Logic and grammar are taught in different departments, and moreover presented as quite different sorts of disciplines, by people of quite different stamps of mind. This essay attempts the ambitious project of engaging readers of both stamps, upon a topic which, when all is said and done, has occupied logicians and grammarians separately for centuries.* It sets out to describe, by slow degrees, one particular kind of message that English speakers communicate by means of *-sentences. The particular kind of message, easily introduced to intuition, is exemplified by those entirely natural interpretations of

1. If Hitler invades England Germany will win the war
2. If Hitler invaded England Germany would win the war
3. If Hitler had invaded England Germany would have won the war

under which Germany's winning the war is ventured as somehow following upon Hitler's invading England. I call them CONDITIONAL interpretations, and they provide the continuing theme in what follows.

Pursuit of this theme enables my bringing together, for philosophical and linguistic scrutiny, representations under perhaps four main heads. The first half of the paper (to section 23) advances a completely novel grammatical analysis for *-sentences, and culminates in an account of the logical form of conditionals. It includes critical assessment of current philosophical thought on such matters, notably David Lewis's, and even a

[*] At diverse times and in sundry places earlier and yet more fantastic versions of these ideas have been feverishly decanted upon patient audiences. I should like to acknowledge, with gratitude, criticism and/or encouragement from David Armstrong, Jeremy Butterfield, K.K. Campbell, Richard Campbell, Hector-Neri Castañeda, Romane Clarke, Nino Cocchiarella, Earl Conee, Fred d'Agostino, Max Cresswell, Max Deutscher, Vanessa Dudman, J. Michael Dunn, Michael Geis, Len Goddard, Danny Goldstick, C.L. Hamblin, Frank Jackson, Isaac Levi, David and Stephanie Lewis, W.G. Lycan, Jim McKenzie, R.K. Meyer, Chris Mortensen, Graham Nerlich, Michael Pendelbury, Malcolm Rennie, Richard Routley, Bede Rundle, J.J.C. Smart, Timothy Smiley, David Stove, Richmond H. Thomason, Frank Vlach, Nick Witton and especially Rodney Huddleston and Hugh Mellor.

disquisition on the so-called future tense. A second venture concerns the kind of thinking that must underlie conditionals, which I see as essentially ANTICIPATORY thinking, proceeding rather by the imaginative envisaging of developing situations than by extracting conclusions from premisses. Indeed this conjecture, together with its allied problem of how the underlying anticipatory thinking relates to the conditional, is the major preoccupation of the essay. Thirdly, I ventilate a philosophical perplexity: how conceivably could conditionals be true or false? Finally, section 41 responds to the propensity of conditionals for incorporating information concerning the order of events with a suggestion, again novel, concerning such ‘unsignalled information’ and the means of its undoubted communication.

Conditionals notoriously raise large issues, and at different stages I find myself discussing the meaning of if, the significance of tense, and the relation of grammar to logic. The grammarian’s stock dichotomy into ‘real’ and ‘unreal’ conditionals comes in for several spiteful side blows, delivered with the sincerest malevolence.

There is one very particular kind of conditional which, for a very particular reason, stands as a counter-example to nearly everything I am about to plead. This is the ‘conceptual’ conditional, and I shall not breathe another word about it until the penultimate section of the entire essay, because I treat conceptual conditionals as (not special but) degenerate cases.

Ideas are unfurled to linguist and philosopher at once only in a vernacular congenial to both. This is the point of the CODE metaphor (sections 2 and 4), which is meant as a model innocent both of needlessly particular grammatical doctrine and of over-strong philosophical presumptions.

1. I begin from the distinction between a sentence and the messages that can be conveyed by uttering it. Instead of ‘message’ I would say ‘proposition’ were it not for the overwhelming presumption then of objectivity. The presumption is often wrong: the message conveyed by

(4) Grannie must/can’t/could/may/might have been flying too low

for example, incorporates an irreducibly subjective element. I take ‘message’ as the generic term and follow the crowd in reserving ‘proposition’ to messages of objective fact.

Whether today’s orthodox philosopher is entirely master of the distinction between sentence and message is a real question, his propensity for ascribing truth to sentences suggesting perhaps not. Deprived of it, however, the grammarian is out of business overnight, for what grammar studies is the relation between the two. What grammar studies, more specifically, is how information ingredient in the message conditions the generation of the eventual sentence. For it is the message that determines
the sentence, of course. Not the other way round, witness ambiguous sentences.

Ambiguity is ubiquitous in English, and systematic. To take a single instance,

(5) If Grannie missed the last bus she would walk home

is ambiguous between a generalisation about the past and a more particular claim about the future, and this same ambiguity is found shared by whole echelons of syntactically congruent surface forms:

(6) If she played the Schubert as an encore she would leave out the repeats

(7) If it broke they would make us pay for it

etc. It may be that the orthodox philosopher views ambiguity as somehow pathological in language. This or some other superstition apparently sustains his serenity in the face of it; for the mere fact of ambiguity demonstrates once for all that entailment, consistency, truth and suchlike cannot be traits of sentences, whereas the orthodox philosopher permits himself these attributions hourly.

Ambiguity, even when deprecated, demands its explanation. What we all need, philosopher and linguist alike, is an account of if-sentences and their messages which predicts (5)'s ambiguity. I sketch one in section 3. According to it, the ambiguity of (5) consists in the fact that there are two distinct messages both of which English encodes as (5).

2. For we can think of a natural language as a gigantic code, a system processing messages into sentences; of English, then, as a vast battery of alternative encoding programs, all with messages as their original inputs and English sentences as their eventual outputs. The feted connection between 'complete' messages and 'complete' sentences is that one message is encoded into one sentence by one complete machine run through some encoding program of the language.

Messages are things thought, impalpable; in order to send one to a distant mind, the speaker submits it to the attentions of his language, which step by step generates a signal from it, a repeatable pattern. The message is subjected to a programmed interrogation: information to help determine the sentence is elicited from the message in a tree of questions, with information culled in earlier steps cumulatively conditioning the subsequent lines of enquiry. Thus organised, this information governs the detailed fabrication of the sequence of words.

And then the speaker transmits the message by broadcasting the signal. Communication, in this model, consists in the hearer's recovering, from the broadcast, the self-same originating message. How she manages this is an excellent question, seeing that the sentence does not determine the message; but it is a further question. The immediate question is the grammatical one: how does the message determine the sentence?
Not that the message COMPLETELY determines the sentence. The exact string of words for broadcast is not fixed by the message alone. For instance, whatever it is that influences the choice between saying (3) and saying

(8) *Had Hitler invaded England Germany would have won the war* it is plainly not to be sought in a difference between the originating messages. The structural decision is there to be made—but left, as it were, in the hands of the speaker, and evidently settled from occasion to occasion of utterance upon grounds broadly stylistic. STYLISTIC VARIANCE is simply a fact of natural language, and the labouring grammarian, seeking to explain how the surface signal is progressively structured by information ingredient in the message, is thus obliged to recognise steps in encoding routines where real decisions of structure are effected FREELY, i.e. without reference at all to the content of the message being encoded. Stylistic variance will recur, in sections 7 and 20.

I shall speak of the messages \( m \) which generate a given sentence \( S \) as its INTERPRETATIONS. With communication modelled as identity of message across minds, the interpretations of a sentence are of course exactly the messages that can be conveyed by broadcasting it. What English does, in effect, is first to call up the unique, ‘right’ encoding routine for encoding \( m \), and then to apply it forthwith to \( m \). In reality, of course, the encoding routine grows organically with the encodement it effects. But it is of expository convenience to hypostasise \( m \)’s own total inquisition, for a given \( m \): the encoding routine is simply the ‘way’ the message is encoded into its signal. The next section begins an empirical study of those encoding routines of English which issue in *if*-sentences.

3. The encoding routines of English which issue in *if*-sentences are of just three different kinds. Of course we can classify encoding routines from all sorts of angles, some more fundamental than others. For example, one really fundamental question, when a sentence is generated, is how its principal predicate is generated (cf. section 10). But if, instead, we agree to classify according to the way the sentence is fitted out with an *if*-clause, then it is a matter of grammatical fact that there are just three ways. As a result, we can divide interpretations of *if*-sentences into three mutually exclusive and jointly exhaustive grammatical CATEGORIES, depending on the way the sentence acquires its *if*-clause.

The FIRST way of generating an *if*-sentence is by first separately generating two sentences and then joining the two together, prefixing one with *if*. It is thus that the natural interpretation of

(9) *If Socrates is a man, Socrates is mortal*

fetches up, in English, as (9). The evidence is unequivocal: under the natural interpretation of (9), both *Socrates is a man* and *Socrates is mortal* are understood exactly as if encountered alone between full stops.
Notwithstanding the extreme simplicity of their common grammatical structure, first-category interpretations of if-sentences are discovered to be enormously heterogeneous semantically (see Dudman 1984: 146ff). One particular variety, however, has traditionally eclipsed all the others. This is the HYPOTHETICAL interpretation, or so I call it, exemplified by the natural interpretation of (9). Under a hypothetical interpretation, the sentence in the scope of if introduces a hypothesis, and the other sentence, the principal clause, announces a conclusion drawn from that hypothesis—from that hypothesis taken together, usually, with some further GROUND. Thus, from the ground that all men are mortal and the hypothesis that Socrates is a man, it follows deductively that Socrates is mortal. Naturally a speaker always incurs commitment to the grounds of his hypotheticals, no less than to the elided premisses of his enthymemes.

The SECOND kind of encoding routine generates the if-sentences in

(10) Nowadays, if Grannie misses the last bus she usually walks/will often//can sometimes//may occasionally walk home
(11) In those days, if Grannie missed the last bus she usually walked/would often//could sometimes//might occasionally walk home
(12) Until that fateful night, if Grannie had missed the last bus she had usually walked home

from generalisations about occasions of Grannie’s missing the last bus. This time the string in the scope of if is obviously NOT generated by its own complete machine run. Grannie missed the last bus can, by all means, be understood as a sentence alleging a unitary past event; but that is not how it is understood under the natural interpretation of (11), where, rather, the string if Grannie missed the last bus functions adverbially, just as on Wednesdays does under the natural interpretation of

(13) On Wednesdays he usually walked/would often//could sometimes//might occasionally walk home

Similarly, although Winston teases Grannie can occur as a sentence alleging a present habit, that is not how it is understood under the natural interpretation of

(14) If Winston teases Grannie she spits at him

where a quite different present habit is proclaimed: Grannie’s of spitting at Winston whenever he teases her. What all this means, as regards the encoding routine, is that the generation of the entire if-clause occupies an EPISODE, merely, in the generation of the principal predicate. (These second-category interpretations are quite distinctive. The string in the scope of if always specifies a condition, and the message as a whole is a generalisation about occasions of this condition’s satisfaction. There is a special tense pattern, too: what is registered by the formal tense in both
clauses is the time, present, past or past past, of the generalisation's validity: cf. Dudman 1984:148f.)

When a sentence acquires an if-clause at the hands of an encoding routine of the THIRD kind, as, for example, (1), (2) and (3) have, there always results a distinctive relationship between time and tense. If we try reading the string in the scope of if as a sentence, it comes out wrong: the time then indicated by the formal tense clashes with the time specified in the interpretation. As principal verb cluster of a SENTENCE, a verb cluster of the V-s form relates inveterately to the present, one of the V-ed form inveterately to the past, and—subject to an imminent proviso—one of the had V-en form to the past past (cf. 1983:26f, 29ff); but under THESE interpretations, the doings adverted to in the if-clause are always contemplated as happening LATER than that. Indeed this is the essential characteristic of the third category. When an if-sentence occurs under a third-category interpretation, I say that the if-clause is being parsed UNDECLARATIVELY.

(I attempted an exacter account in 1983 of this relationship between tense and time. Here, obliged to cut corners, I ignore all PERFECT uses of verb clusters, including the past perfect uses of had V-en. Perfect uses complicate the story without affecting its principle. I should mention, too, that I am using the simple 3rd person singular form merely as a 'paradigm': my V-s form, for instance, embraces take, am taken, are taking, doesn't take, etc., as well as takes; see Palmer 1965:55f, 1974:30f.)

As with the second category, so with the third there can be no question of parsing the string in the scope of if as a sentence. Rather, the entire if-clause is again generated as a component of the principal predicate: 'Germany will-if-Hitler-invades-England win the war'.

Than that between first-category interpretations and those of the second and third, a more thoroughgoing grammatical disparity is accordingly not easily conceived. Under a first-category interpretation there are three sentences altogether. There are the two component sentences, each with its own subject and predicate; and there is the over-arching if-sentence, which has no subject or predicate of its own, being simply a compound sentence. Under a second-category interpretation or a third, there is only one sentence, a complex one: it has a (principal) subject and a (principal) predicate, the latter complex in as much as incorporating an entire if-clause. I pursue these matters in section 15.

4. Already it will be clear how the ambiguity of (5) arises. It comes of two distinct messages fetching up independently at (5) VIA DISTINCT BUT CONCURRENT ENCODING ROUTINES. There is nothing, be it noted, in the idea of a code to say that two different messages can never end up with the same signal. Nor is it necessarily a DEFECT in a code that it generate ambiguous signals in this way. It were high-handed, for instance, to urge univocality of signal as a dictate of practical utility.
As a means to the end of communicating messages, a code succeeds to the extent that the right messages are communicated, BY WHATSOEVER OVERALL PROCESSES, upon individual occasions of the broadcast of signals; and who is to say that this result cannot be achieved unless the messages are uniquely recoverable just from the signals?

More particularly, there is nothing in the notion of a code to say that the same signal should never be arrived at from different messages via two different encoding routines. As soon as a code is complex enough to embrace alternative encoding routines—which means, as soon as information elicited earlier in the inquisition is allowed to influence the subsequent course of the inquisition itself—the possibility creeps in of somehow generating the same output signal via different paths from different input messages. (Indeed, in a code of any complexity, with alternative subroutines nesting within alternative subroutines, adequate safeguards against such concurrences are bound to come expensive, for how might one ensure that no two programs could ever issue in the same results except by complicating those results?) Of course, in a code where signals were thus arrived at from distinct messages by distinct but concurrent encoding programs, we should expect to find, not just individually ambiguous signals, but patterns of systematically ambiguous signals. Concurrent encoding routines would generate whole echelons of structurally congruent signals, all given to the same ambiguity. Just as in the case of (5), (6) and (7), in fact (cf. section 1).

5. Besides (1) to (3), products of the third kind of encoding routine include

\begin{align*}
(15) & \quad \text{If Grannie misses the last bus tonight, she will walk home} \\
(16) & \quad \text{If Grannie missed the last bus tomorrow, she would walk home} \\
(17) & \quad \text{If Grannie had missed the last bus on Friday, she would have walked home} \\
(18) & \quad \text{If he brings his cello we will/shall/can/may/must/should}_1/ \\
& \quad \text{ought to/needn’t/daren’t run through the Brahms} \\
(19) & \quad \text{If he brought his cello we would/should}_2/could/might run through the Brahms \\
(20) & \quad \text{If he had brought his cello we would [etc.] have run through the Brahms} \\
(21) & \quad \text{If Her Majesty was here now she would be revolted} \\
(22) & \quad \text{If Her Majesty had been here she would have been revolted} \\
(23) & \quad \text{If this solution turns green when I add the reagent in a moment or two, the deceased died of hyoscine poisoning} \\
(24) & \quad \text{If Grannie misses the last bus she is going to walk home}
\end{align*}

Notice that (22) can be applied equally to past or present (If Her Majesty had been here at the time/right now...). For that matter, (17) can be...
affirmed as well about NEXT Friday as about last: suppose we learn that Grannie has just been murdered.

Indeed, if we collate the time the if-clause is about with the syntactical tense of the subordinate verb cluster, we discover, all told, six combinations, as shown in Figure 1. As an introduction to the undeclaratively parsed clause, Figure 1 is eloquent beyond any words of mine.

<table>
<thead>
<tr>
<th>$V_s$</th>
<th>FUTURE</th>
<th>Cf. (15), (18), (23)</th>
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<tr>
<td>$V$-ed</td>
<td>FUTURE</td>
<td>Cf. (16), (19)</td>
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<td></td>
<td>PRESENT</td>
<td>Cf. (21)</td>
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<tr>
<td>had $V$-en</td>
<td>FUTURE</td>
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<td></td>
<td>PAST</td>
<td>Cf. (17), (20), (22)</td>
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Figure 1

6. If this arresting pattern has never previously been spotted, perhaps a couple of popular fallacies have helped discourage the juxtaposition. One is that undeclaratively parsed if-clauses relating to the past or the present always confide the speaker's concession that he is indulging in deliberate make-believe. The other is that future $V_s$, in if-clauses and adverbial clauses at large, is really only future will $V$ in disguise.

The latter fallacy is implicit whenever English is alleged to put $V_s$ INSTEAD OF will $V$ in future-referring adverbial clauses (e.g. Palmer 1965:109, 120; Leech 1971:59; McCawley 1971:112; Quirk et al. 1971:780; Palmer 1974:148; cf. Ross 1968:268n; Onions 1971:68). The fact that we say I shall take your photograph when you COME and not ... when you WILL come has even been condemned as a DEFECT of English: I shall take your photograph when you will come ‘would be more correct’, Reichenbach maintained (1947:296). More often it has been dismissed as simply an oddity (cf., for example, Osborn 1965:713). But—without pausing to reprehend the unempirical animus these sentiments betray—the equation of future $V_s$ with will $V$ was a mistake from the beginning: when it comes to explaining the manifest difference between saying I shall call again later, when it is cooler and saying I shall call again later, when it will be cooler, or again the difference between saying If Grannie is dead by sundown we can start selling her clothes right now and saying If Grannie will be dead by sundown we can start selling her clothes right now, its exponents are left without a leg to stand on.

The other fallacy, enormously influential, is the one enshrined in the household notion of an ‘unreal’, ‘rejected’ or ‘counterfactual’ conditional (cf., for example, Sweet 1891:110; Jespersen 1924:265).
Certainly there is no disputing its allure: at first blush, (3) seems automatically to intimate that Hitler did not invade England. Not so, however: all the undeclarative locutions can occur in contexts where the speaker’s standpoint cannot conceivably include the antecedent acknowledgement that he is speculating about something contrary to historical fact (cf. Anderson 1951:35ff). It makes perfect sense to say Whether or not Hitler actually DID invade England, if he HAD invaded England Germany would have won the war. For further examples see the end of section 27. The ‘counterfactual’ treatment of these locutions simply overlooks some of the evidence.

—And the pattern of Figure 1 remains to explain. To the code-breaker, Figure 1 poses a taunting little problem: what information can it possibly be that conditions the choice between V-s, V-ed and had V-en under a third-category interpretation? My own solution purpends, eventuating in section 9. The present section has been by way of removing two of the grosser obstacles to understanding it.

7. The encoding routines called up to process third-category messages are much given to stylistic variation in the sense of section 2. Thus was is always optionally replaceable by were (cf. Sweet 1891:108f; Poutsma 1926:164), and the third-category messages of (2) and (3) have alternative signals in If Hitler was/were to invade England, Germany would . . . and If Hitler was/were to have invaded England, Germany would have . . . respectively. Suppression of if in favour of inversion, unavailable at large, is optional when the subordinate verb cluster begins with, for example, were or had: cf. (8). The stylistic benefits of these duplications are not to be denied, nor their service to the hearer, for whom a contorted version can circumvent otherwise competing interpretations from other categories. But neither, again, are the synonymies themselves easily disputed: empirical investigation confirms no shade of informational difference between third-category interpretations of (5) and future interpretations of

(25) Were Grannie to miss the last bus she would walk home

for example. Visions of basing consequential grammatical classifications upon the egregious forms are accordingly grandiose. Rather, (25) is explained as generated from (5)’s third-category interpretation by exotic resolution of some free step in its encodement.

8. Ex hypothesi, undeclaratively parsed if-clauses are generated in their own characteristic way, and accordingly encode their own special sort of intelligence. What then, is semantically particular about them? This, in my submission: an undeclaratively parsed clause always introduces the IMAGINED satisfaction of its PREDICATION CONDITION. I have explained what I mean by a predication condition elsewhere (see 1983: 30, 32, cf. 35). Here, let me try to elucidate the rest.
Comparing the natural interpretations of the five sentences (15), (16), (17), (11) and

(26) *If Grannie missed the last bus last night, it was not her fault*

we discover the self-same predication condition specified in each if-clause—that, namely, of Grannie’s missing the last bus. Naturally this condition is found to enter conceptually into the overall interpretation in three different ways: we codebreakers had been sadly discountenanced else. Nothing has prepared us for the magnitude of these contrasts, however—particularly of one found segregating the third category from the other two. Under the natural, first-category interpretation of (26), a certain proposition is adopted as a hypothesis, the proposition namely that the specified predication condition was, upon some actual historical occasion, satisfied. Similarly, the generalisation which is the natural, second-category interpretation of (11) is a generalisation about actual historical occasions of the specified predication conditions’s satisfaction. But as soon as we seriously enquire which actual occasions of Grannie’s missing the last bus the third-category interpretations of (15), (16) and (17) are about, we are obliged to recognise that this time we are dealing with a different mode of talk altogether. This time the satisfaction of the predication condition is merely imagined. After all, (17) can be volunteered about the past by a speaker who acknowledges the if-condition to have remained, as a matter of historical fact, unsatisfied. And when it is FUTURE missing of the bus that is in question, how CAN the speaker be advertsing to some actual occasion of it?

And so generally: an undeclaratively parsed if-clause always invokes the imagined satisfaction of its predication condition. — Or, perhaps, its imagined NON-satisfaction, as in (27) and (28):

(27) *If the surgeon does not operate, the patient will die*
(28) *If the patient had not died, the surgeon would have operated*

To formulate a third-category message, the speaker is obliged to conduct a FANTASY in which this ‘if-condition’ is imaginatively satisfied. — Or not satisfied, as the case may be.

And now it is the simplest matter saying what the syntactical tense registers in an undeclaratively parsed clause. It locates the starting-point of the fantasy.

9. Upon learning that Grannie has just been murdered, we leave off saying (29) and say (30) instead:

(29) *If Grannie attends the rally she will insult the President*
(30) *If Grannie had attended the rally she would have insulted the President*

Now what is it that conditions this syntactical shift? Not the time of attendance, of course, which is future either way. Confession to counter-
factuality certainly seems the obvious answer; but if to speculate about Grannie attending the rally now that she is dead is to speculate counterfactually, then ought we not also to confess to it when saying (31)?

(31) If Grannie attends the rally it will cause a furore/be a miracle/be as a ghost.

My alternative answer is that when we say If she attends we are visualising her attending GRANTING PRESENT CIRCUMSTANCES, including the circumstance that she is dead, whereas when we say If she had attended we are GRANTING THE COURSE OF HISTORY ONLY UP UNTIL SOME PAST PAST POINT—as it might be, some moment which is past with respect to the already past moment of Grannie’s murder. Thus the speaker who says had attended is able to set aside the historical fact of Grannie’s death, while the speaker who says attends can set aside no matter of historical fact whatever. It certainly LOOKS as though the speaker who says had attended is implicitly adding which she won’t, being dead; but actually, whether she will attend or she won’t has nothing to do with it, the real question being HOW MUCH OF HISTORY one is going to be taking over when one IMAGINES Grannie attending the rally.

Let me formulate this thesis more exactly. (As to defending it, I have attempted that elsewhere: see 1983:37ff.) It is that what is encoded into the syntactical form of the verb cluster in an undeclaratively parsed clause is the location of a temporal point, the point at which acceptance of history gives way to imaginative construction (pace Ellis 1984:55n). I call it the CHANGE-OVER POINT, c, and hypothesise that the V-s form is selected to identify it as the point of speech, the V-ed form to indicate that it is past with respect to the point of speech, and the had V-en form (remembering, still, that we are ignoring its perfect uses) to indicate that it is past with respect not just to the point of speech but to some already past point. I am proposing, then, that the sheer TEMPORAL significance of these three forms is the same here as in principal verb clusters (cf. section 3). It is just that what is being located is different.

The conception of a change-over point is entirely homely: c is the watershed between the fantasy itself and the past against which it is set (cf. 1983:36f). This at once explains the pattern of Figure 1, for seeing that satisfaction of the if-condition is always part of what is fantasised, satisfaction of the if-condition is always later than c.

10. Busy with if-clauses, I have so far ignored items whose generation must inevitably loom even larger in the encodement of third-category messages. I mean the principal predicates, of which undeclaratively parsed if-clauses are merely subordinate components. Now, mostly, these principal predicates begin with a secondary auxiliary, (23) and (24) in this respect exceptional. The present section is accordingly given over to the grammar of sentences whose principal predicates begin with a secondary
auxiliary.

The SECONDARY AUXILIARIES are will, shall, can, may, must, should₁, ought, need, dare, would, should₂, could, and might, of which the first nine are 'aboriginal' and the other four not. Strictly speaking, I ought to be including on this list an equal motley of negative secondaries, won't and what have you; but I dare not take on negation here. We shall speak of predicates beginning with secondary auxiliaries as being of the SECONDARY PATTERN (cf. Palmer 1965:17, 105; 1974:16, 95). Now, like sentences with if-clauses, sentences with secondary-pattern principal predicates are generated in just three ways. This is another large and sudden grammatical claim about the English language. But again a transparently testable one: the three are easily discerned by probing the relation between form and time.

FIRST, there is the way to which we are indebted for (4) and for (32) to (34):

(32) The fugitives will/may/must/should₁/ought to/would/could/might be a good twenty miles away by now
(33) The Captain ought to be on the bridge at present
(34) The shadow you saw flit past the vestry will/can't/may/must/needn’t/would/could/might have been Grannie

The characteristic feature here, of course, is that pastness is registered by auxiliary have—by 'phase modification', as they say (Dudman 1983:26).

SECONDLY, there is the way that gives us

(35) These insulators will commonly/can often/may occasionally/must never/should₁ always/ought seldom to/needn’t always be removed before the motor is installed
(36) In those days, these insulators would commonly/could often/might occasionally be removed before the motor was installed

and also the alternatives containing secondary auxiliaries in (10), (11) and (13). This time pastness is registered by declension from aboriginality.

And THIRDLY, of course, there is the way we are interested in: the one responsible for (1) to (3), (15) to (22), and so on. Here we discover, all told, six combinations of form and time, and I list them in Figure 2 using will and would as paradigms, will representing the aboriginal secondaries and would the rest. When a sentence S with a principal predicate of the secondary pattern is generated from its interpretation m in this third way, I shall say that m is a PROJECTIVE interpretation of S, or that S is parsed PROJECTIVELY under m.

Among the myriad interpretations if-sentences can bear, those which are simultaneously third-category AND projective will be recognised on all sides as forming a natural genre. Indeed, the reader has doubtless already twigged that my 'conditionals' belong to this grammatical genre.
11. For the narrow purposes of this essay, I have reserved the term 'conditional' to those third-category projective interpretations $m$ whose if-sentences $S$ have either will or would in the principal predicate. By a CONDITIONAL interpretation of an if-sentence, then, I mean an interpretation where the principal predicate fits Figure 2 (to the extent even of literally having will or would) and the if-clause fits Figure 1. And thus, at last, we arrive at our advertised muttons. They are, of course, familiar objects of philosophical scrutiny. But I am recommending a fresh approach—the grammatical approach.

12. From sponsors of the Fresh Approach inculpation of existing doctrine is exacted as a due, and the present section is accordingly given over to reluctant disparagement of current philosophical thinking about the grammar of English if-sentences. I begin with the popular division into indicatives and subjunctives. (Popular, I mean, among philosophers: see, for example, Chisholm 1949:482; Quine 1960:222; Adams 1970:89ff; Lewis 1973:3; Harper et al. 1981:4 and passim. Truth to tell, approximately the same division is popular among linguists, too—a circumstance for which reproach awaits them in section 39—but usually under other names. What linguists who apply the term ‘subjunctive’ to English tend to mean by it has nothing especially to do with conditionals: see Harsh 1968:13ff and passim; Quirk et al. 1972:76ff; Jespersen 1924:315ff; but cf. Curme 1931:421ff; Onions 1971:68ff.)

The dichotomy is familiar without being clear: the natural interpretations of (9) and (1) both count as indicative and those of (2) and (3) as subjunctive, but to my best awareness the two terms are nowhere defined. We, however, are in a position to remedy this want. The indicative, we perceive, comprises an admixture of first-category interpretations and third, particularly of those third-category projective interpretations $m$ whose $S$s have aboriginal secondary auxiliaries introducing their principal predicates. The subjunctive, meanwhile, is exhausted by the remaining third-category projective interpretations (cf. section 20).
Now, in the first place, this analysis is inadequate because it entirely overlooks the second category (and perhaps certain members of the first as well: cf. *If today is Monday then it would/could/might/must/will/can’t have been last Thursday that the symptoms developed*). Secondly, and much worse, even among the cases it does cover, the dichotomy draws the line in manifestly the wrong place, for by every precept of code-breaking (1), (2) and (3) all go together. The grammatical affinities of these three have already engaged me. Their common grammatical difference from (9) was elaborated at the end of section 3.

That it has nevertheless gone unremarked by philosophers I tentatively attribute to the allure of the bisentential model found enshrined in the notations they favour. However that may be, the fact is that all philosophical thought on these matters is premised upon the falsehood that there is always a sentence in the scope of *if*. The only grammatical analysis ever contemplated has two separate sentences joined by a ‘connective’.

It is important to observe that the term ‘antecedent’ presupposes this bisentential analysis, whence the otherwise indefensible presumption that antecedents are candidates for truth. If antecedents are candidates for truth—and the arrogation is encountered on every side—then only first-category messages can have antecedents (cf. Dudman 1983:33, 35; 1984:149).

In a nutshell, then, contemporary philosophy ignores the second category, and assimilates the third to the first by imputing antecedents indiscriminately to members of both.

Recent heavy investors in the notion of an antecedent have included David Lewis, who glosses certain third-category messages by invoking the truth of such in possible worlds (1973:1ff; cf. Stalnaker 1968:102ff). From my standpoint Lewis is seen to propose analysing the IMAGINED satisfaction of an *if*-condition in THIS world in terms, somehow, of its ACTUAL satisfaction in some POSSIBLE world, and I do not see how this can be done. I speak here not of my intellectual difficulty with the notion of something’s actually happening in another possible world; for I cannot see how the linguistic facts are to be explained along the lines Lewis indicates.

His proposals are stipulated (p. 4) not to apply to future cases. They are confined, then, to messages like the examples nominated by the third, fifth and sixth rows of Figure 1. The program is to analyse such messages in terms of the truth or falsity in possible worlds of antecedents and consequents, propositions alleging actual present or past satisfaction of *if*-condition and ‘principal’ condition respectively. For instance, the natural interpretations of (21) and (3) would be limned as

*Her Majesty is here □→ Her Majesty is revolted
Hitler invaded England □→ Germany won the war* 

respectively (pp. 2, 3), with the strings either side of the infix parsed as sentences expressive of propositions.
But how are these two propositions ENCODED INTO the surface forms? What, in particular, determines the syntactical forms of the eventual verb clusters? Lewis’s exact grammatical representations are never revealed. He intimates (p. 3) that, in a case like (5)’s, the surface form is somehow jointly determined by the ‘□’ idea and the time of satisfaction. But this can hardly be right: as we saw in connection with (21) and (22), the same time of satisfaction is compatible with different surface tenses (cf. section 5). While this perplexity remains unresolved, Lewis’s proposals issue in no concrete predictions about surface form and accordingly cannot be brought to grips with the empirical evidence. It is not, then, as if they represented a rival grammatical story to the one ventured above. On the contrary, Lewis has yet to unveil his grammatical account of English if-sentences.

Of philosophical debate concerning the ‘semantics’ of conditionals, perhaps the leading theme today is the opposition defined by Lewis in a chapter called ‘Comparisons’: possible-world treatments versus treatments, in the tradition of Chisholm and Goodman, in terms of some kind of derivability (Lewis 1973:65; see also Bennett 1974:388ff; Mackie 1973: 88ff). Analyses of the former allegiance would have the propounder of a conditional committed to the truth of its consequent in a certain possible world in which its antecedent is true; analyses of the latter persuasion would have the propounder of a conditional committed to the deducibility of its consequent from its antecedent taken together with ‘suitable further premisses’. With all parties thus liable for the antecedents and consequents, a distinct air of unreality pervades the whole debate. For any analysis which discovers a proposition encoded into the if-clause and another into the rest of the sentence is wrong on both counts. In the first place, as I have already averred, there is no antecedent. Furthermore THERE IS NO CONSEQUENT either. Not even a ‘future indicative’ conditional has a consequent.

This last claim cannot fail to scandalise, for according to doctrine unquestioningly received among philosophers, the string she will walk home is understood under the natural interpretation of (15) exactly as if standing alone, which, moreover, is as expressing a proposition of future fact. Whereupon the consequent is straightway identifiable as this proposition of future fact.

Alas, however compelling upon first impression, this received view is grammatically untenable. Long before the end of this essay I hope to have persuaded the reader that seeing she will walk home in (15) is like seeing We love Grannie in We love watching Grannie tease the cobra. Subtler, no doubt, but the same general sort of mistake: misconception about the way information is encoded into the larger sentence.

13. The creed is pandemic that English boasts a past, a present and a future ‘tense’, the latter with will (perhaps sometimes shall) as its marker. Philosophers, excusably in a busy life, may not be aware that nowadays
this creed receives a mixed and generally adverse press from experts, viz. linguists (see, for example, Palmer 1965:63, 106ff; 1974:34, 37; cf. Michael 1970:405). I mention this here because the classical doctrine—‘classical’ as being coeval with English Grammar itself (cf. Michael 1970: 395ff)—obviously fortifies the beliefs I was just now inveighing against. For the classical conception is that sentences of the forms *b V-ed*. . . , *b V-s*. . . and *b will V*. . . all agree in expressing propositions to the effect of *b’s V-ing*, and disagree only in where, past, present or future, they locate this *V-ing*—whereupon *b will V*. . . conveys a proposition about the future, meet to play consequent to an ‘indicative’ conditional.

All is not well with the classical vision. In the first place, if the allegation is that *will* ALWAYS signifies futurity then it is patently wrong, witness (37)’s natural, ‘present propensity’ interpretation, not to mention (38)’s natural, ‘inference about the past’ one (cf. section 10, and Palmer 1965:111f):

(37) *These price tags will customarily be removed at the point of sale*

(38) *The fugitives will have been miles away by the time the alarm was raised*

Those who hold *will* a marker of futurity in, say, (15) are thus driven at a stroke to the theorist’s very last resort: brute, irreducible disparity of explanation.

Moreover, EVERY secondary auxiliary can relate to the future, witness (18) and (19) of section 5. How, then, are we to explain the futurity of the natural interpretation of, for example, (39)?

(39) *We can/may/must/should, /ought to/needn’t/daren’t run through the Brahms tonight*

By postulating (as McCawley 1971:112, for example) that *will* is ‘really’ there too perhaps? The inference is surely rather that future uses of *will* are merely PROJECTIVE uses of *will*, and future for the same reason—whatever it may be—that ALL projective uses of aboriginals are future (cf. section 16).

At all events, with surface *will* neither necessary nor sufficient for future reference, there are good grounds for suspicion of a classical future tense; and linguists are frequently found sponsoring an alternative perspective according to which *will* stands to *would* as *V-s* to *V-ed*. Since, however, they seem nowhere to have vouchsafed IN WHAT RESPECT the comparison is valid, and since in particular this new perspective provides no evident explanation of the very futurity we began with, it is less than unaccountable that the bankrupt classical creed survives, indeed still predominates as the educated lay persuasion.

Of course, it is never to the discredit of a theory that it stand corollary to a bankrupt creed. Nothing I have urged in this section counts against the doctrine that ‘indicative’ conditionals have consequents, but
only against a popular incentive for embracing it. So far as the doctrine itself is concerned, I have not yet begun to fight.

14. Future-referring will, I have averred, is simply projective will in the grammatical sense of section 10. Let us enquire, then: how is a projective message articulated in its sentence? The particular focus of our interest is the case where the projectively parsed sentence incorporates an undeclaratively parsed if-clause; but let us begin properly, with the one-clause case.

Under its natural, projective interpretation, the surface string

\[(40) \text{Grannie will/can/may/must/should1/ought to/needn't/daren't walk home tonight}\]

divides into a subject and a predicate. The subject is the noun phrase Grannie, and the predicate is everything else. The predicate, embellished here with the word tonight, begins with a secondary auxiliary and includes the verb phrase walk home. The subject noun phrase is found to establish Grannie as the NOTIONAL SUBJECT of the overall message, and the verb phrase to specify a ROOT CONDITION, that of walking home. And the message as a whole emerges to be a JUDGEMENT which somehow concerns the unitary satisfaction of the root condition by the notional subject at some time later than the point of speech, and indeed tonight puts a definite bound on this time. The judgement itself, the overall message, is propounded by the secondary auxiliary—incontrovertibly, since it is the niceties of this judgement that condition the ninefold choice among aboriginal secondary auxiliaries (sixteenfold, if we include all the negative aboriginals).

Conditions specified by verb phrases are doubly unsaturated affairs, satisfiable by an object at a time. Thus the projective interpretation of (40) is a judgement about satisfaction of the root condition BY the notional subject AT some time \(y\) later than the point of speech. (Root conditions differ in this regard from predication conditions, which are single-valued conditions upon times: cf. Dudman 1983:30, 33, 35, and section 25 below).

Strictly, the term 'judgement' is too narrow for my purpose, failing as it does to cover the natural interpretations of, for example, I will pay you tomorrow and You shall have my report next week. But here I plead the reader's indulgence and persist with the inaccurate term. With this proviso, however, I proffer the above analysis as fairly exact—and as utterly uncontroversial, as far as it goes.

Great simplicity attends the encodement of (40)'s natural interpretation as (40): indeed the way the noun phrase is arrived at and the way the verb phrase is arrived at are both unimprovably simple. The noun phrase is selected for the straightforward purpose of identifying a single notional subject for the message; the verb phrase is selected as straightforwardly specifying a condition whose satisfaction upon a single occasion
by this notional subject forms the topic of the overall judgement ventured by the secondary auxiliary.

Great complication is possible of this simple arrangement. Subject noun phrases often encode far more abstruse intelligence: think of plural noun phrases like *these men* and *most Australians*, not to mention *everyone* and *no one*. Also, the message may call for something more elaborate than mere unitary satisfaction of the root condition. For instance, the natural interpretation of *Grannie will never walk again* is mistakenly described as alleging Grannie's unitary future satisfaction of the 'condition' of never walking again, correctly as propounding some more complicated judgement concerning unitary occasions of Grannie's walking.

The treatment to follow is obliged upon pain of prostration to limit itself to cases which are simple in the two ways just delineated, and will accordingly be inadequate as a general account. But our next question is how to analyse a projectively parsed sentence when it incorporates an undeclaratively parsed *if*-clause, and the shape of the answer to this is sufficiently established by consulting simple instances.

15. How does an undeclaratively parsed *if*-clause work in a projectively parsed sentence? If, as I think, this can plausibly be held the question that has always been nagging philosophers about conditionals, then the following is tendered as a grammatical contribution to the continuing philosophical debate. At all events, I offer it as the central grammatical contention of this paper.

There is, I fear, no gentle way of putting this proposal to philosophers. But the fact stands naked to the codebreaker's gaze: under a third-category projective interpretation of an *if*-sentence, the *if*-clause modifies the secondary auxiliary. No other analysis could conceivably account for the way information is found articulated in the sentence. In particular, no other analysis could account for the difference made by inserting the *if*-clause. For the plain difference between saying (40) and saying (15) is that, unlike the propounder of (40), the speaker who ventures (15) is not claiming that Grannie WILL walk home, but claiming only that she will if she misses the last bus. (I need not dwell on the further, trifling, difference that *tonight* in (15) puts a time on the missing of the bus rather than on the walking home.)

Turning to the surface string (15), then, my proposals are as follows. Under its natural, undeclarative-cum-projective interpretation, it divides into a subject, *Grannie*, and a predicate comprising the rest of the sentence. In this regard, (15) and (40) are structurally indiscernible. The difference is that (15)'s predicate is 'complex': in addition to its introductory auxiliary and its principal verb cluster, (15)'s predicate contains an entire *if*-clause. As before, the noun phrase is discovered to identify Grannie as the notional subject of the overall message, a judgement concerning her future satisfaction of a root condition, walking home,
found specified by the principal verb phrase. The topic of the overall message is the same for (15) as for (40): Grannie and her walking home. The difference lies not in the topic, but in the judgement concerning this topic: where (40) says ‘will’ outright, (15) confines itself to ‘will-if-she-misses-the-last-bus’. The conditional interpretation of (15) is in this clear sense a REFINEMENT of the projective interpretation of

\[(41) \text{ Grannie will walk home} \]

and the undeclaratively parsed if-clause may be said to ‘refine’ the otherwise outright judgement.

The manner of this refinement remains to be investigated, in section 19. There also remains, and I shall touch upon it in section 25, the question whether the speaker committed to BOTH the conditional interpretation of (15) AND the corresponding (unitary event, etc.) projective interpretation of

\[(42) \text{ Grannie will miss the last bus tonight} \]

is ipso facto committed to the corresponding projective interpretation of (41). My answer is a guarded ‘Yes’. I hope it will be clear, though, that that logical implication provides of itself no justification whatever for discerning the message of (41) as a semantic component of the conditional, obtainable by ‘modus ponens’. This conception, however comfortable, is in my submission a crippling disability when it comes to understanding the logical role of if-clauses under conditional interpretations, because it gets the relationship wrong between saying will and saying will if she misses the last bus.

The contribution of the if-clause to the overall message will continue to occupy us. But my immediate task is to explain the pattern we find in Figure 2—where, we now see, the time recorded in the middle column is the contemplated time of the root condition’s satisfaction.

16. Ex hypothesi, projectively parsed sentences are generated in their own special way, and accordingly encode their own special sort of intelligence. What, then, is semantically particular about them? This, in my submission: that they encode judgements arrived at by IMAGINING DEVELOPMENTS.

One’s judgement as to whether Grannie will (or can or may or must, etc.) walk home tonight relies, inevitably, upon how one expects affairs to develop between now and tonight; and such expectations can be arrived at only by envisioning events unfolding futurewards from now. From his vantage at the point of speech, the speaker of (40) arrives at his judgement that Grannie will (etc.) walk home by thinking STEADILY FUTUREWARD.

And so generally, in my submission: a projectively parsed sentence voices a judgement of its speaker—a judgement which, one way or another, contemplates the satisfaction of the root condition by the notional
subject at some time \( y \); and in order to arrive at this judgement, it is necessary to start from an earlier time and then imagine events taking their course up until \( y \).

I cannot pretend that \( y \) is always an instant. Even when the overall projective judgement relates to the simple, unitary satisfaction of a root condition, this contemplated satisfaction is not necessarily instantaneous, for the judgement may concern some enduring activity or process, perhaps the gradual onset of a state:

\[
\begin{align*}
(43) & \quad \text{The President will/should treasure this memento} \\
(44) & \quad \text{Grannie will become increasingly vituperative}
\end{align*}
\]

Such conditions are represented as satisfied at a point in time only artificially, and indeed there are some root conditions never finally satisfiable at all:

\[
(45) \quad \text{His kingdom shall last forever}
\]

Here, then, is yet another regard in which my account will be inadequate to the general case, for I shall favour examples where what is contemplated is the POINT satisfaction of the root condition, its satisfaction at some INSTANT \( y \).

The earlier time, vantage point from which the forward-looking thinking sets out, I call the POINT OF VIEW; and I further submit that what the formal tense encodes in these projective cases is none other than the temporal location of this point \( v \) of view, hypothesising that \textit{will} or a fellow aboriginal is selected to identify \( v \) as the point of speech, that \textit{would} [etc.] is selected to indicate that \( v \) is past with respect to the point of speech, and finally that \textit{would} [etc.] \textit{have} (still barring the perfect) is selected to indicate that \( v \) is past with respect not just to the point of speech but to some already past point. Then Figure 2 merely reflects the fact that \( y \) is always later than \( v \).

The idea, then, is that the forward-looking thinking sets out from the actual state of the world at \( v \). Actual historical developments up until \( v \) are taken over by the speaker at need; from \( v \) onwards, the developments are imagined developments.

According to this theory, future uses of \textit{will}, and indeed future uses of aboriginal secondaries quite generally, locate \( y \) in the future by fixing \( v \) at the point of speech. This contrasts with the classical conception, where \textit{will} was thought directly to locate \( y \) in the future (cf. section 13).

It will be observed that the above account makes no reference to an if-clause. It is meant to apply whether the projectively parsed sentence incorporates one or not.

17. More needs saying about the forward-looking thinking I am invoking. It involves envisioning a continuously unfolding sequence of events beginning at \( v \) and continuing until \( y \): think of a narrative movie whose story spans the period from \( v \) to \( y \). Run the movie backwards and all
sense departs: things keep happening for no reason, disconnectedly. This is easily explained, of course, for the connections are all in the opposite direction: there IS no connection this way. To make coherent sense, the film has to be run forwards, indeed continuously forwards. And so with the style of thinking I seek to describe. It is the style of thinking that conjures developments, and therefore works in only one direction—the direction (namely ‘futurewards’) in which developments develop.

And as familiar as breathing: I will not hear the stolid objection that I am invoking some arcane faculty. It is the style of thinking which alike navigates swooping magpies and prompts men to duck them, and its continual exercise is evidently a condition of survival.

It is the style of thinking whereby we animals, by visualising consequences of things already going on around us, anticipate our vicissitudes from moment to moment. It need involve no conscious cerebration. Those whose faces have ever been slapped by Grannie flinch automatically when she raises a hand: without mental effort, in spite of themselves, they envisage a continuously unfolding sequence of events culminating in an instant of percussion. It is by continually acting upon apprehensions arrived at by imagining developments that we animals go about our daily occasions.

This, then, is the style of thinking we bring to our fantasies. For this style of thinking, cogency consists in causal coherence (see also sections 34, 37).

18. The key to a projective message is the fantasy that underlies it. It is even the fantasy that the tense is about. Not the topic of the judgement; not the judgement itself; but the fantasy.

I am anxious to keep distinguished the JUDGEMENT, which is the message of the projectively parsed sentence, and the FANTASY, the exercise in forward-looking thinking which (I say) any such judgement necessitates. The judgement might for example be an edict relating to the future, eventually encoded as Grannie must walk home tonight. What is located in the future here is of course the TOPIC of the judgement, the walk contemplated for Grannie. And now my argument is that when, as in such a case, the topic IS future, when, that is, the judgement concerns satisfaction in the future of the root condition by the notional subject, then that judgement cannot rationally be arrived at without invoking presumptions about the situation in prospect at \( y \). And THAT is where the fantasy comes in: it provides an appreciation of how the world is to develop between NOW and the future time \( y \).

I shall say that the fantasy SUSTAINS the projective judgement. I can now put the opening proposal of section 16 more succinctly: it is a common and peculiar semantic trait of projective messages that each is sustained by a fantasy.

That our speaker is found fantasising as ably from past points of view as from present is no marvel. The faculty of imagining developing situ-
ations gets to work on SITUATIONS regardless of the times when (if ever) those situations happen to obtain or have obtained. That faculty exploits our speaker’s apprehensions as to the WAYS OF THE WORLD, it being these apprehensions which govern the otherwise unbridled speculations of his fantasies. And they would not BE ways of the world if they were not omnitemporal. In short, aptitude for anticipating future developments is simply aptitude for anticipating developments.

But if the aptitude is the same, still there is something quite egregious about fantasising from a past point. It means that there is a stretch of history whose facts are simply beside the point as far as the fantasy is concerned (see sections 28, 49). No wonder our speaker flags the occasions, saying would, should, could or might.

Between fantasy and judgement there remains a further difference. In his fantasy, the speaker seeks in effect to predict the situation at $y$ from the historical situation at $v$; and his thinking during this exercise is, one trusts, quite uncoloured by his particular likes and dislikes. In sharp contradistinction, the judgement itself is plainly often animated by precisely these susceptibilities: it is because of his attractions and aversions that the imagined sequence of events to $y$ triggers as his reaction the judgement he ventures at the point of speech.

19. What an undeclaratively parsed $if$-clause accomplishes (I urged in section 15) is the encodement of a ‘refined’ judgement. But what does this refinement amount to?

What the speaker REALLY does by saying $if$, I submit, is to announce his fantasy as one IN WHICH the $if$-condition is imagined satisfied. (The words ‘in which’ represent, I should think, the full extent of my linguistic agreement with Lewis and Stalnaker about conditionals.) The speaker of (40) indicates that his judgement is sustained by a fantasy which straightforwardly extrapolates futurewards from historical realities of the point of speech. The speaker of (15) confides HIS judgement as sustained by a more athletic imaginative performance. HIS performance includes imagining the $if$-condition satisfied AS WELL AS extrapolating beyond realities of the point of speech.

In the first case, the situation at $y$—situation in which the root condition’s satisfaction is being contemplated—is presented as simply eventuating from historical realities of the point of speech. In the second case, the situation at $y$ is presented as eventuating from historical realities of the point of speech in some causally coherent development which also, independently, incorporates satisfaction of the $if$-clause’s predication condition. And the effect in this second case is, in my submission, of refining the sustained judgement, the $if$-clause thus contributing to the communication of the overall message by helping to delineate the judgement itself. Speaking in circles, the fantasy sustaining the message of (15) is too detailed and specialised to sustain the uncompromising message of (40), enabling an appreciation merely of the situation in prospect at $y$ if
Grannie misses the last bus. A judgement applying to a situation at y conjured in a more elaborate fantasy emerges as a more delicate judgement.

The effect of inserting the undeclaratively parsed if-clause is NOT (pace Ellis 1984:55n) of making the projective message expressed by will contingent upon satisfaction of the if-condition. We have been through this already, but it cannot be insisted too fiercely that such analyses get the grammar wrong: under the natural interpretation of (15), there IS no judgement expressed by will. Thus also any treatment which assigns to the if-clause the role of delineating the kind of situation the judgement is INTENDED TO APPLY IN (see, for example, von Wright 1957:127ff; Quine 1966:12n; cf. Dummett 1973:340ff) is fundamentally misconceived: the only judgement is the one conveyed by the whole sentence, if-clause and all. The reason why the projective interpretation of (41) does not logically follow just from the conditional interpretation of (15) is not that (15) presents (41)'s message as depending on something independent. Every analysis is wrong which entails treating (41) as an 'immediate constituent' under the natural interpretation of (15). The correct reason is that the fantasy sustaining (15) is too specialised to sustain the unrefined judgement of (41).

I should perhaps add that the question how satisfaction of the if-condition is to be brought about is not considered in the fantasy. The overall JUDGEMENT may, certainly, relate to means of, reasons for, intentions behind or some similar aspect of its if-condition's satisfaction: cf. (31) of section 9 and (46) to (50):

(46) If we fail, it will not be for want of trying
(47) If they had collided it would have been because Grannie was flying too low
(48) If he's here tomorrow, it'll be on crutches (Wodehouse 1932:177)
(49) If any of the family had inherited poor Henry's eccentricity—and it was nothing more—it would have been Claude and Eustace, . . . (Wodehouse 1967:45)
(50) If Grannie had escaped it would have been through the sewer

But in the fantasy itself, satisfaction of the if-condition is imagined simply as a future eventuality, i.e. as occurring independently in the sequel to the situation obtaining at v. After all, the most improbable and unanticipated contingencies are known to eventuate given the right accidental confluence of independently developing courses of events, and the English speaker, inured to coping with the unexpected, has no difficulty imagining it where necessary.

I intend this account of the role of the fantasy in underwriting third-category projective messages very exactly. The projective judgement
rely upon aspects of a situation at \( y \), and the picture of this situation at \( y \) is arrived at, always, by imagining the if-condition satisfied somewhere along the line in a fantasy which runs from \( v \) to \( y \) and which provides the continuing ENVIRONMENT against which the condition is satisfied. These concomitant background circumstances are, as it were, the things that will hold, would hold or would have held whether or not the if-condition is, was or had been satisfied. And (section 32) there is no denying that synchronous circumstances can make all the difference to the effect upon or significance for the situation at \( y \) of the if-conditions's satisfaction.

I shall defend these ideas later, beginning in section 26. Meanwhile, there is the business of grammatical analysis, logical form, and the relation between them. And, before even that, the question of the relation between the change-over point and the point of view.

20. Conditional interpretations, in my narrow sense, are confined to if-sentences whose principal predicates begin with either will or would. Now, it will not have escaped notice that the CHOICE between will and would correlates with the choice of syntactical form in the if-clause: leaving aside idioms like would like to, V-s demands will and the other two would.

At the core of my explanation of this striking linguistic fact lies the proposition that \( v \) and \( c \) are always the same temporal point. For every conditional, \( c = v \). A corollary of this law is that \( c \) and \( v \) are always either both at the point of speech or both past with respect to it; whereupon, by the proposals of section 9 and section 16, the if-sentences of conditionals have either both or neither of V-s and will, q.e.d. That \( c = v \) is a dictate of coherence for the kind of imaginative, forward-looking speculation I am trying to describe. What it would be like to accept the deliverances of history up until ONE point and then project futureward from ANOTHER I should not care to hazard.

The account ventured above is insufficient to explain the existence of sentences like (51) to (53), which have phase modification in one place but not in the other:

(51) ... and if you had gone into the army when you left Oxford you would be a major by now (Waugh 1942:143)

(52) If the English knew what passion meant, they'd have found a more expressive word than love. But they DON'T know (Huxley 1934:307)

(53) If I didn't have this thing firmly in hand I wouldn't have come in here, I assure you (Weidman 1981:225)

Neither, though, do they discomfit it: in such a case we have (I submit) the self-same temporal point being located, with perfect consistency, as simultaneously past with respect to the point of speech (in one place) and (in the other) past with respect to some already past point.

Why the speaker should do this, indeed in what circumstances he
does it, are questions I shall not pursue here. Suffice it to observe the phenomenon: in one respect at least, the undeclarative-cum-projective encoding program, to which we are indebted for (1), (2) and (3), is more sensitive to information than the second kind of program, which gave us (10) to (12) in section 3, for the latter permits no cognate independence of phase between clauses. A sentence like (6) is in this sense informationally richer when generated the third way than in the second.

Now that the point is in the open, let me underline that a conditional is defined merely as a declarative (e.g. non-interrogative) interpretation where the if-clause fits some row of Figure 1 and the principal predicate fits some row, not necessarily the same row, of Figure 2. What combinations of rows actually occur in conditionals is a question of hard linguistic fact. And among these hard facts, the first and most striking is the one we began with: that every conditional is described on the top row of either both figures or neither.

It is no real digression to observe here that even this regularity fails, and with it the law that $c = v$, when we move beyond the ambit of the speaker's DECLARATIONS and consider, for example, his requests. Thus, whereas

(54) Growing tobacco here has no relation to the incidence of smoking. If the industry is eliminated tobacco would just be imported (Bryan Simpson, Director of the Tobacco Institute of Australia; attrib. Sydney Morning Herald)

is simply not English, the same is not true of

(55) If the industry is eliminated [sc. at some future time], would you please import some tobacco for me?

Evidently, then, there is not the same rational occasion for identifying $c$ and $v$ in the case of a request.

Let us retreat, though, to the safe ambit where $c = v$. Conditionals, we have observed, divide into those which postpone these points—excuse me, this point—to the last possible moment (so that the fantasy adopts as its past everything that has already happened) and those which locate it earlier (so that the fantasy encroaches upon the already experienced). The latter are already conspicuous, hailed from a great distance (and with totally unwarranted familiarity) by the orthodox philosopher as his 'subjunctive'. According to the proposals of sections 9, 12 and 16, then, 'subjunctive' conditionals turn out to be exactly those under which matters of historical fact are open to imaginative revision. Now here, surely, is a semantic trait fraught with logical significance. Or so one might casually suppose. The evidence of section 34, however, is that the inference-patterns for conditionals are the same no matter where $c$ is.

It will be observed, incidentally, that the conditionals whose if-sentences boast the extravagant free variants documented in section 7 are precisely those with $c$ in the past. Nor am I surprised in the least to dis-
cover recourse to the imaginative revision of history marked with some ceremony in human language—especially when the ceremony makes for easier and earlier recognition of the device into the bargain.

21. This section sketches how the natural interpretation of—shall we say?—(3) comes to be encoded by English as (3), and I tender its submissions for linguistic scrutiny. We join our speaker as, bent on implanting his message in another mind, he avails himself of the services of his Code. He has already determined, of course, that what he wants to send is a PROJECTIVE message. The really interesting questions—to what END the speaker has opted for projection, and what he EFFECTS by broadcasting the signal—have thus been forestalled. They are, however, merely postponed, and await our attention in sections 32f.

The client wishes to transmit a projective message? But of course. Three questions arise at once. First, what ‘mode’ of projective message would the gentleman be requiring? An edict, perhaps? Something lapidary? Permission? A prediction, even? A positive prediction; quite so. (In that case the first word of the signal’s predicate will be an affirmative form of will—with bold italics representing lexemes, as opposed to their inflectional forms.) Secondly, what location has the client in mind for v? That is to say, when would he like the message’s sustaining fantasy to commence? In the past past? (Then the signal’s predicate will begin with phase-modified would.) Thirdly, is the message to be refined or unrefined? We find that our clients usually prefer to refine when locating v in the past, because otherwise (cf. section 30) their interlocutors simply answer Would/could/. . ., if what? A REFINED projective message: certainly, sir. (In that case the signal’s predicate will incorporate an undeclaratively parsed if-clause, with c set equal to v.)

At this point in the interview two quite different lines of enquiry are explored with the client independently. On the one hand: what is the TOPIC to be of the client’s prediction? Unitary satisfaction, by Germany, of the condition of winning the Second World War? (Nothing easier: we put Germany so, as the subject of the signal, and win the war as its principal verb phrase.) On the other hand, what precisely is the refinement required? Incorporation in the fantasy of Hitler’s unitary invasion of England? (That gives if Hitler had invaded England.)

And hey presto: we arrive at the signal (3) itself. —Or rather, English EVENTUALLY arrives at (3) after having dealt with an acute problem of organisation. For the signal must consist of individual words strung together like sausages, whereas the informational ingredients of the message, as elicited by the inquisition just recounted, are organised along quite other lines. Therefore the next phase of the encodement process has to engineer a complete change of format. Some of the asides in the inquisition above confidently assume large tracts of this task already accomplished, of course. But even supposing ourselves magically given the surface components nominated in those asides, the task would remain of
determining an order for putting them together. Any order would presumably do—were it not that the hearer had to be able to take them apart again.

What determines word order we dare not explore. But what order the informational decisions are taken in which determine the eventual surface signal, word order and all, I profess already to have explored, at least in outline. Thus, for example, the decisions fixing the grammatical subject of the if-clause are inevitably taken later than the decisions governing the choice among the lexemes will, may, must and the like.

Moreover, it will be becoming evident to philosophers that intimations of order among these informational decisions are simply intimations of scope, in the logician's sense. In the next section, while introducing the ideas of logical scope and logical 'structure' or 'form' to the non-philosophical reader, I seek also to verify the essentially grammatical character of logicians' verdicts concerning logical form. Then in section 23 I shall be able to restate the present section's submissions concerning the inquisition for a conditional message in terms transparent to logicians.

22. The logician's conception of scope, discovered half-innate in the undergraduate mind, is easily introduced to intuition by example. I offer four.

(a) Everyone, logician or not, construes the message of (57) as the negation of the message of (56):

(56) Grannie and the President were both sober
(57) Grannie and the President were not both sober

The logician describes the relationship by saying that, under the natural interpretation of (57), the message of (56) occurs 'in the scope of' a negation operator. The gloss

(57') It is not the case that: Grannie and the President were both sober

reveals the outermost 'logical structure' of the message (cf. Quine 1966: 44). To the codebreaker, the point is that the informational choice to have the overall message negative must have been made BEFORE the inquisition turned to elicit the proposition whose negation was desired. In either mind, what is at issue is no more than how the message of (57) is encoded into (57).

(b) Exactly so, the logician expounds the message of Socrates is not wise as the message of Socrates is wise 'in the scope of' the aforementioned negation operator (e.g. Quine 1966:1). Exactly so, the codebreaker recognises the information resulting in not as elicited in the inquisition BEFORE the information resulting in Socrates or is or wise.

(c) Again, consider the patent difference between the messages of (58) and (59):
Every inhabitant is either Asiatic or European
Either every inhabitant is Asiatic or every inhabitant is European

In logical terms, it is that in the former the alternation signalled by either...or ‘falls within the scope of’ the quantification expressed by every, whereas in the latter it is the other way around. In codebreaker's terms, it is that the choice resulting in (58)'s every was made BEFORE the choice resulting in its either...or, whereas either...or was the first item guaranteed a place in the signal (59).

The work of Frege triumphantly established that the natural interpretation of (61) is expressible as a certain kind of elaboration of the natural interpretation of (60):
If the lavatory is broken, Grannie will get the blame
If anything is broken, Grannie will get the blame

Frege analysed the message of (61) as
No matter what x is: if x is broken, Grannie will get the blame

with the string in the wake of the colon accorded exactly the grammatical analysis that accrues to (60) under its natural, first-category interpretation (Frege 1967:24). The logician would say that under the natural interpretation of (61), the operator of widest scope was a quantifier. The codebreaker would say that in the encodement of (61)'s message, the decision resulting in anything was taken first. For plainly, provided the decision to resort to the anything device is taken early enough, the sentence (61) can be generated from its message m by first generating If x is broken, Grannie will get the blame and then changing x to anything at the last moment.

What the Fregean analysis (61') demonstrates is that the decision CAN be taken early enough, that the informational content of m CAN be organised with the decision triggering anything coming first.

And there I rest my case for the thesis that the logician has been in the codebreaking business all along. But caution is necessary, for logician's scope is quite a different thing from commonsense surface scope.

The logician analyses the if of section 3's (9) as a ‘binary connective' with BOTH component sentences in its logical scope. At first sight, this is shocking: if anything is plain about the natural interpretation of (9), it is that if attaches, under it, to just ONE of the component sentences. Now it has to be conceded that many philosophical assaults upon the problem of if have been too feeble to account even for this structural fact. But it is not to be thought that the logician is denying or ignoring it when he says that if in (9) represents the operator of 'widest scope'. For when HE says that both sentences are in the 'scope' of if, what HE means is that the decision to broadcast a HYPOTHETICAL message—the decision resulting in if's securing a berth in the sentence—had to be
taken FIRST, before either of the component messages could be elicited. Since in this he is absolutely right, *Socrates is mortal* does indeed occur in the logical scope of (9)'s *if*. In the sense of 'scope' employed by sections 3 and 12, however, the string in the scope of *if* under the natural interpretation of (9) is the sentence *Socrates is a man*, alone. One watches one's step with 'scope'.

Danger lurks also in the indiscrimination between information and sign (stealthily illustrated in the previous paragraph) which characterises talk about logical scope. Certainly exposition is facilitated when we can speak casually of SENTENCES occurring in the logical scope of the WORD *if*, but it has to be appreciated that the relationship the logician is monitoring really ranks not the signs but the decisions which govern the generation of the signs.

At all events, I hope it will be plain that logical considerations about scope are simply grammatical considerations about priorities within the inquisition. Nor is it surprising to find the logician occupied with such concerns. For—animating sentiment of this entire essay—when the question is of explaining inferential relations between messages encoded in sentences, the ways in which the information becomes articulated in the sentences simply CANNOT be irrelevant. In short, imputations of 'logical form' are in truth allegations of grammatical fact.

23. This section resubmits the conjectures of section 21, this time as proposals concerning the LOGICAL FORM of conditionals.

First, I should claim that the following crudely but, in the light of earlier depositions, intelligibly represents the logical form of (41) under its projective interpretation:

\[
\text{will} \ (\text{Grannie, walk home})
\]

\[v = 0\]

The two entries in the round brackets here occur because the overall judgement SOMEHOW concerns satisfaction of a root condition specified by the second entry by a notional subject identified by the first. That is, the two entries are somehow determined by the TOPIC of the judgement. But the operator of wide scope is the lexeme *will*.

And now my proposals about the logical form of conditionals can be similarly represented by the following portrayal of (3)'s natural interpretation:

\[
\text{will} \ - \ if \hspace{1em} [\text{Hitler, invade England}] \ (\text{Germany, win the war})
\]

\[v \ll 0 \hspace{1em} c \ll 0\]

This time THE OPERATOR OF WIDEST SCOPE IS COMPLEX, and that is why the overall judgement is refined.

Finally, I essay the logical structure of the natural interpretation of (62):
If anyone smashes anything, Grannie will get the blame

\[
\begin{align*}
\text{whatever, whatever} & \quad \text{will} \cdot \text{if}[x, \text{smash } y] \text{ (Grannie, get the blame)} \\
\text{person } x & \quad \text{thing } y \\
\end{align*}
\]

24. A logician who perceives an undoubted formal relationship between the propositions of (57) and (56) can nevertheless lack a confident semantic account both of negation and of both . . . and. Just so, a code-breaker who perceives the order in which various decisions are taken in the course of a message’s encodement may nevertheless be unable to say what the informational bases are of these individual decisions. To postulate an encoding program for conditionals is not yet to provide a ‘semantics’ for them. The point I am labouring is that perceptions of logical form are GRAMMATICAL perceptions, never—not even when guided by such semantic evidence as, for example, Frege’s analysis of (61)—semantic. I would not fuss so: but alien conceptions, semantic conceptions, of logical form are evidently abroad, else why does one so often hear that deductive arguments are valid ‘in virtue solely of the logical forms of their component propositions’? (E.g. Basson & O’Connor 1953:13; Barker 1965:28; Olson 1969:177; Resnik 1970:15; Kaminsky & Kaminsky 1974:19; Blumberg 1976:103; Cf. Copi 1978:289.) Validity (for the benefit of the non-logician) is a decidedly SEMANTIC conception, having to do with propositions following from other propositions.

At all events, when I sought to provide the logical form of conditionals I never meant to offer a semantics. Giving a semantics involves giving an account of the informational basis of every key choice made in the encodement. Among the impediments and infirmities which preclude my venturing a semantics for conditional interpretations of if-sentences, two outweigh all the rest. One is that I do not know what conditions the selection of will. The other is that I do not know what conditions the selection of if. Since will and (effectively: cf. section 7) if both figure every time a conditional is encoded, semantic mastery of the conditional is not to be numbered among my accomplishments. And surely, no ‘semantics’ of conditionals is worthy of the name that cannot explain the difference between saying (1) and saying If Hitler invades England, Germany ought to win the war, or again between saying (1) and saying As soon as Hitler invades England, Germany will win the war.

Upon neither of these questions dare I venture a syllable. On the other hand, I am prepared to dilate from a safe distance upon how the problems ought to be tackled, and the next section is accordingly to be read as a homily on the subject.

25. We cannot reasonably covet a semantics for conditionals until we possess the makings of a theory of modality for English (cf. Smiley 1983: 177). Since the problem of modality for English is to explain the whole riotous assembly of messages English speakers contrive to convey by
resorting to secondary auxiliaries, this claim might at first seem over-enthusiastic: conditionals, after all, are confined to projective uses of \textit{will}. The adult fact is, however, that no account of projective uses of \textit{will} can pretend to authority that does not also explain how \textit{will} works at large, and no account of how \textit{will} works at large can command much authority which does not handle the fact that \textit{can}, \textit{must} and the other six behave at large very much as \textit{will} does. No theory can hope to get its framework right which ignores such ramifications.

In virtue of what common informational factor does \textit{will} receive starring roles (to say nothing of certain minor roles in subordinate clauses) not only in the encodement of a prediction as (41) and the encodement of a generalisation as (37), but also in the encodement of an inference as (38)? Whatever it is, this common informational factor that triggers the selection of \textit{will} whenever it \textit{IS} selected in the course of an encodement, is what we call the MEANING of the lexeme \textit{will}. Now, what modality theory aspires to is meanings for \textit{will}, \textit{shall}, \textit{can}, and the other six which, when combined with accounts of all the encoding programs that select them, predict the teeming data.

The presumption that each of the nine ‘modals’ has its own single, i.e. common, informational factor to trigger its selection is of course built into the codebreaker’s methodology, for whom every recognition of brute irreducible diversity is an admission of defeat. One can imagine permissive \textit{may} wringing such an admission from him, perhaps, and the \textit{should} of \textit{If I should die before I wake}... But the immense diversity and subtlety of the messages conveyed using secondary-pattern predicates, which to the untrained mind spells chaos, assures the codebreaker of the very opposite: impossible that so vast an array of delicate discriminations should be managed haphazardly; impossible that there not be an exact and substantially invariant system at work. Such reflections are hardly novel. Nor are they more applicable to the secondary auxiliaries than elsewhere. But they justify the observation (pace Palmer 1979:10) that although some early assaults upon the problem of modality have been innocent, it is not innocent but hard-headed to seek unitary meanings for the modals. If we are to explain the communication of messages by recourse to the Code, we must not allow to creep into the information we impute to its signals discriminations we see the code itself to lack the capacity for making.

In section 21 I represented \textit{will} as selected to transmit a ‘prediction’; but this was the sheerest bluff, for I never had the least intention of saying why a prediction should call for \textit{will} or even what I meant by a prediction. Concerning the meaning of \textit{will} I have nothing to say except (i) that it certainly exists, and (ii) that it has nothing remotely to do with futurity. I am stopping short, that is, exactly at the boundary line of modality theory.

The topic of English modality has so far managed to elude large-scale philosophical attention. Yet its problems might have been designed
to challenge philosophical invention (see, for example, Kruisinga 1931:441ff; Scheurweghs 1961:333ff; Joos 1964:149ff; Ehrman 1966:9ff; Huddleston 1971:294ff; Leech 1971:66ff; Quirk et al. 1972:97ff; Palmer 1965:105ff; 1974:94ff; 1979:1ff). Among the countless matters of fact awaiting explanation by a theory of modality, the following—if indeed it is a fact—merits mention as a matter of traditional logical concern. It seems that the speaker who commits himself to corresponding projections of the forms a will U... and if a U-s..., b will V... thereby commits himself to the corresponding projection of the form b will V...; and moreover that exactly the same holds if for will we uniformly substitute shall, can, may, must, should, or ought to.

Turning now to the conjunction if, I have averred that under a conditional interpretation the if-clause announces its predication condition as gratuitously imagined satisfied in the sustaining fantasy; but I have also alleged that under the natural interpretation of (9) the if-clause announces a hypothesis and again that under the natural interpretation of (10) the if-clause specifies a kind of occasion (i.e. a condition upon times: cf. section 14). Plainly these submissions await unification: until we can explain how a common informational factor triggers the selection of if for all three jobs, we can have little assurance of our competence to describe the role of if in conditionals. Still, success is easier to believe in this time: one catches a whiff of the essence of if, one feels, in the idea of 'grantedness'. This meaning, whatever its exact details, would presumably have to be something pretty abstract, seeing that if is selected at unrelated stages in three different kinds of encoding routines (section 3). I confidently demit this problem to other minds, urging, however (cf. Palmer 1974:143; 1979:137; Dudman 1984:148), that no account of the conjunction if can rest easy until it has dealt with (63) to (66):

(63) If you run out of gin there's another bottle in the pantry (cf. Austin 1961:157)
(64) Well, if you MUST know, it's my thunderbox (Waugh 1965:158)
(65) Well, if she wasn't pregnant before, she is now
(66) But if the owl did not like the Collector, the Collector did not like the owl... (Farrell 1973:132)

26. My fundamental tenet about third-category projective messages generally and conditionals in particular is that each is sustained by a fantasy which runs from v to y and incorporates—at x, let us say—satisfaction of the if-condition. I propose now to develop this position. Great diversity is found within the confines of the pattern. But in every case we discern in the ancestry of the situation at y two factors: the if-condition's satisfaction, and concomitant circumstances projected from v. Thus, sustaining the natural interpretation of

(67) If Hitler invades England, Germany ought to / can / must / should, / needn't win the war
asserted, let us say, on midsummer's night 1940, is a fantasy in which (of course) Hitler invades England, but also in which all sorts of realities of midsummer's night 1940 continue to have their effects into the future; and in the culmination at y one discerns the influence of two causal strands: Hitler's invading England, and the things that will be the same whether Hitler invades England or not, notably Britain's military defencelessness in the coming autumn. It is not, of course, that the speaker, wildly presuming military defencelessness invariant over time, is simply transplanting Britain's midsummer defencelessness to some x in autumn. What assures the speaker's judgement concerning y is a piece of imaginative thinking which sets out from the believed historical fact of Britain's military helplessness at v and arrives at a picture of the situation at y by combining his CAUSAL appreciation of what improvement is possible in Britain's military strength between v and an autumn x with further CAUSAL appreciation of the consequences up until y of a German invasion in the imagined circumstances at x. In sum, the speaker's conception of the situation at y is arrived at by thinking STEADILY FUTUREWARDS from v, and the refinement is achieved by incorporating the if-condition's satisfaction somewhere in the fantasy, so that it too has its bearing on the situation at y.

27. Further, I intend this account to cover third-category projective messages quite generally, without regard to whether v is present or past, and shall illustrate it for past cases shortly.

One very obvious DIFFERENCE, however, between having v at the point of speech and having it in the past is that the point of speech is a particular point, whereas the past is just a general region. When the speaker says will, v's location is thereby identified exactly. But when the speaker says would, the position of v has to be contrived COLLATERALLY. Although early September 1940 is a possible point of view for a conditional interpretation of (3), far remoter ones are equally possible, and without the context there is no knowing where v is. After all, the inference from corresponding conditional interpretations of (68) and (69) to the corresponding conditional interpretation of (70) can hold only if all three change over at the same time:

(68) If a had U-en . . ., b would have V-en . . .
(69) If b had V-en . . ., c would have W-en . . .
(70) If a had U-en . . ., c would have W-en . . .

What matters about a past v, we appreciate, is not its date but its temporal position relative to other salient points. Precisely the same goes for c, of course. By his choice of syntactical form, the speaker conveys strictly limited information concerning the location of c (say); and the hearer grasps the speaker's message when, wherever and with whatever imprecision he places c, she understands his PURPOSE in placing it thus.

Consider again (21), If Her Majesty was here now she would be
revolted. Perhaps the message is intended in reproof of certain excesses currently in full swing here. But perhaps, instead, the object is to illustrate fastidiousness in Her Majesty (If she was here now, even at this harmless gathering, . . .) or even tergiversation (Time was when Her Majesty would have been charmed by our little diversions; but now . . .). Alternatively, perhaps the message is intended to illustrate virulent irreverence in mine host Sir Jasper (Whenever a dignitary is coming to visit, Sir Jasper deliberately arranges something deeply and pointedly offensive—quite unlike this evening’s innocent entertainment). In all these four cases it would of course be acknowledged collaterally, whether explicitly or not, that Her Majesty is NOT as a matter of historical fact present. But as well, (21) can be ventured by a speaker investigating WHETHER as a matter of historical fact Her Majesty is present. He can elaborate a fantasy in which Her Majesty is present in order to confront the elaboration with history. Detectives call this ‘reconstruction’ (cf. Chisholm 1949:483; Adams 1975:145n). Sometimes fact and fantasy clash, indicating actual unsatisfaction of the i-f-condition (Evidently nobody present is revolted. If Her Majesty was here she would be revolted. So, fortunately, . . .). But sometimes fact and fantasy contrive to agree, confirming the hypothesis that the i-f-condition IS actually satisfied (I am beginning to fear that Her Majesty has been here all along. I suspect that the revolted lady in the floppy hat is she. —It could be so: if Her Majesty was here she would be revolted). These last examples incidentally expose a fundamental weakness of the dogma of counterfactuality: that it makes nonsense of the roles of conditionals from past points of view in theory-testing and explanation.

28. Consider now (21) ventured in reproof of current practices hereabouts—that is, for the first of the reasons just suggested. It might seem that the contemplated situation at the point of speech, alias x, alias y, is adequately described in this case as one in which Our familiar Majesty is confronted with the exertions currently in train here—whereupon the situation at y is wholly describable in terms of present facts and hence arrived at without recourse to any past point of view, and the thesis of section 16 is discovered flat false. My contrary contention, however, is that these ideas leave no room for rational justification of the borrowings they allege from present reality.

It is no objection, I allow, to the present-fact analysis that it scruples to borrow every present fact at once, for any account of the effect of venturing (21) will inevitably be selective in some regard. What we do need, though, is justification for those borrowings allegedly TRANS-ACTED (cf. Lewis 1973:68 on ‘factual premisses’). Granted the motivation we are ascribing to the speaker, it is perfectly plain why he should WANT the imagined situation at y to agree with reality in respect both of present enactments here and of Her Majesty’s enduring moral character: his motivation was precisely to censure present enactments by referring
them to Her Majesty’s enduring moral standards. But (I repeat) the question remains what his EXCUSE could conceivably be for simply lifting them from reality.

My alternative proposal is that the fantast adopts the enactments here and Her Majesty’s character not by filching them from the present but by projecting them from realities of a past time, a time at which it was as yet unfixed whether Her Majesty was going to be here now at x—but a time, also, whose historical realities include deposits of fact from which both Her Majesty’s actual moral character at x and the actual activities hereabouts at x are to eventuate exactly as they really have. That is to say, the understanding upon which Her Majesty’s character figures in the fantasy is that Her Majesty’s character would be the same whether the if-condition was satisfied or not; and the understanding upon which current activities here figure in the fantasy is that THEY would be the same whether the if-condition was satisfied or not. These aspects of the situation at y are justified in the fantasy as resulting from actual historical determinations of an earlier moment v.

It is tempting to see the problem of conditionals with y in the present or past as the problem of deciding which deliverances of history require to be CHANGED in order to accommodate the if-condition’s satisfaction. But this is a mistake, overlooking conditionals ventured in the course of reconstructions (section 27), where this presumption of divergence from the deliverances of history is downright alien to the interest sponsoring the broadcast. Equally mistaken, I am now urging, is its identification as the problem ‘what traits of the real world to suppose PRESERVED in the feigned world’, i.e. in the fantasy (Quine 1960:222; emphasis mine). The problem is neither which contemporaneous facts to change nor which contemporaneous facts to preserve. The problem is to decide how much of the PAST to take over and allow to develop; and this, properly understood, means deciding which things would be (would have been) the same whether the if condition was (had been) satisfied or not.

We are about to see that these discriminations can vary (as Quine, ibid., also observed) with the PURPOSE of the speaker’s broadcast.

29. Suppose, not as before, that the speaker who ventures (21) is bent upon illustrating Sir Jasper’s propensity for discomfiting the eminent. This time the envisaged situation at y is one in which Our familiar Majesty, anticipating perhaps a performance of Pinafore, is subjected instead to some spectacle of unexampled depravity. This time the historical realities whose effects at y are envisaged by the fantast are, on the one hand, Her Majesty’s moral character at v, and, on the other, Sir Jasper’s iconoclastic tendencies at v toward the eminent, coupled with the kind of eminence, not easily dispelled overnight, enjoyed by Her Majesty at v. Seeing that the postulated object of the broadcast this time is precisely to illustrate the reaction of someone of Her Majesty’s eminence and sensibilities exposed to the drolleries of Sir Jasper, we are unsur-
prised to find the imagined situation at \( y \) incorporating Her Majesty's eminence and character and Sir Jasper's drolleries. My contention is that these aspects of the situation at \( y \) are envisaged as developing out of the prior realities of \( v \), and hence outside the causal ambit of the imagined satisfaction of the if-condition at \( x \), even though \( x \) and \( y \) are identical.

Our recent investigations have discovered a conjoint variation between the fantasy sustaining a judgement and the motivation of the judgement's propoundment. Now, in my submission, whatever the motive for venturing a refined judgement, the object of retreating to a past viewpoint \( v \) to project from is always in order to secure a situation at \( x \) whose 'reigning aspects' are precisely those that that motive requires. The point of locating \( v \) in the past is to contrive these reigning aspects of the situation at \( x \) as developments from historical realities of this \( v \). In the case of (71), for example, what is being projected from a past past point \( v \) is evidently the very trait of personality the author seeks to intimate by propounding his conditional:

\[
(71) \quad \text{But if she had believed in prayer she would have prayed for many people every night (Snow 1972:340)}
\]

30. A very considerable difference has now emerged between projective messages conveyed using aboriginals and projective messages requiring non-aboriginals. Aboriginals locate \( v \) precisely at a point, and the realities of that point are not negotiable. But where do \( \text{would, should, could and might} \) locate \( v \)? The answer is scandalously circular: \( v \) is located just far enough back to 'unfix' the if-condition without unfixing any of those necessary ('reigning') aspects of the situation at \( x \) which are demanded by the broadcast's motive. And thus, quite magically, the evolution at \( x \) of the reigning aspects is kept immune from interference traceable to the if-condition's satisfaction.

Why is it that, whereas (1) still makes sense shorn of its if-clause, (2) and (3) do not? Because (1) locates \( v \) at the point of speech, whereas (2) and (3) locate \( v \) far enough back to unfix an if-condition.

In short, while the fantasist who says \( \text{will} \) is saddled with the realities of the point of speech, the fantasist who says \( \text{would} \) is saddled with the realities of a past point \( v \) whose sole virtue is that its realities are the right ones. In view of this marked difference, it comes as a surprise to discover (section 34) that it makes no logical difference whether we say \( \text{will} \) or \( \text{would} \). One of the preoccupations of my remaining pages (and especially of section 40) will be explaining why the patterns of inference should indeed be the same whether \( v \) is past or present.

31. When \( v \) is past, it is both past enough for the fantasy to incorporate the right sort of satisfaction of the if-condition (as it might be, attendance ALIVE at the rally) and not past enough to encroach upon the
historical realities which are to eventuate in the reigning aspects of the situation at \( x \) (thus section 30). Will the philosopher protest that there is no empirical sense to be made of the orderings among contingencies this analysis presupposes? Ah, but there I am with him, and delighted; no empirical sense of any kind, I agree, is to be made of discriminations between the 'fixed' and the 'unfixed' at a given time \( v \) (cf. Partridge 1938:9f). Whoso thereupon concludes that the analysis proposed in section 28 is confused is entitled, not to say welcome, to his minor premiss, but simply begs my question. For my proposal is that at the bottom of every projective judgement with \( v \) in the past there is a PRETENCE at that discrimination, a deliberate artificiality, a jeu d'esprit in which, quite without regard for how the details might be managed, some things are kept developing in expected ways from past realities, while another thing is allowed to intrude independently. But only in the mind.

32. I believe that the drift of Snow's (71) is to be sought, not in metaphysical speculation about how the world might have been different if Margaret had believed in prayer, but rather in the enduring personality trait he is attributing to Margaret by the expedient of projecting it from \( v \) to \( x \). Misapprehension is always a possibility, of course. In an episode by Alex Glasgow of the BBC television serial When the Boat Comes In, Jack Ford's avowal to Sir Horatio Manners, in effect

\[
(72) \quad \text{If you disapprove [sc. at future } x\text{] of my fiancée, I shan't marry her}
\]

naturally strikes Manners as ridiculously oversubmissive, until Ford elaborates—whereupon it emerges that the trait being projected is not servility but independence: If you disapprove of my fiancée I shall refuse to work for you, whereupon I will no longer be able to afford marriage to anyone.

It follows from what was said in section 29 that the HEARER'S task when \( v \) is in the past is to twig which realities of the past are being projected as reigning aspects of the situation at \( x \). What (72) illustrates, I now propose, is that when \( v \) is identical with the point of speech, the hearer's task is STILL to twig which realities of \( v \) are being projected as reigning aspects at \( x \). What Manners was unfairly expected to detect from the broadcast of (72) was that Ford was projecting his present pride and prospects, rather than his present servility.

Whether the speaker says will, would or would have, then, grasping his message involves seeing which realities of \( v \) are being projected, seeing what will be, would be or would have been the same whether the if-condition is, was or had been satisfied or not. Not that there is the least factual substance in such adjudications, mind (section 37). It is no factual question whether certain diversions would be taking place here whether Her Majesty was present or not. The host (not Sir Jasper) who counters
(21) with (73) denies it; but then, HE is bent, presumably, on projecting his respect for Her Majesty:

(73) *If Her Majesty was here, current amenities would be suspended, and Her Majesty treated with every courtesy*

That is why the sponsor of (21) regards (73) as prevarication. There is no objective issue between the sponsors of (21) and (73). They disagree simply because, in pursuit of different aims, they are projecting different past realities.

The device naturally suggests itself of suddenly switching projections, particularly so as to frustrate an interlocutor’s intention:

(74) ‘You’re in command, old boy. In your place, I’d just push on.’...

‘But you’re drunk.’

‘Exactly. If I was in your place I’d be drunk too’ (Waugh 1952:424)

(75) *If Her Majesty was here now, she would be in two places at once, because look: there she is on telly, live, opening the Motor Show. — You fool: if Her Majesty was here now she wouldn’t be opening the Motor Show.*

33. It is wrong to conflate the projected realities of *v* with the motive for the broadcast. Rather which particular realities are being projected by the speaker on a given occasion of broadcast ‘can be guessed only from a sympathetic sense of the fabulist’s likely purpose in spinning his fable’ (Quine 1960:222). Not that speakers cannot project the same reality in the same sentence out of different motives: projection of the patient’s critical medical condition at the point of speech is effected by sponsors of (27) in section 8 whether those sponsors are bent upon saving the patient’s life or having him die—different motives in anyone’s book.

Naturally the speaker will be guided by collateral information when considering candidates for the role of projected reality. For instance, beholding the patient hale and hearty at the point of broadcast would cohibit the projection just described. But a different projection would still be possible, and AGAIN available to the patient’s friends and enemies alike: *It’s only an ingrown toenail, but if the surgeon does not operate Grannie will.*

34. By instinctive policy, philosophers and logicians have long assimilated conditionals to hypotheticals (section 3). Actually, though, when we consider the results of elaborating the information encoded in the if-clause, a sensational logical difference emerges between the two.

Observe, on the one hand, that any ground which will support the hypothetical that Her Majesty was drenched if she attended the Garden Party will (granted its consistency with the elaboration: cf. 1983:34)
equally support the further hypothetical that Her Majesty was drenched if she attended the Garden Party wearing a plastic mac. (After all, if she attended wearing a plastic mac then she attended.) But on the other hand, even though the ladies will be/would be/would have been delighted if Her Majesty attends/attended/had attended the Garden Party, there is no guarantee that the ladies will (etc.) be delighted if Her Majesty attends (etc.) the Garden Party wearing a plastic mac (cf. Lewis 1973:10).

My explanation of this stark logical disparity is that hypotheticals and conditionals are products of quite different styles of reasoning. In a hypothetical, one is inferring purported fact from purported facts, and the dictate of cogency is simply that the conclusion be contained in the premisses. But with a conditional there is no conclusion and no premiss: rather, to arrive at the overall judgement one has to envisage a continuously unfolding stream of developments. The requisite cogency here is causal coherence, and the first thing about causality is that circumstances alter cases. With hypotheticals, then, it is a matter of arguing from proposition to proposition, conceivably a stamp of homo sapiens; but with conditionals it is a matter of envisaging a developing course of events, a matter of anticipating consequences, and this is an accomplishment as native to Magpie as to Man. My argument will be that the irresolution we have just seen in conditionals is inherent in projective judgements generally, stemming from the nature of the forward-looking thinking in the fantasy. —But I overreach myself. Let us begin at the beginning, with closer observation of the new phenomenon.

35. Sponsors of (1), or (3), are found to acquiesce in the message of (76) with less than customary enthusiasm:

(76) If Hitler [invades had invaded] England in the teeth of a desert sandstorm Germany [will win would have won] the war

Nor is the phenomenon at all peculiar to conditionals. Sponsors of (77) are found reacting to the message of (78) with cognate repugnance:

(77) If Hitler invades England, Germany should1 /can/shall/may/must/ought to/won't/can't/needn't win the war
(78) If Hitler invades England in the teeth of a desert sandstorm, Germany should1 [etc.] win the war

Indeed the codebreaker cannot help noticing an even simpler instance of the same phenomenon: sponsors of Grannie will/may/must [etc.] walk home tonight are rarely found sponsoring (79):

(79) If Grannie is gunned down tonight she will/may/must [etc.] walk home
In short, we are looking at a characteristic of projective messages at large.

36. Now, it lies beyond all possible dispute that the propounder of a projective message is, at least sometimes, taken as alleging something which is right or wrong quite independently of him or us. Far be it from me to reprobate these precritical intuitions of independent correctness: it is I, after all, who am pleading respect for linguistic findings. The philosophical question, though, is how they are to be accommodated, and I certainly query whether accounting projective messages objectively true or false, however natural a reaction, can possibly be the right way of doing it. Not that I profess a right way of my own, I hasten to add. All I have to offer here about these presentiments of independent correctness is that no doubt the swooping magpie has them too.

Notwithstanding any presentiments of independent correctness, the speaker who asserts (41), Grannie will walk home, under its natural, projective interpretation willingly allows, as who would not, that if Grannie is gunned down at the bus stop, she will NOT walk home. Moreover, he ALSO willingly allows that nobody, not even Grannie, is utterly immune from gunmen; so it is not as if he might be asserting (41) secure in the knowledge that Grannie will not be gunned down at the bus stop. Nor—given the intuition of independent correctness—can it be pretended that the speaker is merely GAMBLING on Grannie's not being gunned down when he ventures (41). The fact seems rather to be that, in the thinking of the speaker, the three apprehensions are somehow MUTUALLY COMPATIBLE—the apprehensions, namely, that Grannie will walk home tonight, that she may be gunned down tonight, and that as soon as ever she is gunned down her walking days will be over.

Indeed, all three apprehensions endear themselves to the speaker with the same aura of independent correctness. It is not clear, however, that the cause of science is advanced by declaring the speaker persuaded of the joint OBJECTIVE TRUTH of his three apprehensions—whereupon the question arises why it should be thought an appropriate response to the attractions of any one of them. A more reasoned assessment is that the projective message of (41), whatever its precise details, does not extend to representing the walk home as eventuating COME WHAT MAY.

In other words, the judgement admits of ABHORRENT refinements: quite simply, refinements the speaker cannot possibly be sponsoring. And it is indeed just this general logical fact that needs explaining, that projective messages are prey to abhorrent (not to say simply irrelevant) refinement. Grannie ought certainly to be horsewhipped before sundown—but not if a desert sandstorm blows up in the meantime, complete with flying scorpions.

37. That projective judgements are prone to abhorrent refinement I attribute to the kind of imaginative, inventive thinking to which we owe their sustaining fantasies. Basically, my contention will be that the fantast
is obliged to pursue his speculations THEMATICALLY, leaving out of account the quite fortuitous events which in real life have a way of intruding upon themes, disappointing expectations and confounding judgements.

The speaker's judgement concerning the future time $y$ is (I say indefatigably) his reaction to aspects of a situation at $y$ imagined by projecting futurewards from realities of $v$. Now, consider the fantast's task who must perform this feat. In real life, he knows, circumstances alter cases, any outcome of a state of affairs at $v$ equally an outcome of fortuitously attendant circumstances (cf. Partridge 1938:3ff). In particular, any situation at $y$ will, he knows, be as much outcome of quite coincidental attendant developments between $v$ and $y$ as of any historical realities of $v$ he might care to fix upon. By the time history overtakes the point $y$, by the time we have an actual situation at $y$, these endless questions of accompanying detail will have been settled, indeed the actual situation at $y$ will be the causal result of a great confluence of such details.

But to the fantast, hamstrung at $v$, these attendant circumstances represent an impasse. For if their causal relevance to the situation at $y$ is unquestionable, their effects upon it are incalculable, since they themselves are fundamentally unpredictable. The plain fact is that the fantast is bound simply to pass over in his fantasy countless real future possibilities with outcomes quite discordant with the developments he is envisaging. He cannot conceivably take into account the effect of every possible eventuality, not merely because there would be no end to it, although certainly there is that about it too, but because there could not even be a beginning, adequate specification eluding even the first eventuality. Specification adequate, that is, to determine the situation at $y$ in all respects with a bearing on the judgement.

To appreciate this is to appreciate why projective judgements could never be true or false: there could never be enough information in the message to determine an issue. Construed as claims of objective fact they are radically incomplete, lacking all manner of essential information.

In a sense, the speaker IS able to take account of this or that future contingency. For he can refine his judgement: *IF she misses the last bus* ...

The problem remains, though, that he cannot cover every future contingency, and this means that the explicitly refined judgement is no less prone to abhorrent refinement than the explicitly unrefined: if she misses the last bus she will walk home (although not if gunned down at the bus stop). And the explanation is as before: a fantast who projects futurewards from the point of speech is no less obliged to pass over possible alternative future developments for incorporating in his fantasy the imagined satisfaction of an if-condition.

Nor can it reasonably be maintained that this aspect of his tenure on the planet has escaped the fantast. After all, it has not escaped the reader, who may confirm this by participation in the following thought experi-
ment: What, broadly, do you expect to be doing for the next hour? But what if at this moment Grannie is on her way to get you? And what assurance can you possibly have that she is not? In short, you SAY you'll be doing such and such for the next hour, knowing full well as you say it that dozens of things, countless things in fact, could quite possibly happen in the meantime to frustrate your expectations. —But then, this sentiment is a commonplace of literature, the poet Burns, for example, observing to a mouse (who, however, was perfectly placed at the time to appreciate the point already) that there is simply no planning for every sling and arrow of outrageous fortune. Indeed, even the magpie finds itself obliged to keep revising its expectations.

So it cannot be pretended, I say, that his inability to foresee the future is somehow lost upon the speaker of English. When the speaker says, for example, will in reference to the future, he knows, and his hearer knows, that his judgement is ventured on the basis of expectations concerning the situation at a future time \( y \) which are utterly at the mercy of contingent intrusions from the contemporary scene between now and \( y \).

Whatever the speaker's purpose in asserting a sentence of the form \( b \) will \( V \ldots \), then, it cannot be to state a future fact. Pretension to forecasting the future is simply not to be expected in a language in which animals communicate. This brings us to what is strangest of all about the classical doctrine of past, present and future tenses: the notion that a language might be found whose speakers viewed past, present and future EVENHANDEDLY. No magpie would acquiesce in such an assimilation. For the magpie, who perceives that he has survived up until the present, the past raises no problem: it is the future he has to worry about.

38. To arrive at an expectation about some future time \( y \), we have to envision outcomes of current trends. But these outcomes depend as much on what attendant future circumstances intersect with the initial developing trends (thus section 37). To get any distance at all, projecting into the future, we are bound to deck out our fantasy with a certain amount of future furnishings and fittings. How though? It is not as if we might first establish independently what the future course of events will be, and then adopt THAT as background. On the other hand, not just any choice will serve, since we are bent upon limning actual future developments, and speculations proceeding from eventually baseless conjectures can never aspire to that. Every decision must therefore reflect an expectation; and expectations about the future thus presuppose expectations about the future (cf. Goodman 1965:16f; Lewis 1973:72). Inevitably, such assumptions as we rely on we are unentitled to make.

Unable either to get along without a background course of events or to establish one, we resort to that masterstroke of finesse, the NORMAL course of events. Future developments are always conjured against a background of the normal course of events, and when the fantasy incorporates imagined satisfaction of an if-condition, this condition is likewise
imagined satisfied in the normal course of events.

No doubt the normal course of events varies from case to case, and is constrained by thematic and contextual considerations (sections 27 to 33). But the logically decisive point is that whatever the case, and whatever the context, the normal course of events is never specifiable. One can recognise it when it comes along, but one cannot define it in advance. The conclusive formulation of a projective judgement is inherently elusive (cf. Lewis 1973:67ff).

Occasionally, it is true, one finds oneself in the happy position of intending a prediction come what may. I am confident, for instance, that I shall eventually die, whatever may happen in the meantime. This same confidence does not, however, extend to the how or the when of my death, and indeed not even the suicide plummeting from his skyscraper is rationally entitled to feel entirely safe from gunmen (who after all can be expected to regard him as affording unique if fleeting opportunity for innocent live-target practice). Whatever one predicts as a causal development, there will always be some catastrophe whose intervention would (failing intervention of some further catastrophe) admittedly upset the prediction, and yet whose non-occurrence one is not ipso facto predicting.

It is only for some cases, then, that b’s V-ing... is proposed as ensuing upon the point of speech under a predictive interpretation of a sentence of the form b will V... But which cases? Horrors! The words are no sooner out of his mouth than one realises his frightful gaffe: if we could say which cases we should be back at being able to say ‘come what may’. Whereas with a projective message we can only ever say ‘ceteris paribus’ and let it go at that (cf. Canfield & Lehrer 1961:204ff; pace Braithwaite 1953:316ff; Goldstick 1978:9). ‘Ceteris paribus’ meaning in the normal course of events.

In the normal course of events, it hardly needs pointing out, Her Majesty would never attend a Garden Party wearing a plastic mac. So it is no surprise, really, finding that the very ladies who would have been delighted if Her Majesty had attended the Garden Party would have been disgusted if she had attended wearing a plastic mac. Abhorrent refinements don’t count.

As I see it, the implicit restriction of projective judgements to an unspecifiable normal course of events is simply the species’ response to the realisation that all causal reasoning into the future is conducted in the shadow of the endless contingency of events.

39. The bias of my recent discussion has been heavily towards cases with v at the point of speech. In section 40 I shall set about redressing the balance, concentrating on cases where v falls earlier. Still, these projective interpretations with v in the past have long commanded more than their merited share of attention. Indeed, if there is a fundamental mistake under which all speculation about the English verb system labours, it is
the mistake of exalting this particular species of message to a degree far above its station. The present section is accordingly devoted to derogation of the species.

There is no ignoring the prominence many of its subspecies have achieved, often under several guises at once. Thus the species embraces the ‘conditional mood’ treated as special by many grammarians (e.g. Sweet 1891:108; Poutsma 1926:170; cf. Scheurweghs 1961:337); it includes the ‘strong’, ‘counterfactual’ and generally ‘subjunctive’ conditions treated as special by philosophers (section 12); and it includes the ‘unreal’ conditionals, with their ‘rejected’ or ‘contrary-to-fact’ conditions, treated as special by linguists (e.g. Curme 1931:426ff; Jespersen 1931:112ff; Onions 1971:67ff; Quirk et al. 1972:747ff; Quirk & Greenbaum 1973:324ff). Their fascinated regard for the species has enticed linguists at large into acquiescence in an otherwise unthinkable grammatical howler: the doctrine that, in point of the generation of each from its natural interpretation, (2) stands to (1) as

\[
\text{If Socrates was a man he would be mortal}
\]

stands to (9) (e.g. Palmer 1965:132ff; 1974:140ff; 1979:137f; Leech 1971:110ff; Onions 1971:68f. The pained logician is moved to remonstrate that the operator of widest scope is represented by if in one case and will in the other three: cf. sections 3, 15, and 21 to 23). In many minds the species is even taken for one of just TWO basic categories, perhaps ‘moods’, which together exhaust declarative messages.

My own estimate of this species’s place in the English verb system I can define very exactly. Leaving aside Heaven be praised! and such, English boasts exactly FOUR modes of assertion. Specifically, there are exactly four ways in which English fixes the formal tense of her principal predicates. The first of these, which is common and peculiar to principal is that the choice between V-s, V-ed and had V-en is always settled by the time of some predication condition’s actual, historical satisfaction (1983: 29ff). The other three ways are peculiar to principal predicates of the secondary pattern, and we remember them from section 10. Thus English enables affirmation of just four basically different kinds of message, all thoroughly different semantically because encoded so differently, and none in the wildest sense ‘reducible’ to others (cf. section 46). Now, ONE of these four kinds of message is the projective message; and for projective messages alone the option exists of projecting from a past point; and only when this latter option is elected do we obtain a member of the species under discussion.

My position, then, is that while undoubtedly the species is special, while by all means it merits our minute attention, it is wrongly viewed as a fundamental category. We should expect the location of v to make a difference WITHIN the category of projective messages, nothing more. Actually, we have already seen the sort of difference encompassable by fiddling with the location of v: it is the sort of difference between someone’s attending a rally dead and her attending it alive (section 9). But no LOGICAL difference worthy of the name is encompassable (I submit) by
adjusting $v$. In respect of the crucial logical trait noted in section 34, for example, the fact is that it makes no difference WHERE $v$ is.

40. That projective messages with $v$ in the past are as prone to abhorrent refinement as those with $v$ at the point of speech is simply another fact of observation, one more thing that needs explaining. My explanation, predictably, is that the style of underlying thinking is the same in either case.

In either case we have a judgement sustained by a fantasy. Our fantasies are of course disciplined by our apprehensions as to the ineluctable ways of the world (determinations felt to hold, if at all, in the nature of things, hence enjoying explanatory endowments), including our apprehensions as to the more elaborate, connational ways of conscious agents (whereupon teleological explanations are enabled). Naturally, any expectations such apprehensions nurture are bound to be universalisable, simply because premised upon ‘ways of working’ (cf. Anderson 1935:245ff; Partridge 1938:11ff). Inevitably, these apprehensions about ways of working outstrip every observational warrant—which is just as well, since to resort to them in a fantasy is ipso facto to apply them to a case distinct from any historical one (cf. section 49).

Still, however minutely his speculations are guided by such nomological apprehensions, any picture the fantast arrives at concerning the situation at $y$ by imagining events taking their course from the realities of an earlier time $v$ will be reached at the expense of simply slurring over countless questions of coincidental background circumstance which in real life would be causally decisive; and the present point is that this holds no less when the tract from $v$ to $y$ overlaps actual history, since the vital background details remain as inscrutable in this case as ever. As before, the fantast is pursuing a theme, and its background is the all-weather normal course of events. There is never remotely enough information in the message to determine an objective issue.

The evidence of section 34 suggests that abhorrence is in general invariant under manipulation of $v$. This I take as further confirming that fantasts think thematically.

41. In this section I briefly urge a very general doctrine by putting a single narrow instance of it. The doctrine is that the message $m$ communicated when a sentence $S$ is broadcast regularly incorporates UNSIGNalled INFORMATION, information which, although not consulted in the generation of $S$, is nevertheless communicated by its broadcast. As my sample of unsignalled information I choose the information concerning order of events so prevalent among conditionals (cf. Downing 1959:130ff; Lewis 1979:455ff).

Conditionals are found very often to depict a fixed order of events, the if-clause’s first. Thus the reason
If she misses the last bus tonight she will walk home beforehand

conveys nothing coherent is evidently that the final adverb essays a temporal relationship at odds with other temporal information already ingredient in the natural interpretation of (15), specifically the order of \( x \) and \( y \). And similarly, under the natural interpretations of (16) and (17), satisfaction of the if-condition is very definitely understood as prior. But this order of events is by no means mandatory. Other conditionals include no such understanding, perhaps even the opposite one: see, for example, (50), and (81) to (84):

\[
\begin{align*}
(81) & \quad \text{If the Hun} \begin{cases} \text{attacks} \\ \text{had attacked} \end{cases} \text{we} \begin{cases} \text{will be} \\ \text{would have been} \end{cases} \text{ready for him} \\
(82) & \quad \text{If this switch was/ were on at present, the entire quad would be ablaze with fairy lights} \\
(83) & \quad \text{If Grannie} \begin{cases} \text{commits} \\ \text{had committed} \end{cases} \text{suicide she} \begin{cases} \text{will arrange} \\ \text{would have arranged} \end{cases} \text{it to look like murder} \\
(84) & \quad \text{If Sir Jasper joins the Board of Sunnyrinse, he will/can/must/ought to/daren't resign from the Ministry beforehand}
\end{align*}
\]

In short, some conditionals incorporate interclausal temporal intelligence which others do not.

As codebreakers we discern at once, moreover, that there is never anything in the sentence itself to herald this sort of temporal information. The encoding routine makes no provision for registering it. The encoding routine can be relied upon to contrive the specification, however complicated, of an if-condition and a root condition, it registers the location of a change-over point, and encompasses much besides (section 21); but it patently does not consult the question of time order at any stage in the machine run.

Of course the hearer reads the temporal information in: we all see that. Ought it then to be reckoned part of the message at all? In my design, definitely: with communication modelled as identity of message between minds (section 2), whatever is communicated belongs to the message; and this temporal information surely qualifies as communicated. The hearer reads it in, certainly; but the point is that nearly always she correctly reads it in. She duplicates the very order of events the speaker has in mind, and the temporal information, initially in one mind, is found subsequently in the other.

Messages are thus more complex and various than are the ways of generating their signals. That is, they contain unsignalled as well as signalled information. The latter is of course any information actually consulted by the encoding routine, information which accordingly influences the constitution of the eventual signal.
The patent fact that the informational content of a message can outstrip the capacity of the signal whose broadcast conveys it is surely a matter of concern to anyone intent upon how natural languages work. This fact of unsignalled information is of immediate importance to (for instance) those engaged, like many an orthodox philosopher, upon linguistic analysis of concepts. And to the codebreaker, the problem presents itself of the general means of its communication—upon which I venture a suggestion in section 44. But I confess an ulterior motive for having chosen this particular example of unsignalled information. For time order in conditionals provides the best evidence of all for my thesis that projective messages are sustained by forward-looking fantasies. Meantime, let us run the prurient eye of a codebreaker over the phenomenon itself of time order in conditionals.

42. The eye notes at once that the order of events has nothing to do with what might be called the modality of the judgement (sections 21, 24). For when will is supplanted by another aboriginal secondary auxiliary (or would by a non-aboriginal), the temporal relation of x to y is found invariant. The time order—philosophers please note—has nothing particularly to do with would or would have, then. For that matter (the eye had previously noted) the time order has nothing to do with the tense of the principal predicate: the order of events given out by (1), (2) and (3) is the same.

Indeed, talk of an order of EVENTS, albeit often comfortable for will, emerges here as overstrong. It is salutary to reflect that the information concerning time order is exactly the same in the projective interpretation of (85) as in that of (15):

(85) If Grannie misses the last bus tonight she ought to walk home

Yet it is a simple misunderstanding of English to discover mention of an event outside the if-clause of (85). In a way, it seems, we are comparing incomparables when we compare x and y. For x, certainly, is the time of an event, albeit an imagined one.

In x and y, according to me, we are comparing the time of a predication condition’s imagined satisfaction and the contemplated time of a root condition’s satisfaction by a notional subject. The time x belongs to the fantasy, the time y to the topic of the judgement. According to me, y is the time contemplated for the root condition’s satisfaction in a refined judgement, and x is the time of the if-condition’s imagined satisfaction in the fantasy that sustains the refined judgement. —Not that any of this hinders comparison of x and y qua times, of course.

Still, it must be observed again (cf. section 16) that for many messages, the xs and ys are themselves elusive: the unsignalled temporal information is too complicated and subtle to be regimented into advice concerning the order of two points x and y:
It's the great dead language of the future. If Etruscan didn't exist it would be necessary to invent it (Huxley 1934:304)

Often the unsignalled temporal ingredient of a message is found to be miniscule, or reticent over some obvious question. For example, is y present or future under the natural interpretation of (87)?

If honest men did not squabble for money, in this wicked world of ours, the dishonest men would get it all; and I do not see that the cause of virtue would be much improved (Trollope 1967:110)

Would the dishonest men habitually get all the money in the present, or eventually get all the money in the future? But then, I need hardly add that the detail is irrelevant to Dr Grantly's theme.

But when all this has been conceded, there remains the fullblooded phenomenon we began with. There remain legions of messages which incorporate information both clear and loud about the order of temporal points x and y. My next section deals with the cases where x is later than y.

43. Prima facie, cases where x is later than y ought not to occur. After all, if the role of the fantasy is to inform the speaker's conception of the situation at y, then nothing can rationally be in the fantasy which can have no bearing upon the situation at y. Yet this is precisely the position of all events later than y. Certainly the situation at y is out of the causal reach of all events later than y (cf. section 17). Nor does it emerge how else a later event might be relevant. And yet, as we saw in section 41, it is easy to have x later than y. Taking x strictly as the moment of Grannie's imagined death, y inevitably precedes x under the natural interpretation of (83), for instance.

It is a feature of many such cases that what is imagined in the if-clause involves intentional behaviour on the part of some agent. In fact, what is literally specified by the if-clause is the culmination, at x, of some more or less extended stretch of purposive behaviour, and although x is admittedly later than y, y is nevertheless later than early stages of the purposive behaviour. And then the point is that what prompts the refinement articulated in the if-clause is consideration (not of the effect of the culmination itself but) of the effects of these early stages upon the situation at y. I should urge (83) as providing a case in point, venturing (88) as a relevantly adequate paraphrase:

If Grannie sets [etc.] about committing suicide she will [etc.], while pursuing this objective, lay a false trail.

And essentially the same applies, apparently in (84) above and (89):

If Grannie visits the dentist she should / can / must / ought to / needn't brush her tooth beforehand
In this same connection, observe the effect of changing (89) to (90):

(90) If Grannie visits the dentist afterward, she should / can / must / ought to / needn't brush her tooth

The literal difference between the two messages is merely that one specifies precedence of y and the other subsequence of x—insisting, of course, that (90) be read as If Grannie visits the dentist after brushing her tooth at y, she should / [etc.] brush her tooth at y. But the effect of this minute difference of phraseology is decisive: (89)'s wording allows us to understand the 'visit' as commencing far enough back to encompass the contemplated brushing of the teeth, but (90)'s does not. The result is two utterly disparate messages, for while (89)'s is entirely intelligible, (90)'s is not. Of course (90) exudes its own zany air of cogency, and it is doubtless possible to say it as a joke; but its very propensity to divert relies upon there being no way of understanding the if-condition's satisfaction as affecting the situation at y.

What makes the difference between having y before x and having them level is often a matter of modest detail in the articulation of the messages. Comparison of the natural interpretations of

(91) If Sgt Dixon visits Grannie this evening he will / ought to go armed
(92) If Sgt Dixon visits Grannie this evening he will / ought to fetch his service revolver en route
(93) If Sgt Dixon visits Grannie this evening he will / ought to call home first and fetch his service revolver

confirms the relative unimportance of whether, literally, y precedes x or not. The important factor is the common factor: that the business with the service revolver, spun out at whatever length, is always part of Sgt Dixon's more embracing program of visiting Grannie.

There may be other ways in which it comes about that x is, taken literally, later than y. My suggestion, though, is that all are exponible as cases where what is conjured by the if-clause is imagined for its EFFECT upon or otherwise significance for the situation at y. Then the whole point about (80) in section 41 is that what is conjured in ITS if-clause can have no conceivable effect upon or otherwise significance for the situation at y unless x comes first.

And that, in essence (and pace Dudman 1984:152), is my solution of the hoary old problem of time order in conditionals. Crudely, when the 'conventional' order of events is implicit in a conditional, that is because no other understanding provides rational occasion for the if-clause's announcement that its predication condition is being imagined satisfied. And quite generally, WHATEVER intimations of time order are discovered in a refined projective message, they are there to make the imagined satisfaction of the if-condition relevant to the situation at y. — But I am not finished with this unsignalled temporal information, for
the problem remains of the means of its communication to the hearer.

44. For each parsing of a given broadcast sentence, the signalled information will comprise various bits and pieces, inevitably discrete: a notional subject's identity, perhaps, c's location perhaps, etc., etc. But our hearer makes nothing of any such mere concatenation of informational fragments until she can see, or thinks she sees, rational purpose in those particular juxtapositions—unless, then, she apprehends some overall POINT to the speaker's having worked up that particular collation of informational scraps into a signal and broadcast it, some design which separately explains each piece of codified information AT ONCE. When she DOES see a point she reads it in, thus contriving a unitary overall message by simultaneously imputing motives to the speaker for whole echelons of discrete and independent choices.

Now, ONE of the things that always needs to be apprehended if a conditional message, or indeed any refined projective judgement, is to be imputed to a speaker, is the relevance of the refinement: what BEARING upon the situation at y is intended by the speaker for the if-condition's satisfaction? And it is in coming to a decision upon this question, the 'bearing' question, that the hearer reads time order into conditionals.

A hearer's diagnosis may well have the speaker of (1), or (2), or (3), portraying the German victory as a military outcome of Hitler's invasion. This happy invention provides a confident answer to the bearing question: the situation at y is to lie in the causal wake of the imagined invasion at x. WHEREUPON x precedes y. But of course there are many other ways in which the satisfaction at x can be intended to bear upon the situation at y; and settling this bearing question involves putting definite constraints on the temporal relation of x to y.

When the hearer is stumped for a workable overall motive she is stumped for a message; and in particular when the hearer is stumped for an answer to the bearing question she is stumped for a conditional interpretation. Two conditions are nicely specified in (80), which, however, holds no message for her who can now see no answer to the bearing question, no way in which the if-condition's satisfaction might serve as a factor in determining any aspect of the situation at y remotely relevant to the judgement.

But this last is a METAPHYSICAL adjudication. The impossibility of a subsequently missed bus's having any bearing on any state of affairs is a metaphysical impossibility. If English speakers agree that (80) makes no sense, it is because none can find an intelligible answer to the bearing question; and this in turn betrays among other things shared apprehensions about causality and time. It would never do thinking English CREATED metaphysical conceptions, then. —Or that a machine could speak English.

In sum, if a hearer takes delivery of a message when a speaker broadcasts an if-sentence, she does so by imputing motives to him for the
broadcast—motives comprehensible to her. It is thus she fleshes out the bare bones of the speaker's signalled information into a single, living message—belike the very one the speaker began with. We noted in section 2 that the signal does not determine the message, and it crossed our minds to wonder then how the hearer chose between competing interpretations of a broadcast sentence. Her aim is of course to single out one grammatically possible interpretation from among the many as being the one intended BY HIM, the speaker. And in the final analysis this can only mean that the hearer opts for the reading which—given the speaker's latest commitments and suchlike—makes best sense TO HER of his linguistic behaviour. She elects to parse, say, (6) one way rather than another because the signalled information on that construal impresses her as easiest realised into a likely venture of the speaker; her concommitant introduction of unsignalled information is merely a reflex of her ascription to the speaker of a metaphysically tenable motive for his broadcast of the if-clause.

45. Another side to unsignalled information is its diversity. Intimations of temporal order among conditionals, for example, come in seemingly endless subtle variants, each as clearly delineated as its fellows. Paradoxical, almost, to find such nice differentiations conveyed unexpressed, and indeed it is easy to find oneself thinking of the time order in conditionals as 'vague'. But this estimate betrays uneasy appreciation of something quite else: that this information, for all its detail, its exactness over some particulars and reticence upon others, for all its sheer individuality, is totally inexplicit. One object of this section is to illustrate the diversity which is the hallmark of unsignalled information. The other is to illustrate the sensitivity of time order in conditionals to the BEARING of the satisfaction at $x$ upon the situation at $y$. By way of a change we shall concentrate on cases where, generously, $x = y$. But we shall soon see that many different temporal arrangements fall under this rubric.

We can begin with the natural interpretation of (81) in section 41. It might seem that $y$ is a nose in front of $x$ here, but strictly not: what the judgement concerns is a STATE of readiness AT the imagined time of the enemy attack. The fact remains, though, that being ready for an attack is the same whether the attack eventuates or not: it cannot be that the imagined satisfaction of the if-condition is introduced into the fantasy for its CAUSAL influence upon the situation at $y$. The if-clause merely specifies the contingency that the readiness is readiness FOR. —But that, precisely, is the answer to the bearing question, and the reason $x = y$. What characterises this case is that developments from realities of $v$ hold undisputed causal dominion over the imagined situation at $y$.

By contrast, there are messages, like (82)'s, where it is the imagined state of affairs at $x$ which holds causal sway over the situation at $y$, notwithstanding their simultaneity. No doubt PUTTING the switch on at some instant $x$ would cause the fairy lights to COME on at an infinitesi-
mally later time \( y \); but (82)'s \( x \) and \( y \) are identical, the underlying conception being the sort of causation that keeps bridges up, with one equilibrium causally maintaining another. — And there we have the answer to the bearing question, and with it the reason why \( x = y \).

Caution is necessary. It might be contended that, according to the sponsor of (82), having the switch on is causally sufficient for having the quad lit up, i.e. that the JUDGEMENT ITSELF is a claim of causal sufficiency. This idea is confused (section 46). But I am speaking of causation WITHIN the fantasy, of causation between the imagined satisfaction of the if-condition and the contemplated situation at \( y \). My proposal is that the answer to (82)'s bearing question is a broadly causal one: the if-condition's satisfaction is imagined for its EFFECT UPON the situation at \( y \).

Although the if-condition's satisfaction is the causally dominant factor in the situation at \( y \) this time, other factors are evidently ingredient in this same situation at \( y \), for patently the judgement itself relies upon having the circuit working normally at \( x \). In my submission (sections 26ff), this normal working of the circuit, which is the same whether the switch is on or off, is a reigning aspect at \( x \), an anticipated heritage from an earlier reality which is expected to endure because it IS the way the circuit works. (For without knowing how the circuit works, we know that how it works is the same each time it works in the normal course of events. Presumably this normal course of events does not extend to blown fuses.)

In the thinking of nobody does whether the light-switch is on or off depend causally on whether the lights are on or off. It is always the other way about. This implies a basic asymmetry in the feasible answers to the bearing questions for (82) above and (94):

\[
(94) \quad \text{If the quad was ablaze with fairy lights this switch would be on}
\]

Satisfaction of (82)'s if-condition is seen as a causal factor in the maintaining of some aspect of the situation at \( y \). Satisfaction of (94)'s if-condition is seen as requiring for its causal explanation that a certain state prevail at \( y \). Either way \( x = y \), since the common causal relation is of one state's maintaining another. But the relation of the situation at \( x \) to the situation at \( y \) is utterly different in the two cases.

The conditional interpretation of (95) encourages yet another answer to the bearing question, and again one which makes \( x \) and \( y \) simultaneous:

\[
(95) \quad \text{I'll speak to Bunbury, Aunt Augusta, if he is still conscious ... (Wilde 1948:328)}
\]

The deliberation with which the principal verb phrase of (50) alludes to the imagined event of its if-clause makes it odd to clock the root condition's satisfaction at all. But if cum grano salis we recognise a point \( y \), (50) leaves no doubt that this \( y \) is identical with \( x \). This time the
imagined satisfaction of the if-condition provides the judgement with its notional subject. —And that is (50)'s answer to the bearing question, and the reason for its peculiar temporal content.

The same applies to the natural interpretation of

(96) \textbf{If Grannie starts another fight it will be her third this evening}

Presumably historical reality up until the point \(v\) of speech includes two fights earlier this evening. It is a peculiarity of the message of (96) that it resists abhorrent refinement: Grannie's next fight will be her third come what may. But this is no irregularity: when one considers what the (probable) answer is to (96)'s bearing question, one attributes the immunity at once to the accomplishments of arithmetic.

In the case of

(97) \textbf{If the President dies, Grannie will be/become a murderess}

the bearing of the if-condition's satisfaction upon the situation at \(y\) is evidently LEGAL. Doubtless history up until \(v\) includes an assault by Grannie upon the President. This fact, together with the deliverances of criminal law, will endure until \(x\) whether the President dies or not, and in these circumstances the President's death at \(x\) will have legal significance. By what is (however natural and convenient) strictly a legal technicality, one becomes a murderer at the instant of one's victim's demise; and that is why \(y = x\). The relevance of the President's imagined death to the situation at \(y\), then, is that it is the occasion of legal consequences at \(y\). Incidentally, this time the immunity to abhorrent refinement is missing that we discovered in (96)'s case. If the President dies at the independent intervention of gunmen, Grannie will not thereupon become a murderess.

46. Sometimes conditionals take on the aspect of causal allegations, (1) apparently portraying the German victory as an OUTCOME of Hitler's invasion, (82) seemingly representing having the switch on as causally SUFFICIENT for having the lights on. But to impute these causal overtones to the message itself (as in Dudman 1983:35) is a faulty appreciation, obviously, since (1) can be sponsored by a speaker maintaining that Germany will win whether Hitler invades England or not, and (82) by even a speaker who conceives 'this' switch permanently disconnected and the quad, quite independently, permanently ablaze with fairy lights. The truth here is rather that while (1) and (82) CAN be ventured by speakers bent upon illustrating directly causal themes, other motivations are possible (cf. section 29). It is to be observed that the time-order component of the conditional remains the same whether the speaker is attempting a directly causal point or not; so it would be wrong to expect the causal overtones to explain the intimations of temporal order.

(I need hardly add that in my submission every analysis is doomed to failure which attempts an equivalence between the conditional interpretation of, for example, (82) and some proposition expressed by (98):
(98) Having this switch on is sufficient for having the quad ablaze with fairy lights

The point is that (82) and (98), the latter with a primary-pattern predicate, are generated by such utterly different encoding programs that it is simply NOT POSSIBLE that any semantic equivalence hold between their encoded messages (cf. section 39). The same stricture applies to certain artful accounts of dispositions: it is simply not possible that b is fragile should MEAN that if b was struck sharply it would break.

Conditionals are wrongly thought of, then, as themselves causal messages. Causality none the less plays a crucial role in the formation of conditional messages, for their sustaining fantasies are governed by causal considerations from soup v to nuts y. It is not always the case that the relevance to the situation at y of the if-condition’s satisfaction at x is causal (section 45); but the developments through time which transform the historical realities of v into the reigning aspects of x ARE causal. Even when this transformation is unaccompanied by relevant change, the mere PERSISTENCE through time is itself a causal matter. The point belongs to Heraclitus, although every speaker in any case experiences his own persistence through time as distinctly a matter of causal exchange with his environment.

47. The perception that conditionals are SOMEHOW underwritten by NOMOLOGICAL APPREHENSIONS is philosophical common property (for example, Goodman 1965:11ff; Mackie 1973:65). Actually, the observation is unduly narrow: ALL projections, of whatever modality, rely on nomological apprehensions. The problem is to explain where those nomological apprehensions figure, and my suggestion is that they are invoked in the message’s formulation. Specifically, every third-category projective interpretation of an if-sentence is sustained by a fantasy, and within the arena of that fantasy, the rules of the game are 100% nomological. No matter of historical fact is of the least significance to the situation at y that the judgement is about, except via the mediation of nomological apprehensions (cf. section 28). Conditionals are ‘strong’ (Quine 1960:222) because their sustaining fantasies, albeit creatures of the imagination, are disciplined by exacting nomological requirements.

The pre-eminent nomological guides of our fantasies are of course our CAUSAL apprehensions, some of which we share with the magpie. But lurking in the background, undeniably, are CONCEPTUAL apprehensions of one kind or another: logical, arithmetical and so on. Although capable on occasion of wresting complete control of a fantasy’s cogency—witness (96)—these non-causal nomological apprehensions usually achieve a low profile. Occasionally, however, they are thrust into painful prominence, as we shall see in the next section.

48. This section breaks in with an absolutely fundamental point about theories of English tense which until now I lacked the means of
developing sufficiently. In caricature, its burden is that mathematical and various other highly abstract uses of English verbs are strictly speaking deviant.

The problem of tense for English is to discover what conditions the choice, in the first word of a clause’s predicate, between the aboriginal and the non-aboriginal; what the common informational factor is that triggers the selection of \( V-s \), \( will \), \( must \), etc., in preference to \( V-ed \) or \( would \). The reader has perhaps discerned that I espouse a TEMPORAL theory of English tense. Specifically, I maintain that the aboriginal form is selected, at whatever stage of whatever encoding routine, only to register some point or other identical with the point 0 of speech, with declension from aboriginality always registering pastness of that same point with respect to 0. —And there, in one sentence, is my TENSE CODE for English.

But not all discourse has to do with time. Abstraction from temporal considerations is simply a fact of intellectual life: for all sorts of rational reasons, the speaker will shake himself free of the temporal dimension in thought. And now my point is simply that the sponsor of temporal tense, according to whom there is temporal information encoded into every clause of English, is committed to treating all such non-temporal discourse as NON-STANDARD, requiring special handling.

This is a commitment I am eager to incur. But let me concede first that temporal theories of tense are distinctly uncustomary. The authorities seem unanimous in allowing ‘non-temporal use of tenses’, Jespersen, for example, including a section on that very topic in a chapter called ‘Time and tense’ (1924:265; and cf., at random, Joos 1964:121f, 125; Palmer 1974:43). Usually no UNIFIED account of tense is offered at all—whereupon the question whether it is a temporal account fails to arise. Those few who accept the responsibility of a unified theory of tense are driven, naturally, to non-temporal ones. Thus Martin Joos (ibid.) identifies the common informational factor triggering declension from aboriginality as ‘remoteness’—remoteness either from present time or from reality; and Harald Weinrich (1964:10ff; cf. Casparis 1974:9, 140ff) concludes that tense has ‘nothing to do’ with time.

My position is that here the authorities are frightened with false fires. Particularly, it has seemed to them impossible that a temporal theory of tense might account for the messages they describe as unreal—but at bottom this is only because ‘unreal’ is a misdescription. It is my position that a temporal account of undeclaratively parsed clauses IS possible (1983:35ff), that a temporal account of projectively parsed clauses IS possible, that temporal explanation is possible even of the remarkable difference between saying \( \text{Grannie could have been flying too low} \) and saying \( \text{Grannie can have been flying too low} \); that in short, and pace Weinrich, tense has everything to do with time. Whether solitary occupancy of this position is a matter for self-congratulation remains to be seen.
But certainly self-congratulation is premature while the problem remains of abstract thought and its expression. Without wishing to insist upon the example, I reckon arithmetical discourse a case in point, conceiving that no temporal information is either intended or conveyed when \(3 \text{ is odd}\) is incanted by mathematicians; that indeed temporal considerations are actively alien to the proposition that \(3 \text{ is odd}\). Sharpened to a point, then, my problem is how that proposition is conveyed by a tensed English verb form.

My answer derives from Quine. It is that sometimes ordinary English signals are understood in a special, sophisticated way. When a mathematician says \(3 \text{ is odd}\) there is 'lip-service to time' (1960:170): although the mathematical speaker is obliged to go through the ritual of providing temporal answers during his encoding inquisition, everyone who cares knows that he does this only because obliged to, and nobody takes any notice.

What this means, in other words, is that mathematical and allied ideas are ill-suited for expression in the code of English. —Which is surely no less than the truth. Upon reflection we discern an idiom of events and states being pressed into the service of much more rarified ideas; and indeed the mathematician is found speaking a CUT-DOWN of English, with \(p, x\) and \(y\) (see respectively 1983:30, and sections 26 and 16 above) all set permanently equal to 0. The expedient works only because the rarified ideas, precisely for their lack of a temporal dimension, are SIMPLER than the worldly ones. Having nothing to mark by its means, the mathematician disdains the code's tense resources: he puts \(p = x = y = 0\), and laughs off the pervasive informational ingredient of presentness that inevitably results. But that is the mathematician's business, not the code's, whose resources remain unimpaired: \(3 \text{ is odd nowadays, although time was when 3 was even}\). In this clear sense, then, abstract discourse is DEVIANT, the messages successfully communicated by BENDING the resources of English. They represent a further turn of the screw, outside my theory's control.

Similarly, there are conditionals where imagining the if-condition satisfied means imagining some eternal verity overthrown:

\[(99) \quad \text{If Silicone had been a gas I would have been a general} \]
\[(\text{Whistler; see De Vries 1974:199})\]

Such cases effortlessly defeat my account in section 16 of tense in projectively parsed predicates, since no time \(v\) could ever be past enough to unfix an eternal verity. I owe the reasoning to Goldstick, who is surely right. My reaction is that this is another place where the abstract thinker who speaks English is obliged to fudge.

Again, there are cases where imagining the if-condition satisfied means imagining some (not merely eternal but) timeless truth reversed:

\[(100) \quad \text{The truth is rarely pure and never simple. Modern life would} \]
be very tedious if it were either, and modern literature a complete impossibility (Wilde 1948:325f)

(101) If 2 was/were an odd number, all its powers would be odd

Setting $y$ equal to 0 in a conditional requires that $v$ and $c$ be earlier; but for THESE 'conditionals', granting the term, 'earlier' gets the idea wrong again, and the abstract thinker, his ideas too ethereal for the robust sensibilities of his code, is once more found paying lip-service to time in would and was/were.

Some of these $v$-less conditionals enjoy the further peculiarity of having all their guiding nomological apprehensions purely conceptual, with no causal considerations intruding at any point in the fantasy. Whoso betrays seeing, for example, metaphysical conditionals, or 'counterlegals' (Goodman 1965:7), as sustained by causally-driven fantasies betrays littleness of mind. Likewise, no merely causal underpinning could subsidise the large ideas of arithmetical conditionals such as the message of (101). Here conceptual apprehensions are brought to painful prominence (section 47), left ruling the fantasy on their own.

Whether such messages are properly to be reckoned conditionals is not QUITE cut and dried, since conformity with Figure 1, a defining trait of MY 'conditionals' (section 11), requires temporal reference. But this is a delicate scruple: patently (101) is GENERATED in exactly the manner of (21). Allowing, then, that these 'conceptual conditionals' ARE conditionals, they at once overthrow my central semantic dogma, which has conditionals sustained by forward-looking thinking, i.e. thinking where some of the ruling nomological apprehensions are CAUSAL. The task set the hearer of (101) is not that of twigging which realities of some historical time $v$ are to be allowed to develop causally. What she has to twig this time is which actual arithmetical laws are to remain arithmetical laws for the purpose of the jeu d'esprit. (And that will depend, as usual, on what the speaker is up to. How shaming to be caught agonising over which arithmetical laws would REALLY still hold if 2 were odd!)

Allowing, then, that conceptual conditionals are counter-examples to my position, ought I not therefore to relax it, conceding ACAUSAL nomological support sufficient? A general treatment of conditionals, which embraced the natural interpretations of (21) and (101) evenhandedly, would specify merely that the fantasy be ruled by nomological apprehensions sans phrase, and conceptual conditionals would be those special cases where none of the nomological apprehensions was causal.

But treating (21) and (101) evenhandedly is exactly what I decline to do, maintaining that no sensitive codebreaker would view such a message as (101)'s otherwise than as a SOPHISTICATION of (21)'s kind of message. In sum, conceptual conditionals count with me not as special cases but as DEGENERATE ones, encoded by a cut-down of English and conveyed by the obliquity of 'lip-service'. I need hardly add that this assessment is not meant as disparagement. In common with conditionals
generally, conceptual conditionals can figure in reconstructions (section 27), and are therefore not lightly to be set aside: If \( e \) was proportional to \( mc^2 \), that would explain…

Incidentally, while (101) is able to avoid temporal suggestion, the same is not true of If \( 2 \ Had \ Been \ an \ odd \ number \),… Evidently the phase modification represents a discrimination beyond finding a motive for in non-temporal terms. I mention this cautionary point lest the confessions of the present section encourage mutinous thoughts of abandoning the temporal program for tense altogether.

49. A persistent if diffuse idea in the grammatical tradition credits English with a ‘fact mood’ and a ‘thought mood’, with conditionals (‘unreal’ ones, at any rate) representative of the latter (e.g. Sweet 1891: 105ff). According to persistent if diffuse grammatical tradition, then, the idiom of the conditional is not the idiom of fact. It was perhaps never the destiny of this sentiment to storm the logical heights. Nowadays, at any rate, it goes quite unconsidered, while a heavy industry of philosophical and semantic research into conditionals thrives firmly premised upon the faith that the grammatical intuition was a false alarm.

But the grammarians were right. Conditionals are not claims of fact, but judgements about imaginary situations. The implications for the industry are seismic, for there is a fundamental difference between talking and thinking about actual historical facts and talking and thinking about imaginary happenings. The thing is that actual historical developments and situations come completely kitted out with their own attendant circumstances, whereas with imagined developments and situations there is simply no way of supplying these countless details of attendant circumstance: they have simply to be glossed over while the fantasy proceeds THEMATICALLY.

A theory of conditionals has somehow to reconcile their intuitive ‘strength’ in Quine’s sense, their almost fairyland irrelevance to one another, and their proneness to abhorrent refinement. I lay all three at the door of the fantasy that conjures the imaginary situation at \( y \). I locate the strength in the nomological apprehensions guiding the fantasy (section 47). I attribute the fairy logic to the changes that can be rung upon the projected realities of \( v \) (section 32). And the restriction to an unspecifiable normal course of events I ascribe to the thematic character of imaginative thought in general (section 37). In the fantasy, certain historical deliverances of \( v \) are taken over and allowed to develop through time, blossoming in the reigning aspects at \( x \). The fantasist can naturally be expected to contrive these reigning aspects with an eye to the purpose of his entire venture; but if the if-condition becomes elaborated (section 34), there is no guarantee that the new if-condition will still fit with the old reigning aspects to illustrate the old point—failing which the refinement is abhorrent.

I set great philosophical store by the proposition that projective
judgements always rely on imagining developments THROUGH TIME (cf. section 16). Successive individual frames, each a perfectly consistent and intelligible snapshot, need not add up to a movie. The snapshot shows only how things ARE. The movie has also to show the way they WORK. To fantasise one microsecond into the future is to call upon apprehensions of a quite different order to beliefs of historical fact. The ways things work, including the ways things work together, are indeed all that matter once the fantasy is under way. —I mean, of course, besides the a priori demands of rationality itself (section 47). This intrusion of causal apprehensions between every factual consideration and the situation at y is crucial to my account.

A fantasy sustains a projective judgement about a time y to just the extent that it delineates a situation at y by projecting a certain selection of v's realities. (The fantast cannot be projecting the ‘total’ situation at v because there is no such totality.) When an if-condition is imposed, the situation at y is envisioned by imagining this condition's satisfaction intruding independently at some time later than v upon a situation which is a causal legacy of the selected realities of v. The judgement itself is then refined, as relating to a situation at y pictured in this more elaborate way (section 19). Naturally the if-condition's satisfaction has to have a metaphysically cogent bearing upon the situation at y. Whence time order in conditionals (section 44).

Of course the speaker is only PRETENDING to be able to preserve the causal heritage of v's selected realities from the depredations of the if-condition's satisfaction (section 31). Rather than chide his pretence, however, and MUCH rather than take him seriously (as classically in Goodman 1965:9ff), we should be asking what the speaker achieves by the pretence (cf. section 32). For why NOT pretend? It is all in the mind, after all.

And if in one mind, why not in two? If in the speaker's, why not in the hearer's? If speaker and hearer can both pretend the same discrimination of theme and background, I do not see why they should not succeed in sharing a message of some kind while they are about it—as it might be, some reaction to the situation at y in both minds' eyes. In particular, if she discerns the motive for the pretence, if she manages to twig what the selected realities of v are, if she can see what sort of satisfaction is intended at x for the if-condition, and what its relevance is to the situation at y, then I do not see why that should not be called communication.

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