choice of *even*.

Let us apply this analysis to our opening examples: (1) is true iff everyone in the group was sober, including Grannie. (3) is true iff for you I would eat anything (within reason), including haggis – or on its other readings is true iff for you I would do anything (within reason) including eating haggis, or iff for you I would do anything to haggis including eating it. (4) is true iff the thing in question is fast and durable and has all

<sup>12</sup> I join Bennett in ignoring multiple *evens* and nested *evens*, for simplicity; on those, see especially Kay (1990). I also cannot here investigate the interaction of *even* with negation, though that and the parallel behavior of *only* are both fascinating and relevant to the present issues. Horn (1969) called attention to apparently presuppositional phenomena in this regard; *not* in *not even* and *not only* is obviously not the logician’s pristine “external” negation. (See also Ducrot (1973), Fauconnier (1976), and again Kay.) I could not go into my disagreements with Horn without a lengthy digression on the nature of “presupposition”. (I am grateful to Horn for letting me see some important and more recent unpublished material on this topic, and I hope to take it up elsewhere.) But I would note that differential interaction with negation does nothing to embarrass the claim I shall be defending as to the semantic closeness of *even* and *only*; for by anyone’s lights, *only* has a negative element impacted within it, and *even* has not.



the other good-making properties (that one might reasonably envision) including that of being low in price. (5) is true iff she won in every contextually desirable way including graciously. And, joy of joys, (2) is true iff every one OF THE CREATURES including the mice remained motionless – here the “wider class” *G* is mentioned explicitly. All these semantic proposals are plausible<sup>13</sup> (though we shall see later on that they are flawed).

Moreover our analysis affords us a way of attending to focus distinctions. Recall Grannie and the coat. (6) and (7) do indeed now differ in truth-condition, since the latter implicitly refers to a group and entails that everyone in that group put on his or her coat. (8a) is true iff Grannie did everything, including putting on her coat; (8b) is true iff Grannie put on everything including her coat; and (8c) is true iff Grannie put on everyone’s coat including her own. This all seems right, so far.

Let us now return to Pollock’s example of the puritanical boss, which inspired Bennett’s paper and caused trouble for my own initial analysis of *even if*. Recall that Pollock’s sentence

(13) Even if he drank just a little she would fire him

has an unintended reading on which (given an ANTIPURITANICAL boss) it does entail or imply that she would fire him. That is the reading on which the focus of *even* is the conditional antecedent, and it fits perfectly with my initial analysis (she would fire him in any event, including any event in which he drank just a little). The problem was that it also has the intended, puritanical reading on which it obviously does not even suggest that she will in fact fire him. I suggested that this is a focus phenomenon. Our new analysis of *even* confirms that suggestion. For the new analysis lets us shift our attention to *just a little* as the more likely focus for *even*. On that focus assumption, our truth-condition for Pollock’s sentence is that if he drank any amount, including just a little, she would fire him, or more formally, every amount including just a little is such that if he drank that amount, she would fire him.<sup>14</sup> And this too comes out right. It seems our new Semantic analysis has succeeded in making room for the needed focus distinctions, as, being semantic, it might have been expected to do.

What about Bennett’s example,

<sup>13</sup> If for the moment we ignore the difference between entailment and conventional implicature, this analysis is almost exactly that of Karttunen and Peters (1979).

<sup>14</sup> Formally, in comparison to (13\*), where ‘*a*’ ranges over amounts,

(13\*\*\*)  $(a)(e \in R)(\text{In}(e, \text{He drinks } a) \supset \text{In}(e, \text{She fires him}) \ \& \ (e \in R)(\text{In}(e, \text{He drinks just a little}) \supset \text{In}(e, \text{She fires him})))$ .

- (33) Even if the bridge were standing I would not cross?

Bennett's problem was to account for (33)'s apparently entailing or implying that I would not cross; Bennett's solution depended on his idiosyncratic, arbitrary and otherwise counterintuitive twist on the "neighbor" relation. By contrast, my initial analysis handles the sentence perfectly: I would not cross the bridge in any (envisioned) event, including any in which the bridge is standing. We now see that other readings of the sentence are both possible and accommodated by our new general theory of *even*: Suppose I am in fact going to cross and everyone assumes that. But it is wartime and we are discussing scenarios. The enemy might saturation-bomb the area, and if so would watch out for survivors and still-standing structures, and on sight of any would obliterate the river and anything crossing it. I say,

- (34) If the tall radio tower were still standing, I would not cross the river; for that matter, if the BOQ were standing I would not cross; even if the bridge [a considerably lower structure than either the radio tower or the BOQ] were standing I would not cross.

This is true iff for any former local structure *x* including the bridge, I would not cross if *x* were standing (under the saturation-bombing circumstances). Or consider a case in which bridges and other familiar objects are behaving oddly and we do not entirely know what to expect. Let us suppose our own bridge is trustworthy and we are confident it will continue living up to the highest principles of bridgehood, but (as before) we are also envisioning unlikely scenarios. In one of these the bridge has played all sorts of tricks and is quite unpredictable. I say

- (35) If the bridge were submerged I would not cross; for that matter if the bridge were dancing and singing I would not cross; even if the bridge were standing I would not cross,

which is true iff for any activity on the bridge's part including its just (as usual) standing, I would not cross in the imagined circumstances.

This disposes of Pollock's and Bennett's problem. It was, as Bennett supposed, a matter of focus, though I contend that Bennett got the details wrong.

It remains to show independent reason why we should suppose that any version of the Semantic view is correct, and why in particular we should think that *even* actually reflects a universal quantifier in logical form, rather than being tied to the relevant comparison class by some merely

pragmatic means. The answer is straightforward, though it is overlooked by philosophers everywhere:<sup>15</sup> *Even* is very closely akin to *only* in its grammatical behavior and in its range of hospitable syntactic environments. Both words are “floaters”, in that they can occur in almost any grammatical position:

$\left\{ \begin{array}{l} \text{Even} \\ \text{Only} \end{array} \right\}$  Grannie was sober.

For you, my dear, I would  $\left\{ \begin{array}{l} \text{even} \\ \text{only} \end{array} \right\}$  eat haggis.

[Notice the same ambiguity for *only* as for *even*.]

$\left\{ \begin{array}{l} \text{Even} \\ \text{Only} \end{array} \right\}$  if he drank just a little,  $\left\{ \begin{array}{l} \text{she would} \\ \text{would she} \end{array} \right\}$  fire him. [Parallel ambiguity again. (The order inversion in the consequent is a negative polarity item, caused by the *not* within *only*.)]

Edna  $\left\{ \begin{array}{l} \text{even} \\ \text{only} \end{array} \right\}$  showed up. [Parallel ambiguity between the subject as focus and the predicate as focus.]

John's mother ridiculed  $\left\{ \begin{array}{l} \text{even} \\ \text{only} \end{array} \right\}$  him. [Note that adverbs cannot similarly intervene between V and NP, as in \**John's mother ridiculed recently him* (Rooth 1985, p. 89); *only* and *even* are not adverbs.]

\*?The library is closed on  $\left\{ \begin{array}{l} \text{even} \\ \text{only} \end{array} \right\}$  Sunday. [(Rooth 1985, p. 93).

Neither *only* nor *even* can occur comfortably within certain simple PPs.]

Not  $\left\{ \begin{array}{l} \text{even} \\ \text{only} \end{array} \right\}$  Grannie liked the movie.

And finally

$\left\{ \begin{array}{l} \text{Even} \\ \text{Only} \end{array} \right\}$  I hit him in the eye yesterday.

<sup>15</sup> But see the linguists Horn (1969), Geis (1973), McCawley (1974, 1986), Rooth (1985), and Brugman (1986).

- I  $\left\{ \begin{smallmatrix} \text{even} \\ \text{only} \end{smallmatrix} \right\}$  hit him in the eye yesterday.
- I hit  $\left\{ \begin{smallmatrix} \text{even} \\ \text{only} \end{smallmatrix} \right\}$  him in the eye yesterday.
- I hit him  $\left\{ \begin{smallmatrix} \text{even} \\ \text{only} \end{smallmatrix} \right\}$  in the eye yesterday.
- \*?I hit him in  $\left\{ \begin{smallmatrix} \text{even} \\ \text{only} \end{smallmatrix} \right\}$  the eye yesterday.
- I hit him in the eye  $\left\{ \begin{smallmatrix} \text{even} \\ \text{only} \end{smallmatrix} \right\}$  yesterday.
- I hit him in the eye, yesterday  $\left\{ \begin{smallmatrix} \text{even} \\ \text{only} \end{smallmatrix} \right\}$ .

The similarity is all the more remarkable when one considers that very few words in English can float so freely.<sup>16</sup>

The moral is that *even* and *only* are syntactic soulmates. Their surface distribution is uncannily alike.<sup>17</sup> And *only* is uncontroversially a quantifier,<sup>18</sup> restricted in context to a salient class of items. It would be very surprising if *only* had so robust and classical a semantic value while *even* had no semantic value at all. In fact, once one gets used to the idea that

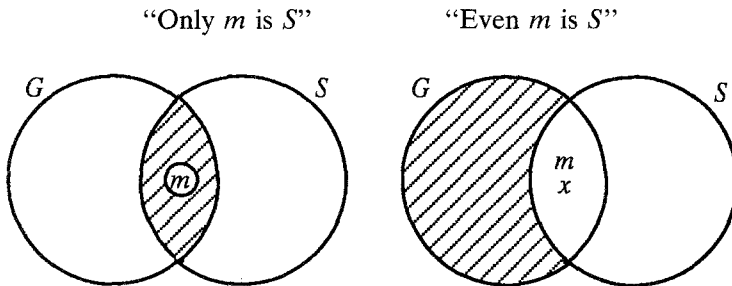
<sup>16</sup> And, when they float, they generate similar focus ambiguities; see Geis and Lycan (1990), Ch. VI. Other floaters are *just* (usually a synonym of *only*), *at least/most*, *maybe*, *too*, and *also*. Notice that all have reasonably clear quantificational or otherwise referential values.

A referee has suggested the addition of the hedges *kinda* and *sorta* to this list, but such hedges cannot normally focus proper names: \**Kinda John sang*. The same referee has also pointed out a difference between *even* and *only* that needs explaining: *Even*, but not *only*, can focus an item to its left (without special intonation).

<sup>17</sup> Though not, strictly, identical, for each has other peripheral uses. *Only yesterday* can mean "as recently as yesterday" as well as "on no day other than yesterday", and *even* has no parallel use unless an archaic one that, oddly, means the same thing. *Only* can occur as a shriek or uniqueness marker in definite descriptions, as in *My only brother has been arrested*, and there is no parallel use for *even*; I suggest that is due to *only*'s negated-identity semantic meaning, obviously not shared by *even*.

<sup>18</sup> Uncontroversially among philosophers and logicians, at least. Someone – more likely a linguist than a logician – might assimilate *only* to *even*, and argue that all that is entailed by *Only Susan left* is that Susan left, while no one else's leaving is only conventionally implicated. But such a view is implausible. If there were an entailment/implicature asymmetry, it would cut in the other direction, i.e., it would be entailed that no one other than Susan left, and merely implicated that she did (as, e.g., in Horn (1969); Horn elsewhere traces the asymmetry claim to William of Sherwood). Also, standard conventional implicatures are contrastive or otherwise attitudinative, not structural. An apodeictic relation between a sentence and a distinctively related quantified formula is semantic.

both words determine a contextually natural reference class relative to focus and that the reference classes are exactly the same everywhere, it is easy to see how the two words differ as quantifiers over that class: An *only*-sentence is true iff none but the mentioned member of the reference class satisfies the schema that results from deleting *only* itself and the mention, while an *even*-sentence is true iff every member of the reference class including the mentioned member satisfies that schema.<sup>19</sup> In brief: *Only* means “none except”, *even* means “everyone including”. The two are logical contraries up to the mentioned member.<sup>20</sup> In a crude Venn diagram:



(*G* is the contextually indicated reference-class; *S* represents the matrix; shading indicates the emptiness of a class; ‘*x*’ indicates occupancy; ‘*m*’ indicates the mentioned member.)

<sup>19</sup> Recall the truth-condition for *even* presented above. The corresponding truth-condition for *only* is

Where *S* is a sentence containing *only*, *C* is the constituent of *S* and of its corresponding *S*\* that is the focus of *only* in *S*, unsaturated dashes “---- ----” indicate the result of subtracting *only* and *C* from *S*, and *G* is a contextually determined class containing at least one member = *C*: *S* is true iff no member *x* of *G* except the referent of *C* is such that ----*x*----.

In putting forward this formulation, I have not tried to deal with the obligatoriness of internal negation, e.g., by splitting the analysans into assertion and presupposition. (Again – cf. fn 12 – my preferred treatment of negation would be a long story.) For convenience, I have also fallen in with the common view that *Only S is P* noncancellably implies *S is P*, but that claim is highly disputable.

<sup>20</sup> Horn (1969) saw a similar contrareity relationship, but expressed it in terms of the then going semantical distinction between assertion and presupposition: “*even* . . . asserts what *only* presupposes and presupposes the negation of what *only* asserts” (p. 106). The detail of Horn’s thesis is criticized by Kay (1990, 86–87).

Stevan Harnad has also observed in conversation that in English, Hungarian and other languages, *even* is fairly well paraphrased by *not only non-*, if the second negation is taken to apply promiscuously to any possible focus.

The argument is, then: (i) *only* and *even* are syntactic soulmates, in that they show identical distribution patterns over an extraordinary variety of syntactic environments; (ii) each of the two determines a “natural reference class” of items, and in a given syntactic environment both determine the same class, without fail; (iii) *only* is uncontroversially a universal quantifier whose domain is the class in question; (iv) when *even* is accordingly though unprecedentedly interpreted as the near-contrary universal quantifier, the resulting paraphrases of typical *even*-sentences are compellingly attractive; therefore irresistibly, (v) *even* is that near-contrary universal quantifier, and the Semantic view is vindicated.

Notice that if that conclusion is correct, it reinforces the case for my general thesis that *if*-clauses quantify over a domain of items, in light of the simple fact that *even* applies to *if* exactly as *only* does. There are other operators as well whose function is to indicate contrasts within the membership of a contextually indicated reference class, such as *especially*.

- (36)a. Everyone was embarrassed, especially Ned.
- b. Ned especially was embarrassed. [Tacitly calls attention to a group.]

Significantly, *especially* applies to *if*:

- (37)a. A grizzly will chase you, if he isn't tired and if he's hungry and especially if you're carrying meat.
- b. A grizzly will chase you, especially if you're carrying meat.

It would be great to stop here. But I must address four potential counterexamples to our account of *even*. One will prove crucial, and require a significant revision.

## 7. APPARENT COUNTEREXAMPLES

The first counterexample is discussed at some length by Bennett: the use of *even* as an intensifier of comparatives, as in

- (38) Bill is even taller than John.

(38) of course has several readings on which it fits our analysis and Bennett's alike (even John is shorter than Bill; among Bill's accomplishments is even managing to be taller than John; etc.). But (38) can and would often mean that although John is tall, Bill is taller. Bennett argues convincingly that this ambiguity is not a focus ambiguity like the others (notice that on the comparative-intensifying reading, *even* cannot be made a tag, as in

- (39) Bill is taller than John, even),

and he claims it represents what is simply if unexpectedly a different lexical use of *even*.<sup>21</sup> Someone impressed by my analysis might think of isolating a comparison class of DEGREES OF TALLNESS, but I see no satisfactory way of following this through; the best I can do by way of a truth-condition is: Every (envisioned) degree of tallness including John's is such that Bill's tallness has (at least) it. Though plausible, this does not carry the requisite implication that both John and Bill qualify as tall, period (that their degrees of tallness fall within the high range). Consequently I agree with Bennett that the comparative-intensifying use of *even* is simply if unexpectedly a different lexical use of *even*.<sup>22</sup>

The second apparent counterexample is

- (40) You have to be eleven or twelve or even thirteen to get your ears pierced.<sup>23</sup>

Construed as a comment on the ages at which various children are allowed by their parents to get their ears pierced, (40) means roughly that some parents make their children wait until they (the children) are eleven, some require that they be twelve, and some require, even more stringently, that they be thirteen. Here again, appeal to a comparison class does not seem to help fit the example into our general analysis of *even*. The obvious comparison class is that of ages at which the relevant children are allowed by their parents to get their ears pierced. But does (40) mean anything of the form, "Every age at which any of the relevant children is to be allowed by their parents to get their ears pierced, including age thirteen, is *F*"? The best instance of this construal I can come up with is to replace '*F*' by "at least eleven and is required by some parent", thirteen being less expected to be required than is eleven or twelve. This is awkward at best.

<sup>21</sup> Bennett's own example of the comparative-intensifying use is *My wife's satisfaction was even greater than mine* (p. 408); he notes that French distinguishes it (*encore*) from the use that concerns *me même*). And the separateness of that use of *even* is supported by the ambiguity of his own example itself, parallel to that of our sentence (38). On its comparative-intensifying reading it entails that my satisfaction was great. But consider also the case in which my wife's satisfaction had a number of interesting properties: being timely and being hard-won, which were expected, but also being greater than my satisfaction, as was unexpected, even though my satisfaction in this case was zero. I think my own analysis of *even* might manage to subsume the comparative-intensifier use, as would Kay's theory (1990), but I shall not pursue it here.

<sup>22</sup> A perhaps related use is the slightly archaic *even as*, as in *Gaius was brought down by his overweening pride, even as his father had been brought down thirty years before*, which is not contrastive at all, but equivalent to *just as* or *exactly as*.

<sup>23</sup> I owe this example to Jane Lycan, spontaneously in conversation.

I would be unashamed to leave (40) officially unsolved, since (40)'s modal operator and funny surface disjunction make (40) an especially puzzling sentence to begin with, even discounting the focus of *even*. But Jonathan Bennett has suggested to me that (40) can be seen as an instance of the disparate comparative-intensifying use. Each of the ages is felt (by the speaker) to be pretty advanced; one could not say

- (41) \*You have to be one or two or even three to get your ears pierced.

And (40) is plausibly glossed by *You have to be pretty old to get your ears pierced – eleven or twelve or even thirteen*.

Notice also that the surface disjuncts are ineliminable:

- (42) \*You have to be even thirteen to get your ears pierced

makes no sense on its own. I think that is because the comparative-intensifying use of *even* is of necessity comparative: at least two items must be mentioned and compared, one of which has a positive scalar property and the other has the same property to a greater degree. So I gratefully accept Bennett's suggestion. It may be wrong, and the details of (40) would be both difficult and fascinating in any case, but (40) is no great threat for now.

The third counterexample was put to me (years ago) by Allan Gibbard in conversation.<sup>24</sup>

- (43) I'll be polite even if you insult me, but I won't be polite if you insult my wife.

My analysis for that sentence is

- (43\*)  $(e \in R)(\text{In}(e, \text{I am polite}) \ \& \ (f \in R)(\text{In}(f, \text{you insult me}) \supset \text{In}(f, \text{I am polite}))) \ (g \in R)(\text{In}(g, \text{you insult my wife}) \supset \text{In}(g, \neg(\text{I am polite})))$ .

This formula is not itself a contradiction, but it entails that there is no event  $e \in R$  in which you insult my wife, which contradicts the Relevance Condition because it ensures via the third conjunct that there is such an event. Some response is required.

In Lycan (1984b) I made the move of claiming that even though 'R' had not changed its value from its first occurrence to its second, it did change its value from the first and second conjuncts to the third. The idea

<sup>24</sup> A similar example is given by Frank Jackson (1979, p. 579).



was that an utterer of (43), while uttering the first two conjuncts, did not envision his hearer's insulting his wife, but suddenly came to envision it and therefore uttered the third conjunct. The plausibility of this increases if we choose not to require the inclusion of all actual relevant events in *R*, since on my analysis under that requirement, (43) would *entail* that the hearer will not in fact insult the speaker's wife, which seems wrong. If we drop the Reality Requirement (Section 3 above, especially fn 8), this consequence is avoided. The intuitive content of (43) could then be expressed as *I do not as things are envision any real and relevant possibility that I will not be polite, not even one in which you insult me, but if I now make myself envision one in which you insult my wife, I do not see myself being polite in any such event*. So we have a bit more motivation for choosing not to impose the Reality Requirement.<sup>25</sup>

It should be recalled that with the Reality Requirement stands or falls Modus Ponens. If Modus Ponens seems a high price to pay for (43), notice that (43) creates a *pretheoretic* difficulty for Modus Ponens, quite apart from the "event" theory. Suppose I token (43) and you do proceed to insult both me and my wife, whereupon I am very impolite. Then although (43) was presumably true, its first surface conjunct *I'll be polite (even) if you insult me* has a true antecedent and a false consequent. Somehow, (43)'s second conjunct cancels or suspends the Reality Requirement we would ordinarily impose on the first.<sup>26</sup> Notice too that the problem is not generated by the presence of *even*; it persists even when *even* is deleted from (43). Still, the present treatment is somewhat stilted and I would like to do better.

Our problem is not the Semantic view of *even*, but the fact that a speaker can imply a global constraint on his or her conduct in one conjunct and then make an exception to the constraint in the next. In light of our discussion of Pollock's example, we might think of now trying to make Gibbard's datum to be a focus phenomenon also. But that is unpromising. *Even* occurs only once in Gibbard's sentence, and so cannot CHANGE its focus in the course of the example. And whether we take the focus of *even* to be the first conjunct's whole antecedent or just *me* (qua representative of the class of potential insultees), the second conjunct seems to contradict the first just as before. I cannot for now improve on my earlier parameter-

<sup>25</sup> To drop the Requirement will force revision of our solution to the Consequent-Entailment problem; see Section 9 below.

<sup>26</sup> The case here is cognate with one in which a speaker's conditional consequent is falsified in some bizarre and unforeseeable way; see Chap. V of Geis and Lycan (1990).

shift hypothesis. However, I can make it a bit more plausible by pointing out that intrasentential parameter shift is far from unknown in English.

My own parameter-shift hypothesis may look odd if one takes a very literal view of “envisioning”: It is psychologically unlikely that anyone could utter the Gibbard sentence (43) without actually having considered the possibility that the hearer might insult his wife; the speaker does not LITERALLY first come to think of that possibility in mid-sentence. But I have never intended my reference-class parameter to be understood in so crude and concrete a way. “Envisioning” is to some extent a stylized matter of conversational pose; I have tried to indicate this by the wording of my English gloss on (43). That raises the question of exactly what “envisioning” is, then. But there are plenty of examples of single sentences within which quantifier restriction classes are widened, without any actual doxastic change occurring episodically in the speaker:

- (44) I'd do anything to get that *F* off my record, Professor, but forget about *kinky* stuff.
- (45) Subway Club with everything and also hot peppers, please.  
[Overheard in line at the Subway sandwich shop.]

And a further example, attributed to Yogi Berra, in reference to a New York restaurant:

- (46) Nobody goes there; it's too crowded.

(Admittedly (46) is a malapropism, and perhaps because it is an oxymoron, but its meaning is clear and unparadoxical.)

Notice too that ordinary *even* sentences exhibit the widening feature:

- (47) I'll eat anything on pizza, even squid or bull's testicles, but not a brick or a crowbar.

I would be willing to leave the Gibbard situation at that, for now. But an alternative possibility will be suggested, indeed required, by an adequate response to the last of our four problem cases.

That fourth apparent counterexample strikes right at the heart of my novel Semantic analysis of *even*. I contend that *even* is a universal quantifier. But universal quantifiers have the habit of being universal. Thus on my view, within the reference class presupposed by any given use of *even*, there can be no exceptions. Yet *even* does seem to admit exceptions.

Suppose that of a large group of people invited to a certain party, all

are very likely to attend. Gonzo and Bluto, in particular, are party animals and virtually certain to go. However as it turns out, nearly everyone ends up staying home on the night in question, because there is an outbreak of stomach flu and not even Gonzo and Bluto feel very well. Bluto succumbs, but Gonzo manages to drag himself to the party nonetheless, finding himself alone with the chagrined host and a forlorn stack of party favors.

The problem is caused by Bluto. It is that

(48) Even Bluto stayed home

seems entirely assertible in the case described, Bluto being the least likely to have stayed home of those who did stay home. But my theory analyses that sentence as “Everyone stayed home, including Bluto”, which is falsified by the intrepid attendance of Gonzo. In fact, as has been argued by Kay (1990) since I first drafted this example, the tale of Bluto and Gonzo is only one of a large array of counterexamples to the popular idea that *even* is an “end-of-scale” marker. Our present penultimate account follows most of the literature in assuming that the mentioned member of *even*’s reference-class must be the most extreme, least “expected” member to occupy the matrix at hand (e.g., Fauconnier (1976)). But witness Kay’s further examples:

- (82) Not only did Mary win her first round match, she even made it to the semi-finals.
- (83) The administration was so bewildered that they even had lieutenant colonels making major policy decisions.

Acceptability of (82) does not depend on the presence of some very special kind of context in which reaching the semi-finals, as against winning the tournament, is in some appropriate sense end-of-scale. In (83) it is clear that having majors, captains, or sergeants making major policy decisions would provide the basis for even more extreme assertions: *lieutenant colonel* is not an end-of-scale item here. (pp. 89–90)

It may be true that the semi-finals were the highest stage of the tournament that Mary DID WIN, and that lieutenant colonels were the lowest-ranking military personnel who were in fact making decisions, but it does not follow that either were respectively end-of-scale relative to contextual expectation or envisioning.

The problem is, then, part of a general difficulty for the understanding of *even*. The general difficulty is that of determining exactly where and how the conventionally implicated contrast of likelihood cuts into the reference class in question. And the Gibbard problem is a special case of it as well.

## 8. THE CONTRAST WITHIN THE REFERENCE CLASS

Bennett's theory incurs that difficulty in a more obvious way. Consider a variation on the previous example: As before, almost all the invitees are very likely to attend the party. Again Gonzo and Bluto are certain to go. However, Clarence is quite shy and virtually never goes to parties, and James is virtually autistic, refusing ever to have anything to do with them. Now this time, the flu outbreak disables everyone, even Gonzo, and everyone stays home; Clarence and James had no inclination to go anyway. But since James was even less likely to go than was Clarence, Bennett's analysis would license

(49) Even Clarence stayed home,

which is intuitively not assertible here since it was never doubted that Clarence would stay home.

One might think of revising Bennett's analysis by requiring that not just one but every "known" and "related" neighbor of  $S$  be less surprising than  $S^*$ . But that would be essentially a reversion to my own present analysis, and so too strong: As we have seen, one could properly token (48) even if one knew that (as in the original version) Gonzo had managed to attend.

One way to avoid the counterexample would be to modify my analysis by substituting a weaker quantifier than the universal, such as *many*. Thus (1) would be taken to mean "Many members of the group were sober, including Grannie", and (2) would mean "There are many things I would eat for you, including haggis", or on the other readings "There are many things I would do for you, including eating haggis," "There are many things I would do to haggis for you, including eating it", etc. (How many counts as "many" in each case would, of course, be contextually relativized to the reference class.) For *even-if* conditionals, our official analysis would accordingly be weakened to " $Q$  in many events, including all events in which  $P$ ", or

(E)  $(\text{MANY } e \in R)(\text{In}(e, Q) \ \& \ (f \in R)(\text{In}(f, P) \supset \text{In}(f, Q)))$ ,

This treatment would of course solve the Gibbard problem as well, for Gibbard's sentence (43) would now be entirely consistent as it stands and there would be no need to posit a mid-sentence parameter shift; the wider of the two reference classes would be in force from the beginning.

Yet the weakened analysis is still not satisfactory. For it does not explain the initial plausibility of the universally quantified paraphrases. Those paraphrases, both of plain *even* sentences and of *even if* conditionals, are

accepted at first hearing by all my informants, and continue to sound right to everyone until counterexample cases such as Gibbard's, Kay's, or my Gonzo example are discovered by theorists. (Pollock's counterexample to Consequent-Entailment does not count, for it turned on a focus distinction unrelated to the Gibbard/Gonzo/Kay problem.) Moreover, ordinarily when a sentence reflects a "many" quantifier, there is no such illusion of universality: No one would even initially accept universal paraphrases of

(50) Jeanne often forgets to eat

or

(51) Melanism is prevalent in urban moths.

It is hard to doubt that *even* involves universal quantification in some way.

Moreover, to posit only a "many" quantifier would lose touch entirely with the Consequent-Entailment problem. For the "many" quantifier does not guarantee that any actual event falls within its range (even if the Reality Requirement applies and guarantees the inclusion of some actual events in *R*); thus (*E*) carries no implication of *Q*. I take illumination of the Consequent-Entailment problem to be a *sine qua non* for a theory of *even if*.<sup>27</sup>

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<sup>27</sup> The same objection applies to a suggestion that can be extrapolated from an observation of Kay's (p. 90, fn 32): One might try restricting our quantifier to the group of things satisfying the containing matrix. Thus one might think of understanding (48) as meaning just that THE GROUP OF PEOPLE WHO STAYED HOME included (as was unlikely) Bluto. As it stands, that interpretation would logically not exclude the possibility that the group had only one member, and it was ONLY Bluto who stayed home; and we need to preserve the idea that a sizeable group did stay home, which group included Bluto along with some people more likely to have stayed. But to do that, we could just stipulate it to be conventionally implicated or lexically presumed that significantly many stayed home, glossing (48) redundantly as *Everyone (of the significant number) who stayed home stayed home, including Bluto (as an extreme case)*, which is of course equivalent to the existential quantification *Some (significant number of) people stayed home, including Bluto (as an extreme case)*.

The objection again is that when applied to conditional antecedents, this redundancy treatment of *even* would make the Consequent-Entailment phenomenon a mystery. *I'll leave even if you leave* would mean just "Some (significant number of) circumstances are ones in which I leave, including all those in which you do", which neither entails nor even strongly suggests that I will, in fact, leave.

Vic Dudman has protested to me in correspondence that *even* generates no quantificational entailments at all, not even that of the constituent item's not being alone. He may be right; I am myself close enough to "rad prag" to entertain that possibility. But my intuitions go sharply against it, and so do those of all normal speakers.

## 9. PRESERVING UNIVERSAL QUANTIFICATION

I can think of two further possible means for preserving the idea that *even* is a universal quantifier. One, the more conservative, is to return to and generalize my original treatment of Gibbard's sentence (43). For (43) I posited a mid-sentence widening of the reference class, stylized rather than psychological. Let us now extrapolate that idea to *even* tout court. Our nonconditional problem sentences were (47) and (48) (where the prodigious Gonzo managed to attend the party). The former seems an obvious example of reference-class widening, the first class including only edibles however dubious. The latter is less obvious, since only people are involved throughout. But it is not badly glossed by *Everyone but the most totally outrageous invitees, including Bluto, stayed home* (not counting THE most totally outrageous invitee, Gonzo). There is still a narrower class, contextually "within reason", within the wider specified class that still does not include every item in the universe or even every human being; for the conversational purposes of the moment, Gonzo is put beyond the pale. And quantification is universal over the narrower class, before sometimes being widened in mid-sentence.

But this conservative treatment is not so good for Kay's examples, as he anticipated in the passage I have quoted above. (82)'s second conjunct is not so well glossed by *Mary won everything but what would be completely preposterous, including the semi-finals*; no more is (83)'s embedded clause by *The administration had everyone within reason making major decisions, including lieutenant colonels*. For it is implausible to think that the degree of extremity to be counted as "preposterous" or complementarily "within reason" was all that precisely fixed by context in advance; to assume that such limits were so fixed seems to beg the question in favor of our conservative account. As Kay says, we have no independent reason to suppose that "some very special kind [or rather, feature] of context" fixes the domain of our putatively extra-restricted quantifier just where we would now like to deploy our *even*.

I take the point of Kay's criticism, and accept it as it stands; that is, I agree that there need be no pre-set boundary encircling the "expected", reasonable, nonextreme, nonpreposterous, or the like. I am less convinced of the unsuitableness of the new "within reason" paraphrases; for the phrase *within reason* is itself highly context-relative, and might be supposed to slide along with *even*. Thus *even* could be taken just to mean "every . . . within reason, including . . .," the application of *within reason* being controlled, not antecedently, but by the speaker's preference of the moment. Since the phrase *within reason* is often used adventitiously to

the point of caprice, the present idea seems tenable, but it is still somewhat *ad hoc*.

Kay's own solution to our problem of setting the contrast within the reference-class is piquant: If I read him correctly, he suggests that context determines a SINGLE less extreme or more "expected" member of the reference-class, with which *even* now contrasts the newly mentioned member. (But that determination and contrast proceed only by way of a prior difference in semantic or pragmatic informativeness between the sentence containing *even* and an antecedently determined "context proposition" about the more expected member, "informativeness" being a matter of contextual entailment relative to a "scalar model", in a sense Kay carefully develops.<sup>28</sup>) In Bennettian terms, there is a single neighbor  $!S_j$  determined in context along with a scalar model, and  $S^*$  contextually entails  $!S_j$  relative to that model.

My beloved penultimate theory falls out of Kay's as a special case, viz., that in which the "context proposition"  $!S_j$  happens to be a universal quantification: If everyone was sober, including Grannie as the extreme case, then for Kay, *Grannie was sober* contextually entails *Everyone was sober* in a scalar model of expected sobriety that ranks Grannie last (pp. 80–81). But Kay's theory is ostensibly broader, countenancing pairwise comparisons that are made without semantical quantification over a group.

I have two objections to Kay's idea, one internal, one external. The internal objection is that context does not always determine a single contrasting proposition or class member, any more than it does a "reasonable" or "nonpreposterous" set of expected members. Kay's discussion concentrates (though not exclusively) on examples in which pairwise comparisons are fairly explicit in the discourse. But sentences containing *even* can also initiate discourses out of the blue. Consider the following sentences, specifically as doing that.

- (52) I am going to get to Sydney next August, even if the ticket costs \$5,000.
- (53) Even Jenner couldn't jump that. [Said regarding a high bar that someone has left in an impossibly elevated position, Jenner being an Olympic athlete]
- (54) I'd give even a hand or a foot to be able to sing like that.

Granted, for each of (52)–(54), we can THINK OF some appropriate

<sup>28</sup> Kay's theory, stated at the level of whole propositions, makes no mention of reference-classes; but as we shall see, nothing in his discussion suggests the needlessness of that notion.

single items of favorable comparison (\$2,500; my brother-in-law; a toenail). And if challenged, a partisan of Kay's view could always choose one that was not too badly motivated. But no such item is psychologically real in the speaker at the time of uttering. The speaker is really making only a general comparison of the focussed things with the respectively normal RANGES of items in the comparison class. We could try to stipulate a default "context proposition" for such cases, say in terms of a "normal" or "typical" member of the reference-class, but there is no reason to think any such single proposition is psychologically real either.

Assuming the correctness of this last criticism, I do not yet see the advantage of Kay's view over my last suggestion about a sliding use of *within reason*. Nor has Kay given us reason to abandon our independently defended Semantic idea of quantification over a group, since his own account itself posits a group of items immanent to each scalar model (and I can see no example in his paper that does not at least loosely determine such a group<sup>29</sup>).

My external objection to Kay's theory is that when applied to *even if*, it flouts the Consequent-Entailment problem.

(55) I'll stay even if Geoff starts throwing up,

uttered without qualification, is felt to entail that the speaker will stay. But now how does Kay's analysis apply to conditionals? Let us waive my internal objection and suppose that someone has provided a single salient "context proposition" for (55), say by having asked, "Will you stay if Dick starts telling his damn parrot jokes?" According to Kay, (55)'s *even if* is lexically correct iff the *S\** or corresponding "text proposition", *I'll stay if Geoff starts throwing up*, contextually entails

(56) I'll stay if Dick starts telling his damn parrot jokes

relative to the appropriate scalar model. And, assuming the scalar model ranks Geoff's throwing up as more extreme than Dick's telling his parrot jokes, that condition is satisfied. But merely the truth of (55)'s "text proposition" plus the satisfaction of that lexical condition does not entail, or even appear to entail, that I will stay. Kay's *even if* is justified *eo ipso* by the contextual extremity of Geoff's throwing up relative to Dick's telling the jokes, and that is all there is to it. So Kay has not explained why (55)

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<sup>29</sup> The example least obviously likely to generate a reference-class is probably *He worked hard and the boss wasn't even there* (attributed by Kay to Oswald Ducrot). But I take it the relevant class is that of conditions under which he would (or would not) work hard.



does by itself seem to entail that, and indeed has (so far) predicted that (55) does not entail it.

One might argue on Gibbard's grounds that (55) just does not have the entailment in question, for (57) is consistent:

- (57) I'll stay even if Geoff starts throwing up, but not if Shi'ite terrorists break in with combat weapons.

And that is correct; *even-if* conditionals do not CATEGORICALLY entail their consequents – not even on my own original theory, if the Reality Requirement is abandoned. But we still need to explain why they are heard as implying their consequents in contexts where *even*'s focus is the whole conditional antecedent and they are uttered flatly, without further explicit or tacit comment. Kay's apparatus suggests no explanation. (He might think of invoking the Rule of Strength (Grice's Maxim of Quantity), and claiming that a cooperative speaker would not utter (55) if that speaker were contemplating a more extreme condition under which he/she might stay; but that would be to say that "contemplating" or ENVISIONING sets a contextual limit on the lexical appropriateness of *even*, which is precisely what Kay is concerned to deny.)

So let us continue to pursue the Semantic idea, and turn to my remaining strategy for preserving *even*'s status as a universal quantifier.

That second and more daring possibility is to hypothesize that *even* means, not "every . . . including . . .," but "every . . . PLUS . . . ." Thus, (1) would mean, more elaborately, that everyone WHOM YOU WOULD EXPECT TO BE SOBER was sober and Grannie was also. Unlike our original formulation, this one leaves it open that someone besides Grannie was unexpectedly sober as well. In like wise, (48) (*Even Bluto stayed home*) would be consistent with Gonzo's having attended, so long as Gonzo was not expected to stay home either. And Gibbard's sentence (43) would be understood as *I'll be polite in any expected circumstance plus any in which you insult me, but not in one in which you insult my wife*, neither insult being expected.<sup>30</sup>

Let us make sure that this proposal preserves my original solution to the Consequent-Entailment problem. As before, *Q even if P* will entail  $(e \in R)(\text{In}(e, Q))$  as a conjunct, but now '*R*' ranges just over the real and relevant possibilities that are also "expected". And the restriction is threatening. For the actual may be unexpected; thus the "plus" theory predicts that *Q even if P* does NOT entail *Q*.

<sup>30</sup> In Chap. V of Geis and Lycan (1990), Geis offers some linguistic (including cross-linguistic) evidence for the "plus" theory.

But it is no longer clear that the entailment holds in real life. For any *even-if* claim can always be counterexampled in the Gibbardian manner of (57),<sup>31</sup> and so one might argue that, what with the possibility of an outlandish defeater always hovering in the background, such a conditional's consequent is never flatly asserted, much less semantically entailed; thus our original approach to Consequent-Entailment would have been impugned by Gibbard in any case.

Actually the appeal to Gibbard does not, on its own, refute the entailment claim. For if the Reality Requirement is imposed, a sentence like Gibbard's (43) or our (57) still does entail its first consequent (along with the proposition that its second, more extreme antecedent is false). But I have urged dropping the Reality Requirement, and if we do so, our analysis thereby ceases to uphold Consequent-Entailment in any case. *Sans* Reality Requirement, our original account runs into the very same problem, that the actual outcome may evade our reference-class.

Our question is, then, how the original approach can be adapted EITHER to the loss of the Reality Requirement or to the "plus" theory. And I think the direction is clear: On the "plus" theory, *Q even if P* does still entail  $(e \in R)(\text{In}(e, Q))$ , where 'R' ranges over the "expected" real and relevant possibilities. Thus one who asserts *Q even if P* is unconditionally placing the event that *Q* in the "expected" category. That is not quite to assert *Q* without qualification, but it is at least NEARLY to assert *Q*, and without OVERT qualification, and with the added emphasis of citing a circumstance that would not upset *Q* even though one might think it inimical to *Q*. Moreover, the theoretical availability of Gibbardian counterexamples does not conclusively show that *Q* is not asserted, for a detailed theory of asserting may rule that in appropriate contexts propositions can be asserted even when they are not strictly entailed by the sentences uttered. And all that, I suggest, is why *Q even if P* is heard as asserting *Q* even though it does not, after all, entail *Q*. (A parallel but stronger argument could be made for the logically more inclusive original notion of an "envisioned" possibility.)

The "plus" hypothesis eliminates our third and fourth counterexamples at one stroke, without the artificiality of supposing that the reference-class widens in mid-sentence. But it has an offsetting drawback: It divorces the reference-class of *even* from that of *only*. Originally, both words ranged over the same contextually specified group of items, as depicted in my Venn diagram. *Only*, of course, continues to do so, but *even* is now being

<sup>31</sup> Arguably a comma can block such counterexamples, as in *I'll stay, even if Geoff starts throwing up*. But only if the comma is understood as noncancellably CONJOINING a flat nonconditional assertion with a conditional.

restricted to a proper subset of the group, containing just the “expected” members. After our lavish appreciation of the parallel between *even* and *only*, it is painful to have to grant that the parallel fails at this one focal point.<sup>32</sup>

Unfortunately the “within reason” theory shares the same defect. That is not obvious at first glance, since one might naturally suppose that *Every . . . within reason, including . . .* and *No . . . within reason but . . .* ranged over the same class in the same context. But amid the Bluto/Gonzo imbroglio, one might truly and in one breath utter

(58) Even Bluto stayed home; only Gonzo attended.

Thus the two classes cannot be the same.

#### 10. CONCLUSION

Some readers will find the paraphrases that result from the “plus” variation somewhat unnatural: *Everyone plus Grannie was sober; I would do anything for you, plus eating haggis; I will go to the party in any circumstance, plus any in which Hud goes*. Though these are not all bad, they still strike me as being somewhat less natural than our original “any . . . including” paraphrases, even though we have seen the difficulty encountered by the latter. However, semantic analyses do not stand or fall with the naturalness of paraphrases.

Each of our two possible retreats from my counterexamined penultimate account (the “within reason” theory and the “plus” theory) is repulsive, for the aesthetic reason I have mentioned, but must be considered in light of the clear counterexamples to the more beautiful penultimate account. The “within reason” theory is ad hoc to boot. I therefore recommend the “plus” theory on the basis of the evidence to date, and most fervently invite anyone to do better.<sup>33</sup>

<sup>32</sup> Since the final theory still features universal quantification, a further counterexample hunt is invited. Suppose (to start again from the original Bluto–Gonzo example) someone who would have been expected to stay home did not do so, for some reason, and in fact attended the party along with Gonzo. Could we still assert *Even Bluto stayed home*? Not, I think, without qualification – a qualification freshly exempting the renegade from the narrow expectation class: *Even Bluto stayed home; though actually, Geoff found some Dramamine and mixed it with codeine and got there eventually*. Readers who disagree, and think such counterexamples work, are invited to solve the contrast-location problem on their own, and I will pay for the champagne if they succeed.

<sup>33</sup> For exceptionally detailed and helpful comments on earlier drafts, I am grateful to Jonathan Bennett, Vic Dudman, Michael Geis, Stevan Harnad, Larry Horn, James McCawley, the members of the Princeton University philosophy colloquium, and several anonymous but very astute referees (one of whom bears a strong doctrinal relation to Paul Kay).

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