MODALITY AND FACTIVITY: ONE PERSPECTIVE ON THE MEANING OF THE ENGLISH MODAL AUXILIARIES

by

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ABSTRACT

This study concentrates on modality as expressed by the set
of modal auxiliaries and seeks to establish that these
verbs share semantic as well as syntactic properties by
identifying a single core meaning which they share. The
relationship between modality and factivity is examined
with the aim of gaining an insight into the former, more
complex concept. When viewed from this perspective, the
defining characteristic of all the modal auxiliary verbs in
almost all of their uses is found to be nonfactivity. The
meanings expressed by this set of verbs are classified
according to a framework derived from modal logic
consisting of three basic types of modality each of which
relates to a different set of laws or principles; the
relative factivity associated with the modal auxiliaries is
seen to vary with the nature of modality as defined and
classified by this framework. Within each of the three
types of modality, a semantic scale is identified and
modality is described as a gradable concept for which
scalar analysis is appropriate, both within and beyond
these three scales. Relative factivity is also shown to
vary according to the degree of modality expressed by each
of the modal verbs. The nature and degree of modality
expressed interact with features of the linguistic (and
pragmatic) context to determine the particular factive or a
contrafactive interpretation conveyed by a given modal
auxiliary token. The influence of certain combinations of
contextual features is sufficiently strong to force a
factive or contrafactive reading of a modal token, although
in general the role of such features is merely to
strengthen or weaken the relative factivity associated with
the modal verb. Epistemic modality is seen to be most
directly related to nonfactivity and therefore to be the
most central modal meaning. The modal auxiliaries are
found to be semantically less modal when they occur in
contexts of determinate factual status. Least modal are
those members of this set of auxiliary verbs which in
certain uses have determinate factual status even without
the presence of any of the significant contextual
features.

TABLE OF CONTENTS

LIST OF TABLES

ACKNOWLEDGEMENTS

For my father

CHAPTER ONE   <u>INTRODUCTION</u>

There is a vast literature on the English modal
auxiliaries, prompted by their distinctive formal
characteristics and by the "fundamental concepts that they
express" (Hermeren, 1978:14). It is the latter property
which determines their high frequency of occurrence in the
language. Hermeren (1978:59) calculates that only the
articles, certain prepositions, conjunctions and pronouns
rank higher than the modals in the frequency table
compiled from the million-word Brown University corpus.
Twaddell's impressionistic assessment that "without [the
modal auxiliaries] it is hard to avoid intolerable
dullness and childish banality" (1962:26) is therefore
supported by subsequent, statistically quantified,
studies. However, it is not only the everyday use of
language in which the modal auxiliaries constantly recur;
there are also certain, more sophisticated, types of
modality[1], the means of expression for which may well be
provided by only those languages "that have been long used
in literate societies for the specialised purpose of
academic discussion" (Lyons, 1977:849). In other words,
modal concepts are not only essential to basic, everyday
uses of language, but are also required for more advanced
or sophisticated linguistic purposes. Nor is the concept
of modality expressed in English only by the closed set of
auxiliary verbs; it may be manifested in diverse
word-classes, including adverbs (POSSIBLY), adjectives
(POSSIBLE), and nouns (POSSIBILITY), as well as in the
suprasegmental features of stress and intonation,
ie "there is ... no one single place in the clause where
modality is located" (Halliday, 1970:331).

*All Notes are at the end of Chapter 5.

However, despite - or perhaps because of - the
fundamental and pervasive nature of the concept of
modality, a succinct characterisation of the term has
proved elusive, as has been recently acknowledged by
Perkins who comments that "in spite of the vastness of the
available literature, it is by no means easy to find out
what modality actually is" (1980:1)[2]. Perkins' response
to this problem is to adopt a very broadly-based line of
enquiry, on the grounds that

> It is only when the different perspectives of
> philosophy and philosophical logic, semantics
> and syntax, pragmatics and social interaction,
> child language acquisition and developmental
> psychology are all brought into focus at the
> same time that one begins to feel that one has
> grasped something like an understanding of
> what modality must actually be.
> (1980:271)

As will become evident, this study owes a great deal to
Perkins (1980; 1982) in terms both of motivation and
influence; other major influences have been Lyons (1977),
Palmer's many works on modality, and papers by Leech and
Coates (1979, 1980). However, the response to the problem
of characterising and understanding modality adopted here
is almost diametrically opposed to that of Perkins,
involving as it does a concentration upon the concept of
modality as expressed exclusively by the set of modal
auxiliary verbs (in contrast to Perkins' extension of the
discussion to cover a range of non-auxiliary modal
expressions), and the examination of modality from one
perspective only (rather than from the perspectives
afforded by several academic disciplines). Both responses
are equally valid, and both are motivated by the desire to
elucidate the nature of modality. I hope that what the
present study loses in breadth, it will gain in depth of
analysis.

The purpose of this work is to examine modality from
the perspective of its conceptual affinity with factivity,

in order to test the hypothesis that the semantic element common to all modal auxiliaries - their core meaning or determining characteristic - is the property of nonfactivity. This particular line of enquiry was prompted by

(i) the marked similarity between a number of (independently motivated) characterisations of the two concepts.

According to the standard analysis of factivity first proposed by Kiparsky and Kiparsky in 1968 (reprinted 1970), a sentence containing a "factive predicate" (such as REGRET, BE SAD THAT) is said to presuppose the truth of its complement sentence, and nonfactivity is defined negatively in terms of the absence of such a presupposition. Karttunen (1971) disputes this analysis on the grounds that "nobody quite understands what we mean by the term 'presupposition' ", and prefers to characterise nonfactive predicates (such as BELIEVE, BE LIKELY THAT) as being 'noncommittal' with regard to the truth/factual status of the complement proposition, and factive predicates as carrying "a commitment to the view" that the complement proposition is true.

Linguists and linguistic philosophers interested in factivity and presupposition[3] have principally concerned themselves with the syntactic structures (for example, type of complementation - infinitival, gerundive, etc) associated with factive predicates, and have paid little or no attention to the set of modal auxiliary verbs. However, if we juxtapose characterisations of, and general observations on, modality with those such as the above which relate to factivity, a certain similarity, or overlap in the areas of concern, emerges:

> Modality ... [is] a semantic system which
> enables a speaker to qualify his commitment to
> the truth of a proposition.
> (Perkins, 1980:199)

>Epistemic modality concerns the status of a
>sentence or proposition with respect to truth
>value
>(Leech and Coates, 1980:86)[4]

>The comparatively small number of modal forms
>in 'Sports' may be explained by the natural
>predominance in sports texts of factual events
>(Hermeren, 1978:179)

>A modal verb is inappropriate [where] the
>factual status of the event is known
>(Palmer, 1980:91)

Characterisations of both concepts, then, have been drawn
- quite independently - in terms of commitment to or
qualification of the truth value and factual status of the
proposition or event referred to in the sentence.

(ii) A second factor contributing to the motivation
behind this study was the number of explicit (if
undeveloped) references to the conceptual affinity between
modality and nonfactivity made in the literature:

>The key concept which underlies modality seems
>to me to be the state of lack of knowledge
>which has been referred to by linguists in
>terms of 'nonfactivity' (cf Kiparsky and
>Kiparsky, 1970)
>(Perkins, 1980:15)

In the course of his examination of 'The expression of
modality in English', Perkins makes extended reference to
nonfactivity in only one other connection, viz to provide
an explanation of the need for such a wide variety of
non-auxiliary modal expressions as that found in English:

>There are good reasons why such a wide range
>of variations on a basic theme should exist
>... for example ... some forms do little more
>than signal nonfactivity (eg TO) whereas
>others require an awareness of the fact that
>nonfactivity is contingent rather than

> absolute (eg IF), and yet others incorporate
> the reasons for nonfactivity (eg IT IS
> PROPOSED THAT, I THINK)
> (1980:214-215)

However, because his study does not concentrate on
factivity, Perkins tends not only to oversimplify the
relationship between modality and nonfactivity (apparently
virtually equating the two concepts), but also to apply
this identification in an inconsistent fashion. For
example, evaluative predicates such as GOOD, AMAZING,
WONDERFUL in the frame IT'S ... THAT are excluded from the
category of modal expressions on the grounds that they
"are very often factive" (1980:18)[5]; yet BE ABLE TO is
classified as a modal expression despite the fact that "it
can sometimes imply previous actuality" (1980:126)[6],
ie refer to events/states of affairs with a determinate
factual status. This sort of inconsistency is an
inevitable result of the lack of a comprehensive and
detailed study of the nature of the relationship between
the concepts (and expressions) of modality and factivity,
a deficiency which it is hoped that the present study will
at least partially remedy.

Perkins is not the first linguist to acknowledge the
existence of a connection between modality and
nonfactivity:

> The [modal concepts] will and likelihood ...
> can ... both be subsumed under the more
> general notion of nonfactivity
> (Lyons, 1977:818)

> The distinction between factuality and various
> kinds of non-factuality falls within the scope
> of what the logician refers to as modality
> (Lyons, 1981:181-192)

As these quotations show, Lyons uses the term
'factuality' as well as 'factivity'; within the same work,
eg (1977:793 and 805) they appear to be interchangeable.
Palmer, on the other hand, in his latest study of modality
(1986:17-18) comes down explicitly in favour of

'factuality'. I am not convinced by his arguments for
doing so. The reference to "dictionary definitions" of
'factive' being in terms of 'making' rather than 'fact'
does not seem very relevant when neither 'factivity' nor
'factuality' are words in common use (and are not included
in Longman's Dictionary of Contemporary English, for
example); so there is little likelihood of confusion with
non academic connotations. To my mind, 'factual' suffers
more from association with its everyday usage; furthermore
it is implicitly restricted (by this association with its
everyday meaning) to qualifying propositions and hence to
only certain types of modality (see next Chapter). As his
second reason for preferring 'factuality' Palmer points
out that the adjective 'factive' was initially adopted by
Kiparsky and Kiparsky to describe the status of
subordinate clauses. But there is no reason why it should
not be applied to other areas of grammer and semantics,
particularly since the Kiparskys observe that factivity is
relevant to much else in syntax besides sentential
complementation. Indeed, Palmer's own objection is not so
deeply rooted that he avoids all use of the term himself
(ibid, pp 74, 185, 195 inter alia). I therefore maintain
my preference for 'factivity' as the more neutral
superordinate term to refer to the various related
concepts (nonfactivity, nonactuality, contrafactivity etc)
that I shall be examining; (see also Chapter 3.1, 3.2.2
and 3.2.3).

Criticism of Lyons for failing to explore the nature
and extent of the connection between modality and
factivity -

> In the later book [(Lyons 1977)] ... although
> it is clearly implied that factivity is
> related to modality, there is no indication of
> the precise way in which the basic notions of
> possibility and necessity will relate to
> 'factive', 'contra-factive' and 'nonfactive'
> (Palmer 1979:4)

- is not entirely justified, as will become apparent
during discussion of the third major incentive behind the
present work.

(iii) The final factor which prompted the writing of
this study was the detailed, but partial, examinations of
the affinity between modality and nonfactivity provided
principally by Lyons (1977:793-809) and by Palmer (1977)
(1979:163-165) (1980) (1986). Palmer's and Lyons' views
on the nature of the relationship between modality and
factivity will be discussed in Chapters 3 and 4. However,
in order to establish that scope for further consideration
of modality and nonfactivity remains - if it is not
positively required - it is sufficient at this point to
outline their respective positions.

Lyons opens his discussion of 'Epistemic modality and
factivity' with the observations that epistemic modality
is not easy to characterise 'non-technically'. His
approach involves the preliminary definition of
nonfactivity:

> The use of a nonfactive predicator like
> 'believe' or 'think', commits the speaker to
> neither the truth nor the falsity of the
> proposition expressed by its complement
> clause
> (1977:795)

Epistemic modality is defined subsequently in very similar
terms:

> Any utterance in which the speaker explicitly
> qualifies his commitment to the truth of the
> proposition expressed by the sentence he utters
> ... is an epistemically modal, or modalised,
> utterance
> (1977:797)

The function of epistemic modality is therefore to express
"different degrees of commitment to factuality"
(1977:805).

Although, as will be seen in Chapter 4, Lyons does
relate his discussion of the concept of factivity to other
types of modality (principally deontic, since he says

"nothing ... about physical necessity and possibility"
(1977:846), ie dynamic modality) it will be apparent from
this brief indication of his approach that Lyons has made
no attempt to offer a comprehensive account of the
conceptual affinity between all types of modality and
nonfactivity.

Palmer's (1979) analysis of the interrelationship
between modality and nonfactivity is similarly restricted
in scope. Strictly speaking, in fact, Palmer does not
examine (non)factivity at all, but refers to
(non)actuality. Presumably Palmer prefers the latter term
because his discussion is limited to the dynamic[7] uses of
only two members of the set of modal auxiliaries (CAN in
the sense of 'ability', and WILL in the sense of
'volition') both of which meanings are more readily
interpreted in relation to events rather than to
propositions; consequently, it is more appropriate to talk
of the actuality or occurrence of events than of the
factual status or factivity of propositions. This
terminological issue can ultimately be reduced to a matter
of the level of abstraction at which the discussion is to
be conducted, since "there is clearly a direct
relationship between the reality [or actuality] of an
event and the truth of the proposition which refers to it"
(Perkins, 1980:11). However, Palmer himself uses the term
actuality with reference to epistemic modality which
qualifies propositions as well as to non-epistemic
meanings and the events they refer to; he therefore
presumably includes within this term what is elsewhere
referred to as factivity[8]:

> With epistemic modality, it is true that to
> say that it is possible that something is so,
> is not to imply that it is so ... [Therefore]
> since epistemic CAN does not imply actuality
> it would seem reasonable to assume that
> dynamic CAN does not either. In ordinary
> language this is not so - dynamic CAN often
> does imply actuality and that is the problem
> we have to discuss.
> (1977:3, my underlining)

Leaving Palmer's resolution of the problem to be appraised in a subsequent chapter (Chapter 4, p 181 ff), I should mention here that his work on modality and actuality/ factuality contributed to stimulating the present study in a number of ways. Firstly, Palmer has considered only two of the modals, in only one of the meanings with which they are associated (ie their expression of dynamic modality) in terms of their implications of actuality; secondly, he himself was prompted to write a second article on the same subject, having discovered that "the picture is much more complicated than [he] had realised" (1980:91); thirdly, he concludes that second article by observing that "it is worth noting that it is not only CAN and WILL that raise issues of actuality" (1980:98); and finally, Palmer clearly holds to the view that modality (as expressed by the modal auxiliaries) and actuality are fundamentally incompatible, in spite of the fact that the modals may occasionally occur with the implication of actuality. Palmer's most recent work on modality touches on the issue of factuality (mostly from a terminological point of view, on which see above, pp 5-6), but it does not examine the relationship between nonfactivity and modal meaning in any detail. However, it raises a number of interesting questions relevant to the present study which I shall refer to at appropriate stages in my argument.

Coates (1983) also comes to some interesting conclusions about the modals and nonfactivity, although her treatment of factivity is somewhat sketchy because it is not the main focus of her study of the semantics of the modal auxiliaries. (For example, she describes KNOW as "the classic example of a factive predicator" (1983:235), which is not strictly accurate (see p 135 in Chapter 3.1 below), a point to which Palmer (1986:141) also draws attention.) She concludes that "with only a few exceptions ... the modals, both Root and Epistemic, are nonfactive" (1983:237). I shall compare her exceptions with mine in Chapter 4.4.

The aims of the present work may now be summarised as follows

(a) To correlate studies of factivity with those of actuality/factuality.

(b) To relate factivity to modality, in order to test the widely held but rarely examined belief that there is a conceptual affinity between modality and nonfactivity, such that the semantic element common to all modal auxiliaries may be characterised in terms of the property of nonfactivity.

(c) To provide a more comprehensive analysis than has been offered to date of the principal types of modality as expressed by all members of the set of modal auxiliary verbs in terms of their relative factivity (ie the degree of nonfactivity with which each modal is associated).

(d) To examine certain features of the linguistic context which seem to prompt or force a factive (or contrafactive) interpretation of a modal auxiliary.

Both the organisation and the methodological orientation of this study have been largely conditioned by the aim of providing a more comprehensive analysis in terms of relative factivity of the principal meanings expressed by the modal auxiliaries. The decision to examine every modal, rather than to concentrate upon a subset such as CAN and WILL (cf Palmer, 1977, 1980), demanded that membership of the closed set of modal auxiliary verbs be formally characterised (Chapter 2.1); the assumption that the concept of modality could be discussed in terms of the meanings of the modals had to be justified by considering the relationship between modality and the modals (Chapter 2.2); and the establishment - and consistent application - of a systematic framework within which to describe modal meanings (Chapter 2.3-2.5) was a necessary, though not a sufficient[9], condition for the comprehensive assessment of the relative factivity associated with each type of modality so distinguished.

A further, similarly motivated, decision with methodological and theoretical implications was to make

use of recorded data to illustrate the argument, as a
supplement and check to examples suggested by
introspection or taken from other works on modality.
There are a number of advantages of working from corpus
data:

i) Recorded material provides a source of examples with
the status of attested usage, which may be contrasted with
some of the more dubiously acceptable or archaic invented
examples offered:

> 1) Did they start tomorrow, he MIGHT
> intercept them.
> (Diver, 1964:337)

> 2) I WOULD that I MIGHT go.
> (Marino, 1973:314)

ii) Uses previously overlooked may be brought to
attention. This is particularly important for a study
such as this which seeks, not to find examples in support
of the hypothesis that modal auxiliaries are almost always
nonfactive[10], but to find and account for - in a more
systematic manner than yet attempted - occurrences of
modals in (contra)factive or (non)actual environments,
ie where the factual status of the proposition (or event)
is known. Examples discussed in other studies, perhaps in
the context of quite other issues, also provide a source
for this type of example:

> 3) We entered the [golf] course at its far
> side ... It made hot and smoky going ... We
> never dared enter the course from the club-
> house side ... The back entrance MAY have been
> hotter, but it was the more practical way in[11]
> (Lebrun, 1965:49)

iii) Palmer acknowledges that the material in the Survey
of English Usage was valuable in that "the immediate
linguistic context of a modal often provided evidence of
its meaning or its relationship with other modals"
(1979:19), ie the context usually serves to disambiguate
potentially ambiguous modal forms[12]. Features of the
linguistic (and, as we shall see[13], the non-linguistic or

pragmatic) context are indeed vital to the factive
interpretation of a modalised utterance (although it was
not this aspect of meaning to which Palmer was referring),
ie the modal auxiliaries may be compatible with a factual
environment but do not themselves, alone, signal the
factive interpretation. Since this study will consider
those elements of the linguistic context which determine
or influence a factive reading, it will necessarily
require a source of contextualised examples, as provided
by a corpus of recorded data. Contextual features such as
tense, person and negation will be found to be
particularly relevant (see Chapter 4.2 and 4.4).
iv) Palmer can again be quoted in illustration of a
further advantage of working from a corpus, when he points
out that it was a "close examination of the data in the
Survey of English Usage" that convinced him that the
picture - ie that CAN is not used if there is an
implication[14] of actuality - is much more complicated[15]
that he had realised (1980:91). Any attempt to analyse
corpus data prompts recognition of the fundamental
indeterminacy and general untidiness of language (see also
Chapter 2.3) and undermines over-confidence in an
oversimplified, overschematic analytical framework
produced as a result of abstract thought by linguists
seduced by system and pattern. As Huddleston comments,
"it is salutary to test one's descriptions by confronting
them with a sizeable body of ... primary data" (1971:1).

A corpus of data can, broadly speaking, be used in
two major ways - "for heuristic and exemplificatory
purposes only" (Palmer, 1979:21) or as a basis for
statistically quantified conclusions. Leech and Coates
(1980:89) emphatically support the latter method[16]. This
study inclines towards the former, partly on the grounds
that relatively little work has been done on the
nonfactive nature of the meanings of the modals, and that
therefore, given the exploratory and tentative character
of the conclusions drawn from their analysis, detailed
quantification of the results would be inappropriate and

premature. In further justification of the
impressionistic use to be made of recorded data, it may be
noted that drawing definite conclusions on the basis of a
statistical examination of an inevitably finite body of
data is methodologically unsound and can lead to
oversimplification. For example, Coates and Leech
(1979:28) state that there is a 100% probability of the
epistemic use of MUST occurring in the presence of the
progressive aspect, citing in illustration

> 4) She MUST be touching up her hair, it never
> used to be quite that auburn shade

While this may be a valid deduction from their (very
substantial) body of data, as a generalisation it requires
qualification, in order to accommodate the acceptability
of examples such as

> 5) You MUST be singing when my
> mother arrives[17]

in which MUST is interpreted in a non-epistemic or root
sense. Conclusions based on a very small collection of
samples, however 'representative', are likely to be even
less reliable. Coates' assertion that "CAN is not used to
express epistemic possibility" (1980a:211)[18] which – since
an interesting tendency towards a restriction on the
epistemic use of the positive form can undoubtedly exists
– would have been a valuable observation, had the author
added the qualification 'in my data', and perhaps noted
that no similar restriction was observed to operate with
can't/cannot, and that even can may occur with an
epistemic interpretation if it is used to contradict a
previous can't:

> 6) He CAN'T have missed the train!
> – Oh yes he CAN (have), he's well known for
>   his unpunctuality[19]

The significance of such relatively minor errors of
overgeneralisation lies in the fact that works containing
this type of inaccuracy are liable to be treated as if
they were of only narrowly stylistic significance, since
the conclusions drawn are not seen as having validity
beyond the finite corpus of data analysed.

Making use of, but not limiting oneself to, examples
provided by recorded texts may also be advantageous in
that invented examples can be framed so as to illustrate,
with maximum clarity - unburdened by syntactic
complexity[20] or the 'normal nonfluency' of spontaneous
conversation - one step of the argument at a time.
Significantly, Leech and Coates emphasise "the fundamental
role ... [played by] the statistical study of corpus
data" (1980:89) but also, in the same article, use
invented examples to substantiate their theoretical
claims.

Many previous studies of modality and the English
modals have, in fact, been based upon - or have at least
made use of - a corpus of written and/or spoken English.
The corpus may vary considerably in size, ranging from "a
representative sample of 200 cases of MAY and 200 cases of
CAN" (Coates, 1980a) to a computer corpus of 2,000,000
words (Leech and Coates, 1980); this is a factor which has
been the cause of anxiety to certain authors, with
Hermeren (1978) concerned to point out that, although his
70,000 word corpus may appear small by comparison with
Ehrman's of approximately 300,000, his analysis of the
modals actually accounts for all 978 occurring tokens,
whereas Ehrman cites only 300 in the course of her
description.

The widely available Brown University corpus of
contemporary American English has been used by Ehrman
(1966), Hermeren (1978), and Leech and Coates (1979)
(1980) in their examinations of the modal auxiliaries; and
the Survey of English Usage located at University College,
London has provided examples for Palmer (1979) (1980),
Close (1980) and Coates (1980a), working in the same
field. General grammatical studies which include
significant treatment of the modals have also been based
upon data compiled from sources as diverse as: the report
of a murder trial (Joos, 1964), a collection of scientific
texts (Huddleston, 1971) and a wide selection of literary
classics (Jespersen, 1931). Consequently, for those
interested in a stylistically oriented examination of the

meanings of the modals[21] an extensive amount of relevant information is already available. Although the present work makes reference to a corpus of political discourse (the composition of which will be detailed below), no inferences of a stylistic nature will be drawn, nor should the composition of the corpus be taken to imply a belief in the existence of a putative 'language of politics'.

Even where studies of modality have relied upon invented examples to illustrate the various meanings distinguished for the modals (eg Anderson (1971), Diver (1964), Halliday (1970), Leech (1969) (1971), Lyons (1977), Marino (1973), Riviere (1981), Tregidgo (1982)) cross-referencing to examples discussed by previous linguists is so extensive as virtually to create a definable body of 'examples used in works on modality' – as exemplified by, for example

    7) The £ CAN be devalued

    8) The £ MAY be devalued

originally cited by Leech (1971:76) and constantly referred to in subsequent works on modality; or by the fact that Perkins, in the course of a short article (1982), discusses examples culled from Huddleston (1971), Lakoff (1972), Marino (1973), Palmer (1974) (1979) and Lyons (1977).

As previously mentioned, this study will supplement examples derived from introspection, and from previous works on modality, with reference to a corpus of political discourse, compiled during the British General Election campaign of April-May 1979 and the September 1981 election for the deputy leader of the Labour Party. It is composed of the following items

A. Party Election Broadcasts

	Date of transmission	Ref no	
Conservative	19.iv.79	CO 3 79	(*)
	23.iv.79	CO 5 79	−
	25.iv.79	CO 7 79	−
	27.iv.79	CO 9 79	−
	30.iv.79	CO 12 79	−
Labour	17.iv.79	LA 1 79	−
	20.iv.79	LA 4 79	−
	24.iv.79	LA 6 79	−
	28.iv.79	LA 10 79	−
	1. v.79	LA 13 79	−
Liberal	18.iv.79	LI 2 79	−
	26-iv-79	LI 8 79	−
	29.iv.79	LI 11 79	−

(*) refers to line number

Thirteen party election broadcasts, each of ten minutes
duration, and approximately 1,500 words in length: a
subtotal of 19,500 words.

B. Panorama Programmes

	Date of transmission	Ref no	
Relating to the	23.iv.79	PA 23 79	(−)
General Election	30.iv.79	PA 30 79	−
Relating to deputy	14.ix.81	PA 14 81	−
leadership election	28.ix.81	PA 28 81	−

Three of the <u>Panorama</u> programmes were of sixty minutes'
duration, and approximately 13,200 words in length, the
fourth was of thirty minutes' duration, and approximately
6,600 words in length: a subtotal of 46,200 words.

The total corpus comprises approximately 65,700 words.
1,136 tokens of the ten modal auxiliary types occur.

The following table is offered for comparative purposes.
Corpus (A) is that detailed above, (B) is the 1,000,000
word Lancaster University Corpus[22] of contemporary British
English, and (C) is the corpus of recordings of
spontaneous speech between 6-12 year olds collected as
part of a study of language development in older children
carried out at the Polytechnic of Wales, and used by
Perkins (1980)[23].

Table 1

<u>Frequency of each modal type, expressed as a percentage of
the total number of modal auxiliary tokens</u>

	(A)	(B)	(C)
WILL	30.75	19.0	34.5
WOULD	23.25	20.5	6.5
CAN	17.5	14.5	38.75
COULD	6.0	12.0	7.75
SHALL	2.0	2.5	4.5
SHOULD	7.0	8.75	4.0
MAY	4.25	9.0	0.5
MIGHT	2.5	5.25	2.0
MUST	6.0	7.75	1.75
OUGHT TO	1.0	0.75	0.25
	(100.25)	(100.00)	(100.5)

With reference to the character of the corpus in
terms of the positions held by its component items on the
written-spoken and formal-informal continua, it is
relevant to note that party election broadcasts are
generally scripted, ie written to be spoken, but may
include short 'vox pop' extracts from unscripted street
interviews; and although no longer as formal as they used
to be, are probably more formal than interviews or debates
in which the television presenter/chairman and the
interviewees are old acquaintances[24]. Programmes such as
Panorama, although obviously well prepared, necessarily
tend to incorporate more spontaneous, unscripted speech,
particularly when cast in the form of a debate between
politicians of differing political persuasions, as was the
case for each of the four editions of the programme
recorded in the corpus.

Given that this study intends to offer no stylistic
characterisation of the corpus, a short explanation of its
political content may be appropriate. It was compiled
with a view to collecting a body of data homogeneous as to
content, providing material of varying degrees of
formality, and illustrating contemporary British English,
as directed at a mass television audience. I tentatively
surmised that the political content of the material would
produce a high frequency of occurrence of modal auxiliary
tokens, given the likely conflicting desire of campaigning
politicians to make definite promises and to convey the
absolute certainty of those promises being fulfilled on
the one hand; and, on the other, a concern not to be tied
to election promises coupled with an awareness of the
complexity of the modern world. Such a conflict might
well be expressed linguistically through use of the
modals, functioning as a signal of varying degrees of
nonfactivity:

> 9) ... we've already cut the rate of inflation
> from nearly 30% to under 10% ... In our next
> period of office we SHALL halve it again to
> 5% or under by the beginning of 1982
> PA 30 79 (29)

10) Mr Healey, you said yourself that
the unemployment target SHOULD be
down to 700,000 by 1979. We are
exactly 3 years on since you
made that statement. Unemployment
is more than double that figure
PA 30 79 (528)

11) I'm a little worried about what
MAY happen when we get a new deputy
leader
PA 14 81 (534)

12) I find that most people agree with
us that we MUST cut taxes on earnings
... and ... pensioners' income ...
But they are worried that it MIGHT
involve putting a little something
extra on VAT. Not a lot but a little
CO 9 79 (123)

The evasiveness of politicians, their tendency to
'fudge' and 'hedge' their answers, may also be reflected
in use of the resources of the modal system, since "in one
sense [modality] constitutes a means for eschewing
responsibility for what one is saying by involving some
relevant circumstance or piece of evidence which is
independent of one's personal control "(Perkins,
1980:199). Politics may also be seen to relate to the
system of modality[25] as outlined in Chapter 2, in that
politicians are predominantly concerned with laws, rules,
and social constraints (both their imposition and their
removal) and "modal expressions are probably the primary
linguistic means for talking about and establishing rules
and social constraints" (Perkins, 1980:261). The
pragmatic and functional correlates of a semantic system
capable of conveying an assessment of the relative
factivity of the propositional content of an utterance is
a fascinating area of study (see, for example, Dirven,

1981) but one which will fall outside the scope of the present work.

The scope of this study is intentionally limited to the consideration of the concept of modality, as expressed by the set of modal auxiliary verbs, from a single perspective, namely that of its relationship to, and compatibility with, nonfactivity. This inherently restricted approach was adopted in order to offer a comprehensive analysis of all types of modality in terms of their compatibility with varying degrees of nonfactivity. Previous work in this area has generally been confined to consideration of particular types, or particular expressions, of modality. Consequently, the analysis offered and the conclusions reached in this work are of an exploratory and tentative nature only.

A further consequence of the restriction and particular focus of this study relates to the lack of attention paid to a number of controversial issues which have been widely discussed in the literature on modality. Many of these centre on pairs of modals[26]: WILL and SHALL – future tense morphemes or modal auxiliaries?[27] CAN and MAY – in free variation or non-equivalent?[28] SHOULD and MUST – is the former a weaker equivalent of the latter?[29] To these and many other semantic distinctions relevant to the meanings of the modals, this work has little direct contribution to make. However, it is hoped that the value of the insight into and clarification of the core meaning of the English modals afforded by the selective nature of this study will outweigh its inherently restricted scope.

It will already be apparent that extensive reference to other works on modality is to be made in the course of this study. Constant citation of sources is inevitable when working within an area so widely researched, one in which virtually no advance is possible without detailed knowledge of existing contributions to the literature. So, instead of apologising for the amount of reference to and quotation from previous studies, I would rather

express the hope that I have always acknowledged my
sources and apologise for any occasion on which I may
inadvertently have failed to do so.

CHAPTER TWO   THE CLASSIFICATION OF MODALITY

2.1 THE MODAL AUXILIARIES

The closed set of English modal auxiliary verbs has been the subject of a multiplicity of studies, but - as both cause and consequence of this considerable literature - fundamental discrepancies between the various treatments persist. Perhaps the most basic of these discrepancies relates to the number of forms which qualify as members of the set of modal auxiliaries. Disagreements arise because the nature and number of the criteria recognised as characteristic of this category of verbs vary between grammarians, and because different authors accord different weight to formal or to semantic characteristics.

Ehrman (1966), for example, examines the meaning of 12 modal auxiliaries:

(1) CAN   (2) COULD

(3) MAY   (4) MIGHT

(5) WILL   (6) WOULD

(7) SHALL   (8) SHOULD

(9) MUST

(10) OUGHT TO

(11) DARE

(12) NEED

Leech (1971) discusses (1) - (9) in his chapter on the modal auxiliaries, subsuming the so-called past tense forms MIGHT, COULD etc under their 'present tense' counterparts. He includes:

(13) HAVE TO

as a member of the set of modal auxiliaries on semantic, rather than formal grounds, arguing that "in grammatical terms, have to is not an auxiliary verb on the same footing as may, must and can" (1971:67). By the end of the chapter, Leech has introduced (10), (12) and

(14) IS TO

(15) HAD BETTER

into the discussion (but with no mention of DARE).

Hermeren (1978) accepts (1) - (9), and accords (10), (11), (12), (13) and

(16) USED TO

the status of 'marginal modals'. Palmer includes (1) - (10) within the scope of his 1979 study of <u>Modality and the English Modals</u>, gives a briefer consideration to (11), (12), (14), (15) and

(17) WOULD RATHER

and further discusses a number of expressions which he says are not formally modals, but which are semantically linked to them: HAVE TO (which Leech and Hermeren would classify as a modal auxiliary), BE BOUND TO, BE ABLE TO, BE GOING TO and HAVE GOT TO.

And finally, in a more recent full length study of modality, Perkins (1980) recognises (1) - (10) as modal auxiliaries - five primary

    CAN   MAY   WILL   SHALL   MUST

and five secondary

    COULD   MIGHT   WOULD   SHOULD   OUGHT TO

Formal characteristics

This study will concentrate upon the first ten, or central, modals. These forms have been accepted, and others rejected, in accordance with the following criteria

A. The four characteristics which classify the modals with the primary auxiliaries BE, HAVE and DO - referred to by Huddleston as the NICE properties:

(i) Direct negation with <u>not</u> and enclitic <u>n't</u>

(ii) Inversion with the subject in interrogation

(iii) Use in 'code', ie the use of the auxiliary to avoid repetition of the whole verb phrase

(iv) Stressed use in emphatic affirmation.

In similar functions, all other verbs require the dummy auxiliary DO:

N	'I don't want to go'	'I CAN'T go'
I	'Does he want to come?'	'WILL he come?'
C	'I want to come and so does he'	'He CAN come and so CAN she'
E	'I do want to come'	'I WILL come'

B. The four criteria which distinguish the modal
from the primary auxiliaries:

(v) Modals occur as the first element of the verb
phrase - they may not be immediately preceded by
another verb

(vi) Modals lack -s in the 3rd person singular

(vii) Modals lack non-finite forms

(viii) Modals cannot co-occur

This restriction on co-occurrence follows directly
from the fact that modal auxiliaries have no non-finite
forms, and is not attributable - as Twaddell suggests - to
elements of incompatibility in the meanings of the various
modals; BE ABLE TO shares certain of the semantic
characteristics of CAN and yet

(13) He MAY be able to come

is not ill-formed, whereas

(14) *He MAY CAN come

is. Equally, although HAVE TO is semantically akin to the
modals, it is not affected by all of their formal
constraints; for example, it does possess non-finite forms
and hence can combine with other modals:

(15) He MAY have to come

These eight formal properties - a mixture of
morphological and syntactic criteria - are all
characteristic of the ten central modals only, with the
qualification that mayn't, a negative form of MAY, is of
doubtful acceptability. Leech (1971:88) refers to "the
rare (?obsolescent) British contraction", and Hermeren
(1979:49) juxtaposes Palmer's statement that there is no
negative form mayn't and Strang's assertion that she would
always use this form. Mayn't does not occur in my
idiolect.

There are in addition a number of other features that
are typically but not invariably characteristic of the set
of modal auxiliaries, including

C. (i) Certain of the modal auxiliaries have 'past tense' forms, ie WILL/WOULD, SHALL/SHOULD, CAN/COULD, MAY/MIGHT. The anomalous form HAVE TO (had to) is available to indicate past time reference for MUST and OUGHT TO.

The semantic connection between SHALL and SHOULD is much more nebulous than that between WILL and WOULD for example, except when used according to the sequence of tense rule for reported speech (an uncommon use). 'Past tense' forms is in fact a misleading description of WOULD, COULD etc since they are neither limited to past time reference nor is this a particularly frequent function of theirs[1]:

(16) WOULD you like to go swimming tomorrow?

(17) A Liberal vote COULD help change the
course of British politics
LI 11 79 (83)

(It is this observation which excludes USED TO from the set of modals; the -ED morpheme in this instance does always signal past time reference.) For this reason the terms introduced by Perkins (viz primary and secondary modal auxiliaries) are to be preferred.

C. (ii) Modal auxiliaries tend to lack derived nominals, eg *can-ity; this is not a semantic constraint, viz ability. Will and must, however, can function as nominals, though the latter is of relatively restricted use.

C. (iii) Modal auxiliaries tend to precede the following infinitive without the infinitive marker to.

Of all the criteria and tendencies mentioned as characteristic of the modals, C. (i) and (iii) are the only ones whereby OUGHT TO would be excluded. Given the limited extent of this discrepancy, and the semantic congruity with (certain uses of) MUST and SHOULD, OUGHT TO is considered to qualify as a member of the closed set of the English modal auxiliary verbs. IS TO and HAVE TO, on

the other hand, are also contrary to B.(vi) above, ie they are marked according to the person of the subject, and will consequently not be included in this category of verbs for the purposes of this study.

DARE is excluded on the grounds that: it is semantically inconsistent with the central modals (Palmer (1979:89) glosses the meaning of DARE as 'have the courage to' which is only tenuously linked to the basic modal concepts generally accepted as being possibility and necessity); it readily bears a factive interpretation (see above, p 3):

> (18) How DARE[2] you go off and leave me like
> that!

; it occurs as a full verb[3], negated with DO, inflecting for person etc; it can co-occur with other modals and be followed by the infinitive marker to:

> (19) He won't DARE (to) do it

; and it is used very much less frequently than the central modals. To quantify that last statement, the corpus of political discourse cited throughout this study yielded 1136 tokens of the ten primary and secondary modal auxiliaries (including 349 tokens of WILL) and only two of DARE, both of which occurred within a verb phrase with a head verb of SAY:

> (20) I must say, all that suggests to me –
> either that the cuts cannot be made as Mr Heath
> found, or that you DARE not say where they're
> going to be
> PA 23 79 (571)

> (21) I believed in Santa Claus when I was
> young and I DARE say you did as well
> PA 30 79 (106)

NEED will be discussed only insofar as it functions as a suppletive form of MUST in negative and interrogative environments.

It has been argued that the closed set of English modal auxiliary verbs is not syntactically homogeneous. McCawley holds the extreme position that "modals fail in a

spectacular way to form a syntactic category; no two of
them have exactly the same properties" (quoted in Wekker,
1976:10, footnote 9). Huddleston (1980) recognises the
same problem, commenting that with respect to the modals,
"Bolinger's warnings of the methodological dangers of
assuming too great a homogeneity in the system are highly
pertinent". Huddleston's response is "to examine in
detail various criteria that have figured in discussions
of auxiliary verbs in general or modal auxiliaries in
particular with a view to determining the precise
membership of the classes they define" (1980:66).
Huddleston classifies 37 items, including the primary and
the modal auxiliaries, in terms of 30 criteria; of these
30 parameters, 12 relate 'more specifically' to the
modals, but despite the fact that Huddleston examines a
greater number of criteria in greater detail than most
writers on the modal auxiliaries, the considerable degree
of homogeneity revealed does not support McCawley's
assertion that the modals fail 'spectacularly' to form a
syntactic category. A certain amount of variation between
the members of the set must be accepted and has been
acknowledged in the preceding discussion, but nevertheless
the minor syntactic inconsistency is of less significance
than the degree of syntactic, morphological and semantic
regularity they display.

Non-auxiliary modal expressions

This study will concern itself primarily with the ten
central modal auxiliaries, but it is widely acknowledged
that English possesses other resources for expressing
modality in addition to this closed set of verbs[4]. In
other words, English provides lexical as well as
grammatical means for expressing modal meaning (see below,
Chapter 2.5.6). Such recognition has been accorded either
implicitly, ie in the regular use of paraphrase as an
analytical tool[5], or explicitly, eg Hermeren (1978:10),
Perkins (1980). While Hermeren lists various
"manifestations of modality in English" (citing examples
of nouns, adjectives, adverbs and main verbs) but

subsequently concentrates upon an analysis of the modal
auxiliaries, Perkins provides the most comprehensive
catalogue and analysis of non-auxiliary modal expressions
offered to date:

- Quasi-auxiliary modal expressions: HAVE (GOT) TO, HAD
BETTER etc.
- Modal expressions incorporating adjectives and
participles: BE GOING TO, BE WILLING TO, BE CERTAIN TO, BE
EVIDENT THAT etc.
- Modal adverbs: ALLEGEDLY, CLEARLY, PERHAPS, SURELY etc.
- Modal nominals: BELIEF, OBLIGATION, PROPOSAL, WARNING
etc.
- Modal lexical verbs: ALLOW, CONCLUDE, HOPE, PROMISE etc.
- Modal 'devices': Tense, If-clauses, questions.

These expressions will not fall within the scope of
the present study, yet they have indirectly made a
significant contribution to the motivation behind it, in
that the recent explicit acknowledgement and analysis of
non-auxiliary modal expressions has highlighted the
inadequacy of the traditional, circular definition of the
concept of modality:

> 'Modality' ... is a semantic term ... use[d]
> to refer to the meanings of the modals.
> (Palmer, 1979:4)

The inadequacy and circularity of such a definition
becomes inescapable if one substitutes 'modal expressions'
for 'the modals'. The definition derives its semblance of
validity from the fact that the set of modals can be
established according to formal criteria, without
reference to semantic considerations. Non-auxiliary modal
expressions, on the other hand, can only be recognised by
their manifestation of modal meaning, and not by virtue of
their syntactic and/or morphological properties. The need
to define the concept of modality might possibly be evaded
by asserting that all non-auxiliary modal expressions must
enter into a paraphrase relationship with one or more of
the modal auxiliaries, ie BE ABLE TO may be established as
a manifestation of modality because it may be substituted
for CAN in certain contexts. But this approach not only

ignores the greater precision of meaning conveyed by non-auxiliary modal expressions but it is also methodologically unsatisfactory. Furthermore, it perpetuates the unchallenged and obscured nature of the relationship between the meanings of the modal auxiliaries and the concept of modality.

2.2 MODALITY AND THE MODALS

Even without any preconceived notions about the concept of modality or the meanings of the modals, it is evident that some sort of relationship between the two is assumed to exist. This is indicated by the choice of premodifying adjective (viz <u>modal</u> auxiliary[6]) and by the fact that the majority of studies of modality all focus upon this particular subcategory of verbs. Hermeren makes the qualified assertion that "it is perhaps the modals that first come to mind when the term modality is mentioned" (1978:12). Additionally, Perkins (1980:162) provides a number of reasons for the centrality of the modal auxiliaries within the system: they are the least formally explicit, or marked (ie least specific), of all modal expressions, thereby constituting the most straightforward means of expressing modality; and they conform to the generalisation that "the more fully something is grammaticalised[7] rather than lexicalised ... the more central it is in the system" (see also Chapter 2.5.6).

However, the preeminent position of the modal auxiliaries within the range of possible expressions of modality in English is not being disputed. Rather, it is the precise nature of the link between the modals and modality that is of interest here. It is possible to distinguish two broadly alternative views of this relationship:

1. Modality = the meanings expressed by the modal
   auxiliaries.
   1.i The modal auxiliaries express ALL possible modal
       meanings and are the ONLY expression of these
       meanings.
   i.ii The modal auxiliaries express ALL possible modal
       meanings, which can also be expressed by non-
       auxiliary forms.
2. Modality = a concept that can be characterised
   independently of the modal auxiliaries.
   2.i The modal auxiliaries express ONLY but not
       necessarily ALL modal meanings.
   2.ii The modal auxiliaries express neither ALL nor
       ONLY modal meanings.

While this is, of course, merely a schematic
presentation of various possible relationships which may
be seen as obtaining between the concept of modality and
the set of modals, it is possible to relate 1. and 2. to
formally based, and to semantically based, studies of
modality respectively. The former type of analysis tends
to be both inflexible - failing to allow for the fact that
the semantics of a closed set of verbs isolated on
syntactic and morphological grounds might not exhaust all
modal meanings - and arbitrary, as observed by Palmer:

> A formally defined category will contain some
> semantically heterogeneous items. If we ...
> define modality in English in terms of the
> modal auxiliaries, we shall, by including WILL,
> have to include within the system of modality
> both futurity, which seems to belong more to
> the system of tense, and volition, which has
> little in common with the more obvious modal
> concepts of possibility and necessity.
> (1979:2)

Both these defects, of inflexibility and arbitrariness,
derive from the fact that, in a narrow formal analysis,
little or no consideration is given to modality as a
conceptual system[8]. Any sense of system tends to emerge
only indirectly, insofar as it can be abstracted from the

relationships between the notions associated with the traditional labels for the meanings of the modals - permission, possibility, ability, volition, obligation, necessity, probability and prediction.

The main problem associated with semantically based studies of modality,on the other hand,is that of indeterminacy. In the absence of any formally definable limits, an ever-expanding and syntactically heterogeneous class of modal expressions will be the result, with the consequent loss of any single, unifying element to give cohesion to the class[9].

These two approaches need not, of course, be pursued independently. Palmer (1979:17) explicitly acknowledges 'two starting points', the one formal, the other semantic, and appears to hold a view similar to that expressed in 2.ii. above, in that he recognises that not all of the meanings expressed by the modal auxiliaries are obviously related to the central modal concepts of possibility and necessity (eg futurity and volition), and that certain other verbs (eg BE ABLE TO and HAVE (GOT) TO) must be discussed in order to "complete the semantic systems into which the modal auxiliaries fit". In other words, the modal auxiliaries alone do not express all or only modal meanings. This is the conclusion I also draw (see Note 2 to Chapter 5).

This study is predicated on the assumption that modality is a concept independent, in principle, of its expression through the medium of the set of modal auxiliaries and, in accordance with this view, I adopt a characterisation of the system of modality that is derived from modal logic (see below, Chapter 2.4). However, for reasons of space and in the interests of closer analysis, my central argument - that modality is fundamentally nonfactive - will be explored in relation to only those aspects of the system of modality that are manifested in the semantics of the modal auxiliaries. I shall argue that the modal auxiliaries are least modal when they occur in contexts of determinate factual status, that is when

they bear either a factive or a contrafactive
interpretation.

2.3 THE SYSTEM OF MODALITY

Before presenting the descriptive framework within
which the concept of modality will be discussed in this
work, a brief consideration of previous attempts to impose
a system on the semantics of the modals will be provided,
in acknowledgement of the difficulties inherent in any
such attempt.

In order to account for, and to order, the diversity
of meanings expressed by the modal auxiliaries, a
descriptive framework must be at once systematic, if it is
to have any explanatory power, and flexible, if it is to
accommodate the variety of contextually conditioned
meanings with which the modal auxiliaries are compatible.
While a few linguists present their analysis simply in the
form of a list of 'uses' distinguished for each modal
(Huddleston, for example, observes that his study is "more
semantic, less formal than [Palmer's][10]" and lists the
meanings of each auxiliary), and yet others are content
with having arrived at "a rather loosely structured set of
relationships"[11]; but the majority of writers are
preoccupied with the attempt to reveal the semantic system
underlying the meanings expressed by the modal
auxiliaries. Marino, for example, entertains no doubt of
the existence of such a system. Despite recognising the
difficulty of the task[12] involved in exposing it, he
maintains that "there seems to be no easy response to the
multiple meanings and nuances of the modal system, but we
certainly need an appropriate device for the description
of the system qua system" (1973:311, my underlining). And
even Palmer, who believes that "the subject is not one
that lends itself to any simple explanation" (1979:40)
and, like Ehrman (1966), is critical of any highly
structured analysis of the modals, is anxious to refute
Anderson's criticism (1971:113) that his approach to
modality is 'unsystematic', and devotes a separate

section (Palmer, 1979:39-40) to an account of the 'organisation' of his 'exposition'.

A number of different models of the nature of meaning have been adapted in the attempt to reconcile a sense of a modal system with the meanings expressed by the modal auxiliaries. Those linguists, such as Joos (1964), Ehrman (1966), and Tregidgo (1982) who, by adopting a basic or core meaning approach, assume that each modal auxiliary is essentially monosemous, tend to allow for semantic variability by accepting that meaning is non-categorical or non-discrete, so that for example the ability and possibility uses of CAN merge into one another. Unitary approaches to meaning, however, are widely criticised - Anderson (1971:113) comments upon "the opacity of the labels which Joos chooses to characterise his classes of modals. With respect to these, I must agree with Palmer in finding them 'vague and general' ". Perkins (1980:50) finds further fault, saying that "the elegance of Joos' account is marred by the fact that it does not accord with the intuitions of many native speakers", ie the distinction Joos draws between, for example, the 'contingency' of WILL and the 'adequacy' of SHALL is counterintuitive[13]. Ehrman's treatment has also been criticised[14] for failing to isolate a basic meaning for each and every modal auxiliary (eg MAY is characterised in terms of a continuum between two dimensions - labelled 'circumstance' and 'occurrence'[15] - of meaning).

An alternative approach assumes that each modal is polysemous (eg Leech, 1971; Huddleston, 1971) but a semblance of structuring is retained by accepting that each meaning is categorical or invariant and that various logical relationships can be observed to hold between these meanings (see Chapter 2.5.2). These meanings may be referred to by traditional notional labels such as 'permission' and 'ability' - Leech (1971:68 ff) offers three 'chief meanings' of MAY: permission, possibility and benediction/malediction. Huddleston's procedure, on the other hand, according to Perkins (1980:64), is to "find a

paraphrase for MAY in each environment and ... turn it into a label for a category of use", a method which produces six uses of MAY - qualified generalisation, exhaustive disjunction, uncertainty, concession, legitimacy and ability (Huddleston, 1971:297 ff). An unmanageable proliferation of uses of each modal is a common result of an investigative procedure based upon a classification of the contexts in which a modal may occur[16]. Nor is it in fact justifiable to assume that the meanings of each auxiliary are discrete.

Recent articles by Leech and Coates (1979 and 1980) which take the modal auxiliaries to epitomise one of the major problems besetting modern semantics, viz indeterminacy, argue for a "more multifaceted approach" to the meanings of the modals in view of the fact that the range of meanings expressed by each form may be interrelated in a variety of ways. According to their analysis, CAN is monosemous, with an 'unmarked' meaning of possibility, related to the meanings 'permission' and 'ability' through the gradients of Restriction[17] and Inherency[18] respectively (see pp 75 and 108 for further discussion); the "essentially monosemantic nature of CAN" is derived from the fact that "the meanings of CAN are distributed along [these] gradients[19] with no absolute cut off points" (Coates and Leech, 1979:29). MUST and MAY, on the other hand, are polysemous, with a clear-cut distinction between their epistemic and root[20] meanings. Further semantic indeterminacy results from the fact that tokens of the modals may yield more than one interpretation, and that the two (or more) meanings may be in an 'either-or' relationship (eg ambiguous - rare in actual texts, by virtue of the contextual clues provided) or alternatively, in a 'both-and' relationship (Leech and Coates (1980) use the term 'merger'), where both meanings are mutually compatible, the differences between them having been subject to contextual neutralisation. Halliday is drawing the same distinction when he observes that

The complex nature of the relationship between
modality [= epistemic modality] and modulation
[= root modality] is brought out by
consideration of the ambiguities that
arise - which appear sometimes as
ambiguities and sometimes as blends ...
[With] clearly ambiguous ... instances ...
the hearer has to select one or the other
[of] ... the two interpretations ...
[With] blends ... there appears to be no
requirement of selecting just one or the
other interpretation ... The distinction
between modality and modulation tends to
be neutralised in a hypothetical environment.
(in Kress, 1976:205-207)

Note that Halliday disposes of the problem of the semantic
heterogeneity of the modals by essentially terminological
means - his view of the relationship between the concept
of modality and the meanings of the modals is
idiosyncratic, in that he offers a very narrow definition
of modality as "the speaker's assessment of the
probabilities inherent in the situation" (Halliday and
Hasan, 1976:135) and discusses all other meanings
expressed by the modals under the heading of 'modulation'.
He does, however, as in the extract quoted above,
acknowledge the closeness of the two concepts, even going
so far as to say that modality may be used in a 'derived
sense' to refer to 'rights and duties' (Halliday and
Hasan, ibid) ie to root modality.

As an example of a blend, Halliday offers

(22) He COULD have escaped if he'd tried

where both the interpretation 'That he would have escaped
if he'd tried is possible' and 'If he'd tried he would
have been able to escape' are applicable.

Hermeren (1978) in his analysis of the meanings of
the modals, similarly encounters the problem of
indeterminacy. Having distinguished 20 modal meanings or
modalities (including - determination, intention, ability,
certainty, possibility, necessity, want, hope,

permission etc), he then considers how they may be
combined and warns that "although the plus sign is used to
indicate that more than one modality is expressed by a
modal, it is not necessarily to be understood to mean
'and', ie that the modalities are simultaneously expressed
by the modal. It may well be argued that there is an
alternative of choosing one or the other interpretation".
Hermeren discouragingly concludes that 'it is well-nigh
impossible' to distinguish between a 'both-and' and an
'either-or' relationship (1978:150)[21]. Equally
discouraging is Marino's warning to the effect that "the
lack of agreement by native speakers about a particular
modal phrase ... must well remain alarming for any
investigator because it abnegates any final taxonomy"
(1973:312)[22].

I would accept that minor dialectal and/or idiolectal
variability in the use of the modal auxiliaries does exist
- consider Palmer and Strang's contradictory observations
about mayn't in contemporary British English (referred to
on p 24 above), and Halliday's comment that "in my own
speech possible tends to go with may and perhaps with
might, but the two are interchangeable and other speakers
probably have different patterns" (in Kress,
1976:193-194). The well-known diachronic instability of
the modals (see for example Strang, 1970:148 ff) is also
relevant here, since a change in usage takes place over a
period of time, proceeding at different rates in different
parts of the country and for each speaker. An example of
a current change is the development whereby MAY, in cases
of personal permission, is giving way in modern English to
the more informal CAN (Twaddell, 1963:14, Tregidgo,
1982:85).

The collocation must well used by Marino in the
extract quoted above itself provides evidence for the
existence of variation between speakers, since in my own
idiolect only MAY or MIGHT collocate with WELL functioning
as an intensifier:

(23) You MIGHT well blush

(24) He MAY well be late

(25) As a viewer watching the Labour Party
Conference one MIGHT well take the view that
you on the Left ... are united on policies
and are winning the day
PA 28 21 (287)

Though

(26) He CAN'T very well say no now, can he?
would also be acceptable.

However, despite this marginal variability, I dispute
Marino's implication that a considerable degree of
disagreement over the interpretation of modal phrases
exists. I would agree instead with the conclusions
reached by Leech and Coates (1980) after extensive,
corpus-based, and statistically quantified analysis that
'unclear cases' of 'ambiguity', 'merger' or 'gradience'
occur infrequently and that the vast majority of tokens
can be matched to 'quantitative stereotypes', or core
meanings, corresponding to such traditional notional
categories as possibility and ability (1980:88). In fact,
the present study goes further than this, in that it
considers the core meaning of nonfactivity to apply to
each and every member of the set of modals, rather than
providing a separate quantitative stereotype for each
member.

The semantic heterogeneity and indeterminacy of the
modal auxiliaries should not therefore be exaggerated, nor
viewed as prohibitive to systematic analysis. As Palmer
observes (1979:172-173), indeterminacy must be
acknowledged, but does not invalidate any attempt to
categorise. Gregory (1980) commends Halliday for the
balance he achieves between "respecting the untidiness of
what happens when people speak and write" and the desire
to "tame this wilderness in a ... meaningful way", by
recognising that such a balance depends upon acceptance of
"a much lower level of formalisation". In other words -

also Halliday's - not only do 'all grammars leak', but they must do so if they are to accommodate the potential for flexibility and subtlety of expression inherent in human language.

2.4   CATEGORIES OF THE CONCEPT OF MODALITY

2.4.1   The concept of modality

Halliday's very narrow definition of modality as "the speaker's assessment of the probability of what he is saying" (1970:328), referred to on p 35 above, excludes many of the meanings expressed by the modal auxiliaries, for example

(27) CAN I leave the table?

(28) You MUST eat all your cabbage

Other grammarians have discussed modality more widely - and more vaguely - in terms of 'speaker's attitude' (see for example Diver, 1964:322; Leech, 1971:52; Marino, 1973:312; and Wekker, 1976:11). Reference tends to be limited to speaker's attitude towards the predication (Marino, ibid) or to the event indicated by the main verb (Diver, ibid); in other words, both third- and second-order entities are subject to modality. These terms are taken from Lyons (1977:442 ff) who, in making "assumptions about what there is in the world", distinguishes three ontological categories:

- First-order entities, or physical objects
  (persons, animals and things) which are
  relatively constant as to their perceptual
  properties, and which are said to exist.

- Second-order entities, or events, processes,
  states-of-affairs, etc which are located in
  time and which, in English, are said to occur
  or to be real, rather than to exist.

- Third-order entities, or abstract entities
such as propositions, which are outside space
and time and which are said to be <u>true</u>, rather
than to be real or to exist.

The distinction between events (e) and propositions
(p) is primarily one between different levels of
abstraction (see above, p 8). It will, however, be found
to be relevant to the relationships between factivity and
the different types of modality. For while certain types
of modality (eg epistemic) relate to third-order entities
and it is therefore appropriate to analyse them in terms
of (degree of) truth or relative factivity, other types of
modality (eg dynamic) relate to second-order entities, so
that analysis in terms of relative actuality is more
appropriate.

Although I agree that "the term 'modality' is not
normally used to refer to the status of first-order
entities" (Perkins, 1980:10), Palmer (1979:152) finds it
necessary to discuss certain uses of the modals (eg the
'sometimes' or sporadic use of CAN) in terms of existence
rather than truth or occurrence (see p 72 below).
Significantly, these uses tend to be factive and
therefore, I conclude, not modal.

Halliday evidently saw modality as relating to
third-order entities only, as indicated by statements such
as that "through modality, the speaker associates with the
thesis an indication of its status and validity in his own
judgement" (1970:335). He is careful to distinguish
between modality and "other ways in which the speaker may
take up a position":

> Modality is a form of participation by the
> speaker in the speech event ... Modality thus
> derives from ... the 'interpersonal' function
> of language, language as expression of role.
> There are many other ways in which the speaker
> may take up a position, and modality is related
> to the general category that is often known as
> 'speaker's comment' ... Modality represents a
> very small but important part of these

resources - of the semantics of personal
participation.
(1970:335, my underlining)

Other writers are not so careful (see Note 9 to
Chapter 2). 'Speaker's attitude' is not distinguished
from 'speaker's comment' - Kress (1979:51) for example
discusses "attitudinal meanings, modalities of all kinds".
Halliday cites various adverbs to illustrate expressions
of "other types of speaker's comment", including
FORTUNATELY   FRANKLY   REASONABLY.
But one can understand why the distinction is sometimes
ignored. Halliday himself, in a later work (Halliday and
Hasan, 1976:135), speaks of "modality ... in a derived
sense" (my underlining) as the speaker's assessment of
'rights and duties'. Hence Hermeren's characterisation of
"what the modals are for", viz "to express what we
consider to be certain or possible as well as to express
what we judge to be right and wrong" (1978:10). And there
is little doubt that the modals can express judgements of
right and wrong. Consider the semantic similarity
between[23]

(29) You MUSTN't tell lies

(30) It's wrong to tell lies

The dividing line between (moral) judgements of right and
wrong and evaluative judgements of good and bad,
surprising and shocking, fortunate and unfortunate is
thin. For there is an obvious semantic connection between
that type of modality which relates to social and moral
laws (ie deontic modality, see below) and emotive
evaluation, since such laws are intimately connected with
a society's ethical values and its sense of justice. A
similar, but slightly less direct, connection can be
observed between the modal meaning 'volition' and
evaluation since, as Leech (1969:217) points out, "in no
circumstances can a sentence containing strong volitional
will be emotively neutral". Even more indirect, but still
readily perceived, is the link between the central modal
notion of the assessment of probability and emotive
evluation. It may be that one makes a modalised or

relative assertion at the risk of being proved wrong
rather than a liar (Joos, 1964:150), but social
evaluations are made about speakers on the basis of their
accuracy as well as their honesty; the penalty for having
been proved wrong (by events, the passage of time, other
speakers) is "a reputation for not being well-orientated
in the circumstantial world - for misjudging how things
are going to turn out" (Joos, ibid).

Thus, Hermeren's decision to include evaluative
adverbs[24] such as
FORTUNATELY   REGRETTABLY   SURPRISINGLY
in his list of non-auxiliary modal expressions (1978:10)
becomes comprehensible. However, the decisions may be
comprehensible without being justifiable, either on formal
grounds, or on notional grounds, ie in terms of the
insights to be gained by treating evaluative and modal
meaning together. The assimilation of these two
essentially distinct but undeniably related types of
meaning is plausible only if one confuses pragmatic and
semantic contributions to meaning, if one fails to
distinguish between the elements of meaning signalled by
the modal auxiliaries, and the elements of meaning with
which they are merely compatible.

The emotive effect of a modalised assertion is
determined by features of the non-linguistic context
and/or by lexical items in the linguistic co-text other
than the modal itself, although the modal may become
conventionally associated with a particular pragmatic
force. Consider for example
        (31) I CAN do that
Decontextualised, (31) would be taken as a simple
assertion of ability. In context, however, it is
frequently used with the indirect pragmatic force of an
offer of help. It could also be a boast, or a plea to be
allowed to 'do that'[25]. The current non-occurrence of the
event (e) 'I do that' qualified by CAN is compatible with
various evaluative judgements of the event imagined as
actualised in the future, none of which judgements is
signalled by CAN. Or consider

(32) You COULD have killed her (but thank
God you didn't)

(33) You COULD have told her (it was unkind
not to)

both of which exclamatory sentences convey an evaluation
of the non-occurrence of an event in the past. In (32),
the speaker expresses his relief at the fact that 'you'
did not kill 'her' - in addition to his shock at the mere
(past and unfulfilled) possibility of actualisation; in
(33), the speaker expresses his disapproval of the fact
that 'you' did not tell 'her'. The determinate factual
status of (e) as signalled by the modal auxiliary COULD
with past time reference, is compatible with two widely
differing emotive judgements on (the nonactuality of) the
event. The precise emotive effect is determined by the
context, principally by the lexemes KILL and TELL
respectively, and by the relative importance and
desirability attached to the acts of killing and of
telling in our culture.

There is no intrinsic emotive element in the
semantics of COULD, or of any other modal auxiliary,
although certain modal meanings are more readily
compatible with emotive connotations. It is, however, the
case that, when the modals occur in an environment of
determinate factual status, they are more likely to be
associated with evaluative force. But this is not an
argument which supports the assimilation of the concepts
of modality and emotivity, since the modal auxiliaries are
least modal[26] when in such environments.

The problem of the relationship between modality and
emotive evaluation[27] is relevant to the perspective
adopted in this study, and will be raised in a later
Chapter (4.4) but has been mentioned at this point in
order to illustrate the dangers of unconsidered extension
of the domain of the term 'modality'.

For the purposes of this study, modality will be
considered as a semantic system expressed by the modal
auxiliaries which enables a speaker to signal the degree

and indicate the nature of his commitment to the truth of a proposition or to the occurrence of an event.[28]

Any and every formally explicit indication of the nature and degree of modal commitment automatically qualifies the truth value of the propositional content of the sentence. In other words, modalised sentences are inherently and inescapably relative, a characteristic which is implicit in Joos' distinction between 'relative' and 'factual' assertion (1964:147 ff), and explicit in Perkins' statement that "modality is essentially the qualification of the categorical and the absolute" (1980:28). Therefore, while (35) differs from both (36) and (37) only in degree, it differs in kind from both (38) and (34)

(34) That is the postman

(35) That WILL be the postman

(36) That MIGHT be the postman

(37) The MAY not be the postman

(38) That isn't the postman

This is because "there is no epistemically stronger statement than a categorical assertion", for the reason that

It is a general principle, to which we are
expected to conform, that we should always
make the strongest commitment for which we
have epistemic warrant. If there is no
explicit mention of the source of our
information and no explicit qualification of
our commitment to its factuality, it will be
assumed that we have full epistemic warrant
for what we say. But the very fact of
introducing 'must', 'necessarily', 'certainly',
etc into the utterance has the effect of
making our commitment to the factuality of
the proposition explicitly dependent upon
our perhaps limited knowledge.
(Lyons, 1977:808-809)[29]

Palmer (1979:43) expresses a related point more concisely when he says that "factual assertion is not an expression

of certainty or 100% probability; rather it makes no epistemic judgement at all". To say, therefore, that modality is a semantic system by means of which a speaker indicates the nature and degree of his modal commitment is equivalent to saying that that commitment - although it may vary in extent or strength - cannot, by definition, be absolute. Total commitment is formally unmarked in English.

By characterising the modal auxiliaries as providing a signal of the degree and only an indication of the nature of modal commitment (ie commitment to the truth of a proposition or to the occurrence of an event) it is intended to draw attention to the fact that these verbs constitute the least specific[30] means of expressing modality. They are compatible with a range of modal interpretations, precise specification of which must be provided by features of the linguistic co-text or non-linguistic context. This is not to say that the linguistic and non-linguistic environment contributes additional elements of meaning which happen to be compatible with modal meaning, as is the case with emotive/evaluative force. Rather, the essential or core meaning signalled by each modal auxiliary is that of its degree, ie its relative factivity, but this nonfactive status (of specified degree) must be interpreted in relation to one of a limited number of sets of laws or principles (see below, Chapter 2.4.4), each of which may be said to indicate the nature of the modality being expressed by characterising a different type of modal commitment - a different type of modality. Precise specification of the appropriate type of modality is provided contextually. Consider

(39) He MAY go

(40) He is permitted to go

(41) It is possible that he will go

In (39), MAY signals

(a) the relative or qualified nature of the proposition (p) or event (e) 'He (future) go'; and

(b) the specific[31] degree of commitment accorded by the

speaker by his choice of this particular modal auxiliary
to the factual status of (p)/(e).
While (a) is an invariant property of all modals - see
above, p 43 - the precise value of (b) is specific to MAY,
although each modal has a comparable (but different)
scalar value (see Chapter 2.5). Further, (b) is not
invariant in the same sense as (a) in that the degree of
commitment associated with each modal is affected by the
nature of the modal commitment in terms of which a
particular modal token is interpreted (see Chapter 4), and
can be strengthened or weakened by combination with
'emphasisers' or 'minimisers'[32]:

> (42) He MIGHT arrive after dinner
>
> (43) He MIGHT well arrive after dinner
>
> (44) He CAN swim
>
> (45) He CAN barely swim

Yet the degree of each auxiliary remains fixed in its
relation to other members of the set, given that they
undergo comparable modification, eg the degree of
commitment to the truth of the proposition (p) 'He arrive
after dinner' expressed by (42) differs from that
expressed by (46) by the same scalar interval as (43)
differs from (47):

> (46) He MAY arrive after dinner
>
> (47) He MAY well arrive after dinner

Both factors (a) and (b) are present whether (39) is
interpreted as roughly equivalent to (40) or to (41).
However, (39) cannot be interpreted in any ordinarily
meaningful way without being related to the nature of
modality expressed, ie particular type of modal commitment.
In other words, (39) must be interpreted as approximately
equivalent to either (40) or (41) - or possibly as
equivalent to both (see pp 34-5 above and Chapter 2.5.5).

Modal auxiliaries, then, independently signal their
relative degree of commitment but merely indicate the
nature of that commitment, ie the type of modality. I
shall now offer a categorisation of the types of modality
expressed by the modal auxiliaries, defending the
distinctions drawn on formal grounds where this is

possible, but acknowledging that the classification
established basically relates to the conceptual frameworks
(characterised in terms of sets of laws or principles)
within which it is appropriate to talk of the truth of
propositions or the occurrence of events, ie the contexts
in which an assessment of relative factivity is pertinent.
This classification is offered as a theoretical construct
imposed upon the modal auxiliaries in order to explain and
illuminate their semantic system. I do not claim that it
in any way approximates to the means whereby a native
speaker either produces or interprets modalised sentences.
To the extent that it provides an accurate account of
modal meanings, and serves to clarify the relationships
between those meanings, it may be said to constitute a
satisfactory and useful descriptive framework.

Having detailed the categories of modal meaning
(which are analysed later, in Chapter 4, in terms of their
relative factivity), I shall then discuss the scalar
characteristics of modal semantics, ie that aspect of the
meaning of the modal auxiliaries which signals degree of
commitment. It will be proposed that modality is a
gradable concept.

For the purposes of exposition, therefore, the nature
and the degree of modality will be examined separately.
This is the result of methodological convenience, and
carries no theoretical implications. Both are essential
features of modal meaning, and the significance of their
interdependence (which will become apparent in the course
of the discussion) is demonstrated in Chapter 4.

2.4.2 Language and logic

Perhaps the most systematic or schematic approach to
a classification of the types of modality derives from
modal logic, a branch of philosophical logic which an
eminent practitioner (Rescher, 1974:ix) has defined as
"the formal theory of reasoning with statements that
involve a reference to possibility and necessity". A
number of linguistic studies of modality[33] have adapted
the work of philosophers in order to clarify the

expression of modality in English. While the present study will conform to this practice, certain reservations about the validity of drawing parallels between natural and logical languages must be acknowledged.

Reservations about the lack of fit between language and logic arise out of the fundamental indeterminacy of language in general and modal semantics in particular, a problem with which all grammars must contend, as observed above (Chapter 2.3). Palmer points out in the introduction to his full-length study of modality and the English modals (1979:2) that, if the semantic system of the modals is to be presented as a logical system, it will have little in common with actual usage. This is because logical systems do not underlie natural language, but are "essentially languages themselves that can, with varying degrees of success, be translated into a language such as English". Palmer subsequently (ibid, p 7) reasserts that "logical systems are idealised" whereas "natural languages are notoriously untidy [and] what little logic they have is likely to be fragmentary and inconsistent". Leech and Coates (1980:80) make a similar observation when they suggest that any attempt at a semantic classification of modals "as they occur in real language data" will be complicated by unclear cases which cannot be "clearly assigned to one category or another, except arbitrarily".

Another reason for caution in proposing an analytical framework for the modals based on modal logic is that, until recently, work in this branch of philosophy has concentrated upon necessarily true, possible, or false ('analytic') propositions. Such propositions are held, after Leibniz[34], to be true in all logically possible worlds. This kind of logical necessity ('alethic' modality), however, is rarely found in ordinary language, where modality is essentially a relative concept. Neither the modal auxiliaries, nor the lexemes POSSIBLE and NECESSARY express alethic modality in English[35]. As an apparent exception to this statement, consider

(48) Alfred is a bachelor

(49) Alfred MUST be unmarried[36]

Under one possible interpretation of (49), MUST appears to have the same function as the modal operator of logical necessity, ie given the truth of the proposition expressed in (48), (49) is a natural, legitimate and logically necessary inference:

(50) Alfred is a bachelor so he MUST be unmarried.

However, in English the meaning '(49) is a logically necessary consequence of (48)' could also be expressed by

(51) Alfred is a bachelor so he is unmarried.

Furthermore, (49) could be interpreted in at least two other ways, both of which would be described as qualified rather than absolute judgements, viz

(52) Alfred MUST be unmarried (because he's just announced his engagement to Ethel)

(53) Alfred MUST be unmarried (if Ethel is to have a church wedding)

(52) expresses the meaning that the speaker is strongly committed to the truth of the proposition (p) 'Alfred is unmarried' on the grounds that not-(p) is incompatible with the fact of his recent engagement. Such a conclusion is not, however, necessarily true in any logical sense – Alfred may in fact be divorced, widowed, or planning to commit bigamy, contingencies for which the speaker allows by his use of MUST. (53) expresses the meaning that the speaker is strongly committed to the actuality of the state of affairs (e) 'Alfred be unmarried' on the grounds of the obligation imposed by the church that individuals seeking the sacrament of marriage be unmarried. However, Alfred could be widowed, or a member of the Church of England rather than of Rome, either of which facts would invalidate the requirement that Alfred be unmarried; again, the relative nature of the meaning expressed by MUST allows for these or similar reasons for the nonactuality of (e). No doubt this is a doctrinally over-simplified account of the Church's position, but it serves

to illustrate the point that the system of modality can accommodate a range of degrees of truth.

The type of contingent necessity expressed by (52) is quite closely related to alethic modality and has consequently been discussed in certain of the more recent works on modal logic, under the term 'epistemic' modality (see below, Chapter 2.4.3). However, even where both linguists and logicians are concerned with similar sorts of meaning, the view of the linguist differs from that of the philosopher or logician. Lyons (1977:791-792) concisely glosses (52) as

> (54) I (confidently) infer that Alfred is
> unmarried

from a linguist's viewpoint, and as

> (55) In the light of what is known, it is
> necessarily the case that Alfred is unmarried

when he adopts the logician's point of view. In other words, the linguist emphasises the subjective nature of modality (see the quotation from Halliday (1970) above, p 39), the logician, its objective basis. While the issue of the subjectivity of modality will be raised in Chapter 4.4, it is mentioned here merely in illustration of the fact that, even where natural languages and logical languages do seem to relate to similar sorts of modal meaning, significant differences remain.

Despite the dissimilarity between language and logic, however, certain benefits may accrue from an analysis of the semantic system of the modal auxiliaries in terms of a descriptive framework derived from modal logic. Leech and Coates' assertion that "logical formalism has provided the basis of explicitness and precision on which most advances in the semantics of modality have been made" (1980:80) is valid because modal meanings do exhibit at least some relationships of a logical or semi-logical kind. Certain of these relations will be demonstrated below (Chapter 2.5.2) in the context of discussion of the scalar properties of the modals. To the extent, therefore, that the semantic system of the modal auxiliaries expresses relationships of a logical nature, a descriptive framework

based upon the systematic distinctions utilised in modal
logic will provide an adequate and illuminating model.
Such a framework, on the other hand, may also prove
valuable in exposing those aspects of modal meaning for
which a logical analysis fails to account. With these
reservations in mind, I shall now survey previous
classifications of modality which make use of, or may be
related to, logical distinctions.

2.4.3 Root and epistemic modality

Irrespective of the number of categories of meaning
established in the course of any one of the many previous
studies of the English modal auxiliaries, one broad
division is almost invariably observed - that between
EPISTEMIC and ROOT modality. The proliferation of terms
(see Table 2) which is characteristic of the literature on
modality partially obscures the extent of agreement which
obtains with respect to the relevance of this distinction
for the modal auxiliaries[37].

	Epistemic	Root
Joos (1964)	Logic	Duty
Lebrun (1965)	Logical possibility	Moral/physical possibility
Leech (1969)	Possibility etc	Permission etc
Halliday (1970)	Modality	Modulation
Anderson (1971)	Non-complex	Complex
Hermeren (1978)	Neutral	External/internal
Kress and Hodge (1979)	Knowledge	Power

Table 2   Comparison of terms

Within the discipline of linguistics, this
distinction was originally drawn, using the terms root and
epistemic, by Hofmann[38] in the late 1960s, although Von
Wright's seminal work on modal logic in which he
differentiated between four kinds of modality, one of
which was labelled 'the epistemic modes, or modes of
knowing', had appeared more than a decade earlier. Most

studies of modality written after the middle of the 1970s
make some reference to the terms 'epistemic' and 'root'
(eg Lyons, 1977; Palmer, 1979; Leech and Coates, 1980;
Perkins, 1980; Tregidgo, 1981; and Riviere, 1982), even if
they subsequently introduce additional (eg Palmer, 1979)
or alternative (eg Hermeren, 1978) terms.

The semantic distinction between root and epistemic
modality is easy to perceive but less easy to define. The
modals when used in a root sense may be said to qualify
the subject of the sentence, either indicating some factor
'inherent in' (ability, volition) or 'operative upon'
(permission, obligation) the subject (after Anderson,
1971:72) which influences the occurrence or actualisation
of the event referred to in the propositional content of
the sentence. When interpreted epistemically, the modals
function to assess the truth value of the propositional
content of the sentence as possible/probable/certain.
Each modal is capable of expressing the root/epistemic
distinction:

CAN

Root sense

    (56) CAN I leave the table?

    (57) Now I know this country CAN do better, it
    can achieve far, far more
    LA 13 79 (94)

Epistemic sense

    (58) That CAN'T be John - I thought he'd gone
    to America

    (59) And what a runner this boy is, he's getting
    into his stride, he CAN'T fail
    CO 3 79 (21)

(There is also an element of the root meaning 'ability' in
(59).)

COULD

Root sense

    (60) I COULD play the piano quite well when I
    was younger

(61) COULD we have slightly shorter questions,
otherwise we won't cover enough ground and it'll
be too easy for Mr Healey
PA 30 79 (294)

Epistemic sense

(62) That COULD be John

(63) - You've talked about the demand for
democracy leading to the sort of people's
democracy the Russians set up in Eastern
Europe ... were you thinking of the sort of
thing Mr Benn wants to see happen?
        - I think that's where it COULD lead
PA 14 81 (106)

MAY

Root sense

(64) MAY I leave the rest of my cabbage?

(65) And in any case, if I MAY make a macabre
joke, in the long-run we'll all be dead
LA 13 79 (72)

Epistemic sense

(66) It MAY be sunny tomorrow, you never know

(67) I mean, he MAY argue of course that it was
inevitable ... but he knows ... that the six
month campaign was immensely damaging to the
Labour Party
PA 28 81 (81)

MIGHT

Root sense

(68) MIGHT I bother you for a light?

(69) And if I MIGHT say so, Tony, if you're
thinking as deputy-leader of going back to the
members each time you have some problem, you'll
have a permanent sitting conference - and I
speak as a professional trade unionist
PA 14 81 (482)

Epistemic sense

> (70) She MIGHT be waiting at the other entrance
> right now

> (71) MIGHT you not have done better without
> Tony Benn?
> PA 28 81 (174)

WILL

Root sense

> (72) He WON'T do as he's told

> (73) We are going to enable council house
> tenants who want to, to buy their own home.
> If they don't want to - and perhaps the
> majority of them WON'T - then we're going to
> bring in a new tenants' charter
> PA 23 79 (61)

Epistemic sense

> (74) She WILL be Prime Minister one day

> (75) The OECD, which is a very respectable
> body ... take [sic] the view that our growth
> rate this year WILL be close to 3%
> PA 30 79 (512)

WOULD

Root sense

> (76) She WOÙLD go on about it

> (77) Just look at the problems ... and decide
> what you WOULD do
> CO 9 79 (7)

Epistemic sense

> (78) That WOULD have been in 1979, no?

> (79) But a tight money policy, you know, WOULD
> certainly push up the interest rates
> PA 23 79 (286)

SHALL

Root sense

(80) I SHALL do as I like

(81) Well, which question SHALL I answer?

Epistemic sense

(82) I SHALL arrive after dinner

(83) I have in fact already arranged and announced ... that the Trustee Savings Bank SHALL finance £200 million

PA 30 79 (645)

SHOULD

Root sense

(84) You SHOULD get your hair cut

(85) The point that SHOULD be made here is the one that Michael Foot has made clear

PA 14 81 (615)

Epistemic sense

(86) If they leave early they SHOULD be here by lunchtime

(87) - Might you not have done better without Tony Benn?

    - No, I don't think we SHOULD

PA 28 81 (176)

MUST

Root sense

(88) Pupils MUST wear school uniform

(89) You MUST never be extreme

LA 1 79 (36)

Epistemic sense

(90) He MUST be getting on for ninety at least

(91) This MUST be a British record! We're really giving the foreigners a run for their money

CO 3 79 (154)

<u>OUGHT TO</u>

Root sense

> (92) One OUGHT TO help those less fortunate than oneself

> (93) As I go round the country, people say to me something OUGHT TO be done about this
> LA 1 79 (33)

Epistemic sense

> (94) They OUGHT TO be back by now, unless the traffic's bad

> (95) - We can't find the manuscript ... can you remember where you put it? ... it OUGHT TO be I suppose in those two - those double grey filing cabinets[39]

While there is little doubt that a semantic distinction between root and epistemic modality can be drawn, the question that must now be addressed is whether it should be drawn - is it justified on any grounds other than the purely notional? One persuasive argument in favour of making the distinction is that it is made systematically[40] by every member[41] of the set of modal auxiliaries. In other words, at least two different kinds of modal meaning can be abstracted from any reasonably-sized collection of contextualised tokens of each modal type; this is illustrated above (pp 51-55) from the corpus of political discourse compiled for this study. Jackendoff (1972) takes the process of abstraction one stage further by presenting the meanings of some of the modals in the tabular form reproduced in <u>Table 3</u>.

	<u>Root</u>	<u>Epistemic</u>
<u>may</u>	Permission	Possibility
<u>can</u>	Ability	Possibility
<u>must</u>	Obligation	Logical entailment
<u>won't</u>	Refusal	Future non-occurrence
<u>should</u>	Obligation	Supposition

Table 3 <u>Root and epistemic meanings</u>

A number of linguists have unhelpfully referred to
this systematic distinction as 'ambiguity', a term the
misuse of which has prompted the incorrect conclusion that
"it is often the case that the modal in a sentence is
ambiguous between the root sense and the epistemic sense"
(Hermeren, 1978:93). Kress and Hodge (1979:122 ff), in an
interesting, functionally-oriented approach to the
analysis of root and epistemic modality, draw a similar
conclusion. They propose the view that "modality in
general establishes the degree of authority of an
utterance" and that the modal auxiliaries perform this
function but that "they contain a systematic ambiguity
about the nature of authority - whether it is based
primarily on knowledge [ie epistemic modality] or on power
[ie root modality]. Sometimes the context of an utterance
makes the modality unambiguous; but in practice
unambiguous uses are the exception. This is precisely
what we would expect if the ambiguity of the form is
highly functional". Kress and Hodge have found what they
were expecting - or hoping - to find, with one of the
premises of their investigation being that "language
functions to deceive as well as to inform" so that the
'ambiguity and vagueness' of the meaning of the modal
auxiliaries is therefore 'clearly functional'.

This study will express no opinion on the deceptive
function of language, but rather holds to the view that
the question of the functional motivation for the
ambiguity of the modals is a vacuous one, since the modals
are, in fact, rarely ambiguous when contextualised. This
issue has already been raised (see above, p 34 ff) when
the term 'indeterminacy' was preferred to that of
'ambiguity'. Reference was made to Leech and Coates'
insightful subclassification of 'three types of
indeterminacy' (1980:81 ff) as well as to their
statistically quantified conclusion that "ambiguities are
rare in actual texts, because contextual clues generally
make clear which meaning is appropriate". Other types of
indeterminacy (eg blending or merger) are more frequent -
though still less so than one might imagine from the

conclusions of Hermeren (1978) or Kress and Hodge (1979).
(Examples of indeterminacy will be given when we turn to
the arguments which would suggest that modality is a
gradable concept, see Chapter 2.5.5, p 109 ff.)

It appears to have been the systematically expressed
distinction between root and epistemic modality - the fact
that "by and large, each of the modals have two different
semantic uses" (Hofmann, reprinted 1976:92) - which
prompted Hofmann to postulate and Ross (1969) to develop a
different deep structure derivation for root and epistemic
modals, such that the former are derived from an
underlying transitive structure with a sentential
complement, and the latter from an intransitive one with a
sentential subject. (I shall not pursue the implications
that this transformational analysis has for the category
status - main verb or auxiliary - of the modals.) Hofmann
refers to root and epistemic modals, rather than to root
and epistemic uses or senses of the modals, which "should
be listed in the lexicon as separate though related verbs"
(Macaulay, 1971:180). According to this analysis, an
example like

(96) He MAY go

would be associated with the underlying structure 'X
makes-possible (= permits) his going' (where X = the
speaker or some unspecified source of authority) if
transitive (root) MAY was present in surface structure;
and with 'His going is possible' if intransitive
(epistemic) MAY was present.

Leaving aside for the moment the problem of how to
decide which of the two homonymous lexemes MAY is in fact
present in surface structure, it may be pointed out that,
although certain linguists have "assumed the ...
correctness of [these] convictions" (eg Horn, 1972:127),
the more recent and widely accepted response is to reject
"Ross's ... famous but now much-criticised analysis"
(Tregidgo, 1982:76). The most cogent criticism is offered
by Lyons (1977:843-844) when he observes that just as root
modality may be understood to "originate in some causal

source", so too can epistemic modality[42] be interpreted in terms of "the two-place [ie transitive] predicates 'make-necessary' and 'make-possible' ". Example (96) could therefore also be associated with the underlying structure 'X makes/has made it possible that he goes'. Lyons concludes, "it is not being suggested that epistemically ... modalised sentences should, in fact, be derived in this way in a grammar of English. The point is simply that an underlying transitive structure is no less appropriate for epistemically modalised sentences". This seems to me to demonstrate conclusively that Hofmann/ Ross' hypothesis of a deep structure grammatical distinction between root and epistemic uses of the modals is untenable.

I shall now return to the problem deferred above, of how a native speaker chooses between the root and the epistemic interpretations of the modal auxiliaries. I shall examine the syntactic behaviour exhibited by the modals at the level of surface structure, in order to determine whether or not there is any syntactic reflection of or justification for the semantic distinction between these two types of modality.

Most linguists who draw this distinction are anxious to produce syntactic evidence of its validity. Leech (1971:69) urges the reader "not to conclude ... that the 'permission' [= root] /'possibility' [=epistemic] distinction is unreal", on the grounds that "there are important grammatical differences between the two senses of may". Anderson (1971:70,72) is similarly concerned to relate his sub-categorisation of the modals to the 'syntactic possibilities' associated with each modal, referring with satisfaction to 'a distributional confirmation' of the distinction between complex, ie root, and non-complex, ie epistemic, uses of the modals. Certain linguists (eg Hofmann, 1976) formulate categorical syntactic 'rules' which either preclude or demand one of the two basic interpretations. Others (eg Coates and Leech, 1979) prefer to treat these syntactic restrictions as "co-occurrence ... relationships between contextual

features [syntactic and semantic, not pragmatic] and
[modal] meanings"; they express the probability of
co-occurrence as a percentage, calculated from a large
corpus of real language data. I shall discuss each of the
syntactic restrictions noted in the literature in turn:

i) Aspect - Hofmann (1976:93) claims that the root
sense "is where ... Perf [perfect aspect] is forbidden and
Prog [progressive aspect] is permitted only under
exceptional circumstances [ie] only with a when-clause".
It is a common fallacy, held, for example, by Halliday
(1970:342) and Dirven (1980:111), that a verb phrase
consisting of a modal auxiliary and auxiliary HAVE cannot
bear a root interpretation, a fallacy exposed by examples
such as

(97) You MUST have finished all your cabbage
before you start your ice-cream

(98) A competitor MAY have knocked down a
maximum of two fences and still be eligible
to compete in the jump-off

It is also acceptable to use the modal auxiliaries in
their root sense with progressive aspect, but without a
when-clause[43]. Hermeren (1978:93) offers an example which
has almost attained the status of a formulaic leave-taking
and is used with commensurate frequency

(99) I'm afraid I MUST be going

The existence of these and similar counter-examples
do not, however, completely invalidate this distributional
confirmation of the root-epistemic distinction. It
remains true that expressions of root modality rarely
occur in combination with aspectual marking, in contrast
to epistemic modality which co-occurs freely with both
progressive and perfective aspect. There is in fact a
pragmatic explanation of this syntactic constraint,
deriving from the kinds of meaning classified as root
modality, which accounts not only for the restriction on
co-occurrence but also for the exceptions. For it makes
no sense to oblige someone, or to give someone permission,

to do something in the past. It is only when a verb
phrase consisting of a sequence of modal auxiliary +
auxiliary HAVE has non-past time reference, that the
restriction does not apply. For example, (97) refers to a
future, possibly hypothetical, finishing of the cabbage
and eating of the ice-cream; (98) is timeless - this rule
has applied, does apply, and will continue to apply in the
future; (99) refers to the present - there is an
(unspecified) obligation on the speaker to go at the
moment of speaking[44]. This particular syntactic
reflection of the root-epistemic distinction, therefore,
must either be expressed as a typical[45] but not an
invariable constraint, or - if to be expressed in the form
of a categorical rule - it must incorporate specification
of time reference.

Palmer, in fact, offers a more precise specification
of the time reference compatibility of root and epistemic
uses of the modals (1979:33 ff). In the attempt to
associate semantic distinctions[46] with syntactic
possibilities, Palmer differentiates between past marking
of the modality and of the event/proposition, which allows
him to produce the following suspiciously neat
correlations:

	Epistemic	Root	
		Deontic	Dynamic
Modality	No	No	Yes
Proposition	Yes	No	No

Table 4 The past marking characteristics of different
kinds of modality

If such a correlation were to exist between different
types of modality and formal marking for past, it
certainly would constitute syntactic justification of a
tripartite classification of modal meaning.
Unfortunately, there are a number of criticisms that can
be levelled against Palmer's scheme. The first is that,
although Palmer professes to be looking at the syntactic -
by which I assume he means formally explicit -

possibilities of the modals, this distinction between past marking of the modality and of the event/proposition is not one that can be formally identified. Formally (morphologically) only the modality, as expressed by the auxiliary, can be marked for tense[47], since only finite forms permit tense marking and in a modal verb phrase (VP) the lexical verb will always be in a nonfinite form. (Palmer himself makes this point, 1979:30.) Past time marking can be provided by the auxiliary HAVE after an expression of epistemic modality, but see examples (97) and (98).(This amounts to little more than a rephrasing[48] of the syntactic restriction prohibiting the co-occurrence of perfect aspect and expressions of root modality.)

Nor do I agree with Palmer that with the MAY of epistemic possibility only the proposition and not the modality may be marked as past. Palmer cites

(100) John MAY be reading

(101) John MAY have been reading yesterday

presumably to illustrate that, in (101), the possibility is present while the event is past. With epistemic MIGHT (which Palmer (1979:48) says "is used exactly as MAY is") the possibility may also be past:

(102) Yesterday I thought that John MIGHT have
been reading until I remembered that his glasses
are still broken

In (102) MIGHT is at least compatible with, even if it does not signal, a past possibility. This would conflict with Palmer's contention (1979:34) that "with the MAY of epistemic possibility only the event ... may be ... marked as past".

Finally, I disagree with Palmer that, with deontic modality (see Chapter 2.4.4) neither past marking of the event nor of the modality is possible. MIGHT occurs with the root (specifically deontic, ie permission) interpretation, not only in accordance with the sequence of tense rule as in

(103) The invitation said that evening dress
MIGHT be worn if desired

but also as an independent, "truly past tense" (Tregidgo, 1982:87), as in

(104) No-one but the Duke MIGHT build a castle

(105) If the law applied by the King's judges
could not provide a remedy, an aggrieved person
MIGHT appeal to the Lord Chancellor.

As Tregidgo observes, "whatever the context, both these examples could clearly refer to what was permitted habitually in the past".

Compatibility with (the formal marking of) temporal reference, while it undoubtedly contributes towards the precise interpretation of modal meaning (see Chapter 4.2 for discussion of the interaction between modality, factivity and time reference), does not appear to be susceptible to a simple correlation with different types of modal meaning.

As will become apparent, any one feature of the formal behaviour of the modals is not sufficient to provide evidence in support of the subcategorisation of modal meaning developed in this study, but each feature does gain in significance when seen as part of a consistent and meaningful syntactic pattern - a pattern which emerges because syntax is as it is precisely because it is not an abstract, logically motivated construct, but because it is a system of rules, tendencies and exceptions developed in accordance with and responsive to the semantic and pragmatic demands made upon language by human beings. Human language is characterised by tendencies rather than by exceptionless rules, although these tendencies themselves tend to combine, and to relate consistently to semantic distinctions, with a conclusive - because cumulative - effect.

(ii) Voice - Certain modalised sentences are voice neutral, ie active and passive versions of the sentence are virtually synonymous. However, the property of voice neutrality alone cannot justify the semantic distinction between root and epistemic modality. For sentences

containing an expression of epistemic modality may be
voice neutral:

    (106a) Janet MAY have seen John

    (106b) John MAY have been seen by Janet

But so too many sentences containing an expression of root
modality:

    (107a) In whatever way the Party makes its policy
    that is the policy which every Labour candidate
    MUST present to his electorate when he's elected
    PA 14 81 (303)

    (107b) ... that is the policy which MUST be
    presented by every Labour candidate to his
    electorate

Nevertheless, sentences containing certain types of
root modality do seem to resist passivisation:

    (108a) That man CAN run a mile in 4 minutes

    (108b) ?A mile CAN be run in 4 minutes by
    that man

or to change their meaning in predictable ways:

    (109a) He CAN beat the world champion

    (109b) The world champion CAN be beaten by him

    (110a) Janet WON'T meet John

    (110b) John WON'T be met by Janet

It is, then, only those sentences which contain modal
meanings relating semantically to the subject that are not
voice neutral. His ability to beat the world champion,
(109a), is not the same as the world champion's ability to
be beaten, (109b); nor is Janet's refusal (volition-not)
to meet John to be equated with John's refusal to be met
by Janet. Note that if WILL in (110) were to be
interpreted epistemically, ie as a prediction, a) and b)
would be virtually synonymous (voice neutral).

    Despite the striking lack of voice neutrality of the
root senses of WILL and CAN, the property of voice
neutrality cannot be elevated to a distinguishing formal
characteristic of expressions of root modality since
(107b), which also expresses root modality (obligation),

is as acceptable as (107a), and the two are comparable in meaning. However, Coates and Leech (1979:29) calculate that there is a 95% probability of MUST being interpreted in a root sense when it occurs in the presence of passive voice. Palmer (1979:36-37) tabulates the voice neutrality characteristics for epistemic and root modality in a table similar to Table 4 above, but since he enters 'YES' for each category except the one subcategory of root modality where he enters 'YES/NO?', this can hardly be described as a decisive test.

(iii) Negation - the modal auxiliaries provide particularly clear illustration of the phenomenon known as internal versus external negation, for which reason it is also known as propositional versus modal negation. In other words, although it is always the modal auxiliary itself which is formally negated, that formal negation may signal the semantic negation of either the modal or of the main verb. What has been appropriately called "the complicated semantics of the negative forms ... of the modal auxiliaries" (Leech, 1969:229) has been widely discussed in the literature, with particularly insightful treatments by Anderson (1971), Lyons (1977:768 ff) and Perkins (1980:82-86).

I shall therefore merely provide a few illustrative examples, ignoring for the moment such contentious issues as whether WON'T/WILL NOT negates the modal or the main verb (on which, see Chapter 2.5.4, pp 100-101).

External/modal negation

(111) On that rhetorical question which I'm
afraid you CAN'T answer because we've come to
the end of our time, thank you gentlemen
PA 28 81 (348)

(112) The fact is you CAN'T genuinely increase
wages without increasing production
CO 5 79 (60)

(113) My opening remarks, limited as they were
to five minutes, COULDN'T conceivably be
comprehensive
PA 23 79 (123)

Internal/propositional negation

(114) But there's another Britain which MAY NOT
make the daily news but which each one of us knows
CO 12 79 (101)

(115) Last winter ... the dead were left
unburied ... there were pickets outside
hospitals ... Now this MUST NEVER happen again
PA 30 79 (226)

(116) What I am going to go on fighting for is
a Labour Party which is going to win the next
General Election irrespective of individual
items of policy which Neil or I MIGHT NOT
agree with
PA 28 81 (267)

Although the ability to negate either the modality or
the proposition/event conveys considerable flexibility
upon the semantic system of the modal auxiliaries, it does
not appear to be exploited with a view to differentiating
in general terms between the different types of modality.
As in the case of past marking and voice neutrality,
epistemic and root modality do not exhibit clearly
contrasting characteristics with respect to negation:

	Epistemic	Deontic	Root neutral dynamic	Subject- oriented dynamic
Modality	YES	YES	YES	YES
Proposition	YES	YES	YES	YES/NO

Table 5 Internal and external negation as exhibited by
different types of modality

Once again the results Palmer himself provides
(1979:36-37) appear to contradict his belief that "if we
take the syntax and semantics carefully into account, we
can distinguish between three basic kinds of modality".

It is only when one considers each modal auxiliary
individually that the phenomenon of internal versus
external negation appears to have relevance for the
epistemic-root distinction. For example

(117) He MAY NOT go

when interpreted epistemically may be said to be roughly
equivalent to 'it is possible that he will not go', ie
expressing internal negation. If, on the other hand,
(117) is interpreted in the root sense of permission, it
would be approximately equivalent to 'X does not permit
him to go', ie expressing external negation. The system
maintains its semantic flexibility with economy. It
avoids duplication in the case of the epistemic uses of
MAY and CAN, often regarded as synonymous: negated
epistemic MAY has internal negation, while negated
epistemic CAN (CAN is only epistemic when negative,
see pp 13, 81 and 108) has external negation, as shown in

(118) That MAY NOT be John = It is possible
that that is not John

(119) That CAN'T be John = It is not possible
that that is John

And when MAY is used to signal the refusal of permission
(root modality and external negation), NEEDN'T is
available to signal the permission not to do something or
the lack of obligation to do it - because there is a loose
logical equivalence between 'permission-not' and
'not-obliged' (but see Chapter 2.5.2 - 2.5.4):

(120a) He MAY NOT go = He is not permitted
to go

(120b) He NEEDN'T go = He is permitted not
to go

The system does, however, exhibit some redundancy, as

can be seen from the similarity of the following pairs of
sentences

(121) You MAY NOT leave the table until
everyone has finished

(122) You CAN'T leave the table until everyone
has finished

(123) She CAN'T be at home then

(124) She MUSTN'T be at home then

The effect of negation on modal meaning is also discussed
in Chapter 2.5 (pp 82, 89-93 and 100-101), Chapter 3.1
(p 121) and Chapter 4.2 (pp 187-193)

(iv) Interrogation - Hermeren (1978:93) suggests that
interrogative structures favour a root interpretation,
arguing that, of the pair

(125) MUST/SHOULD/MAY Sonia leave tomorrow?

(126) Sonia MUST/SHOULD/MAY leave tomorrow

the latter is 'ambiguous' between a root and an epistemic
reading, whereas the former prompts a root interpretation.
But if (125) were to be transformed into

(127) MAY Sonia be leaving tomorrow?

the interpretive effect of interrogative structure is seen
to be over-ridden by that of progressive aspect. This
same example serves to contradict Leech's assertion
(1971:69) that "only the permission [ie root] sense ... of
MAY ... is found in questions". While these counter-
examples may be of rare occurrence, the fact that they can
be found indicates both the difficulty of generalising
about modal semantics and the significance for modal
meaning of interaction between features of the linguistic
environments in which the auxiliaries occur.

(v) Nature of the subject - the surface subject of
modals used in a root sense tends to be animate, hence the
unacceptability of (129)

(128) That child CAN'T swim

(129) *That table CAN'T swim

However, this restriction has as much to do with the

feature to be dealt with below, in (v1), viz the nature of
the lexical verb.

(130) Most children CAN float

(131) ?Most leaves CAN float

(131) is less unacceptable than (129) by virtue of the
difference between the actions of floating and swimming,
eg the former does not require the subject either to
possess or move limbs. Note that (131) would be more
acceptable if CAN were deleted, thus removing the
suggestion that leaves are sufficiently animate to possess
abilities (rather than characteristics or properties).
(130) is also acceptable without CAN although an adverb
like EASILY or NATURALLY is perhaps called for to
'complete' the sentence. It is significant that CAN in
its meaning of ability (ie dynamic modality, see pp 73-4)
may often be deleted without radically altering the
meaning of the sentence. As Chapter 4 will show, dynamic
CAN also has other markedly different properties from
those demonstrated by most modal uses (particularly in
that it is more likely to be factive); in other words,
this use of CAN is not very modal.

The attribution of animate or human properties to
inanimate objects also invalidates the restriction that
the surface subject should be animate if the modal is used
in a root sense, as in

(132) This car WON'T start

(133) Did you know that trees CAN talk

Significantly, Coates and Leech (1979:29) found only a 75%
probability of the root use of SHOULD occurring in the
context of animate subjects, citing as an example

(134) Everyone SHOULD take time to read

Martin Luther's hymn

Coates and Leech observe a similar tendency (80%
probability) for WILL used in a volitional (root) sense to
co-occur with first person subject, but an unqualified
100% probability of co-occurrence between MUST in its
epistemic sense and the existential subject, as
exemplified by

(135) I cannot will what is impossible and

>therefore there MUST be a God who is able
>
>and willing to bring about the supreme good

But even here contextual features can force a root interpretation:

>(136) There MUST be a letter from him today

This is more likely to have the pragmatic force of a fervent wish (expressing root meaning) than of an epistemic prediction.

(vi) Nature of the verb - stative verbs tend to be associated with expressions of epistemic modality, agentive verbs with root modality[49]:

>(137) John MUST be a young man
>
>(138) We MUST stop the bloody whaling

Again, contexts can be contrived which require the less usual of the two interpretations, such as

>(139) In the early part of the story, John
>
>MUST be a young man

where the speaker is 'agentive', ie capable of bringing about the state-of-affairs 'John be a young man' - a novelist, script-writer, or film director, for example.

Coates (1983:233) concludes that "the interpretation of a modal as Root depends in most cases on the presence of agentivity". The underlining is mine but the qualification is important.

(vii) If clauses - Many linguists have followed Jespersen (1931) in claiming that WILL in if clauses implies volition (eg Jenkins, 1972). In other words, WILL cannot be interpreted epistemically when it occurs in the context of an if clause. Close (1980) provides a number of counter-examples, although acknowledging that "instances of ... if + non-volitional will ... may be comparatively rare":

>(140) I WILL come if it WILL be of any use
>
>to you

(141) If the slick WILL come as far as

Stavanger, then of course I must take

precautions on a massive scale

(A similar set of contextual features will be examined in Chapter 4.2 in terms of their influence on the relative factivity associated with the modal auxiliaries.)

This survey of the association between syntactic and semantic characteristics of the modal auxiliaries does not justify Hofmann's confidence that "these parallel syntactic and semantic dualities are quite common throughout the modal system" (1976:93). More appropriate are the reserved comments of Palmer (1979) and Perkins (1980) to the effect that "there is no straightforward isomorphic relationship between the semantic notions [of root and epistemic modality] and their syntactic realisations" (Perkins, ibid p 56) and that "it would be unwise to overstate the importance and clarity of this distinction"(Palmer, ibid p 35).

The distinction may not be remarkable for its clarity, but its importance should not be underestimated. Riviere, in an article devoted to the epistemic senses of MUST and SHOULD (1981), feels it necessary to acknowledge that "when a sentence is marked as unacceptable, it should be understood that the rejection is attached to must and should with their [epistemic] meaning of probability. In many cases the sentence would be acceptable with the [root] meaning of obligation". One such example is

(142) The plane MUST land in a few minutes

For the purpose of Riviere's article, this sentence is unacceptable, ie it cannot express epistemic modality.

In the analysis of alleged synonyms (eg CAN and MAY) one of the criteria usually invoked is that of the substitution possibilities of the items concerned - can both freely occur in the contexts characteristic of each? If not - if they are not in free variation - then they cannot be accurately described as synonyms. In the same way, the acceptability of a root, but not an epistemic (or vice versa) interpretation of a modalised sentence provides a strong argument in favour of recognising (and

utilising in description and analysis) the epistemic-root distinction. The evidence from paraphrase formulae or, more accurately, independent non-auxiliary modal expressions, also supports this distinction. More precise expressions of modality are available if a speaker wishes to make use of them, and such expressions can be seen to relate to - if not to provide an exact paraphrase for - the modal auxiliaries. According to Perkins (1980:215), MUST in its epistemic sense gives less specific information about the human reasoning processes than such expressions as I INFER THAT or IT IS HYPOTHESISED THAT but the existence of a relationship (less specific ←——→ more specific) between the auxiliary and the non-auxiliary expressions is inherent in the semantic structure of English (see also below, Chapter 2.5.6, pp 114-115).

Leech and Coates maintain that "the epistemic-root boundary ... is clearcut" and offer (1980:85) three reasons for this. The first is that the distinction is associated with "clear syntactic/semantic criteria, such as scope of negation and the non-occurrence of the perfective aspect with root meaning". The syntactic criteria have been shown (above pp 59 ff) to be rather less than 'clearcut'. The fact remains that the distinction is associated with a number of characteristic but not invariant formal properties. The second of Leech and Coates' reasons is that epistemic modality relates to propositions, and root modality to events or states-of-affairs. This has already been mentioned (see above, p 39), and will be shown to be of considerable significance for the relationship between different types of modality and nonfactivity. The final reason concerns the most valuable observation made in this and other articles by Coates and Leech - the fact that epistemic modality has no gradients[50], in contrast to root modality within which "there are continua of meaning with extremes which can be (unambiguously) identified, but with indeterminate areas between (Coates, 1980b: 338-9). For further discussion of these gradients of meaning, see pp 75 and 108. This is both a significant clarification

of the nature of modal meaning, and an explanation of why Palmer (1979:35) is prompted to say that "there are not just two kinds of modality, though the distinction between the other kinds is sometimes even less clear than between epistemic and the rest".

2.4.4 The subcategorisation of root modality

Palmer (1979) operates essentially with three subcategories of root modality: deontic, neutral dynamic, and subject-oriented dynamic. A number of other kinds - 'rules and regulations', 'rational', and 'existential' modality - he relegates to a chapter of miscellaneous examples which he feels unable to accommodate within his system. Coates (1980b:342) suggests that 'rules and regulations' could be subsumed under deontic possibility (ie permission), and 'rational' and 'existential' modality under dynamic modality. Palmer cites (143) as an example of 'rules', (144) as an example of 'rational' modality, and (145) as an example of 'existential' modality

(143) In the library you CAN take a book out and keep it out for a whole year unless it is recalled

(144) These are terms we CANNOT accept. No British government should, no Labour government would. These terms are unacceptable

(145) ... And this CAN mean, it doesn't always mean, it CAN mean, that the students are restructuring their learning, one's teaching, by asking questions

In many of these 'problematic' examples, Palmer appears to create the problem by ascribing meanings attributable to other sentence elements to the modal auxiliary. For example, when expressing 'rational' modality the speaker is said to refer to "states-of-affairs that he finds quite unacceptable, and that are, in that sense, not possible" (p 151); Palmer has allowed the context (in the case of

(144), the subsequent lexical item UNACCEPTABLE) to influence his interpretation of CANNOT. (Note also the parallel with the discussion above, in Chapter 2.4.1, of the extension of the domain of the term modality to include evaluative meaning.)

No attempt has been made to reproduce Palmer's definitions (derived from Von Wright's seminal work on modal logic, 1951) of these subcategories of root modality for the reason that Perkins' classification supersedes Palmer's by being more comprehensive, and presented more clearly and systematically.

Perkins (1980) establishes his classification of the types of modality by reference to Rescher's summary of the conceptual domain of modality, on the grounds that "no other account ... extends the domain of modality to cover as many different sets of principles as that of Rescher" (Perkins, 1980:14). Perkins reduces Rescher's eight categories to four, three of which he discusses in detail. The relationships between the two classifications are indicated schematically in Table 6. Examples to indicate the nature of the distinction between deontic and dynamic modality are derived from Perkins:

Deontic modality

        (146) MAY I have a quick word with you?

        (147) They SHALL not set foot in this house

        (148) You MUST never breathe a word of this

Dynamic modality

        (149) John CAN swim

        (150) We MAY now move on to the next question

        (151) I SHALL do as I like

PERKINS   RESCHER

                                     (A. Alethic modalities,
1. Epistemic modality,   (relating to the notion
defined in terms of _____((of truth itself
rational laws   (B. Epistemic modalities,
                                     (relating to knowledge
                                     (and belief

2. Deontic modality,   C. Deontic modalities,
defined in terms of _____   relating to duties
social laws

3. Dynamic modality,   (D. Causal modalities
defined in terms of _____((E. Boulomaic modalities[51],
natural laws   (relating to desire
                                     (F. Likelihood modalities[52]

(4. Temporal modality)_____   G. Temporal modalities

                                     H. Evaluative modalities

Table 6   The domain of modality

These three types of modality, then, can be seen as
defining three 'possible worlds', each characterised by a
particular set of laws or principles, in which the truth/
occurrence of propositions/events may be assessed. These
three sets of principles define the domain of modality.
It is in relation to rational, social, or natural laws
that the relative factivity of the modal auxiliaries is
interpreted (see above, p 44); as Perkins observes,
"virtually all modal expressions are comparatively
flexible with regard to the way their relativity may shift
from one set of laws to another" (1980:103) - and none
more so than the members of the set of modal auxiliaries.

The unfamiliar appearance of Perkins' classification
belies its relationship to previous categorisations, from

which it differs more in terminology than in substance, as indicated by <u>Table 7</u>.

PERKINS (1980)	Deontic	Dynamic
PALMER (1979)	Deontic	Dynamic
HERMEREN (1978)	External	Internal
ANDERSON (1971)	External	Non-external
LEECH (1971)	Permission etc	Ability etc
HALLIDAY (1970)	Passive modulation	Active modulation
LEBRUN (1965)	Moral possibility	Physical possibility

Table 7   The subclassification of root modality

That comparable subclassifications should have been made by so many linguists in itself provides some justification for the retention of the subdivision. What formal confirmation of the division as exists was discussed above, under points (i) - (vii); the essentially noncategorical nature of subtypes of root modality has rarely been challenged, ie it is recognised that these distinctions are often extremely difficult to make. Leech and Coates (1980:82) postulate the existence of gradients between the various root meanings, one of which, the gradient of Restriction, may be illustrated by the auxiliary CAN. CAN is thought of as presupposing a universe of possible worlds (cf Perkins) which vary in terms of the restrictions they impose. At one end of the gradient, the dynamic 'ability'/'possible for' sense of CAN relates to a universe restricted only by natural laws. Leech and Coates illustrate different points on the gradient with these examples

Deontic   (152) You CAN'T do that - it's   MOST
            against the rules   RESTRICTED
            (153) You CAN'T do that - it
            wouldn't be reasonable
            (154) You CAN'T do that - it
            wouldn't be right
            (155) You CAN'T do that - it's   LEAST
Dynamic   contrary to the law of gravity   RESTRICTED

Leech and Coates thus argue that the root senses of each modal auxiliary share a core meaning, and further acknowledge that - despite their constant affirmation that "the epistemic-root contrast is discrete" (1980:86) - epistemic and root modality both express a common semantic element of 'possibility'. The existence of this common semantic feature has prompted certain linguists to propose or imply that root modality is derived from the more basic epistemic modal concept (eg Anderson, 1971:72; Halliday and Hasan, 1976:135) or, alternatively, that it is root meaning that is basic, and epistemic which is derivative (eg Lyons, 1977:844; Tregidgo, 1972:75).

The position adopted in this study is that, since the epistemic-root classification is acknowledged to be a theoretically constructed model imposed upon the semantics of the set of English modal auxiliaries, it is not necessary at this stage to designate one of these categories as the source from which the others are derived. (However, in the course of my analysis of the meanings of the modal auxiliaries in terms of their relative factivity it will become apparent that, since nonfactivity is the core meaning or determining characteristic, then epistemic modality, for reasons shown in Chapters 2.5 and 4, is the most central modal meaning; see also p 292.) Justification for analysing the meanings of the modal auxiliaries with reference to this particular descriptive framework is partially provided by the existence of the various syntactic tendencies exhibited by the modals with which the semantic categories distinguished may be loosely associated. Furthermore, this classification is methodologically convenient for a variety of reasons. It serves to facilitate discussion of the abstract and elusive concept of modality in that it offers a rough indication of the scope and domain of modality by categorising the contexts (possible worlds) in which it is appropriate to assess the truth/occurrence of propositions/events; in other words, it renders the concept more susceptible to scrutiny and analysis by making it more tangible and concrete. A less important

but not insignificant consideration - bearing in mind the
confusion generated within the literature on modality by
the proliferation of terms (see Tables 3 and 7) - is that
the terms used (epistemic, deontic, etc) have gained quite
wide currency in recent studies of the English modals; and
these terms have the additional advantage of being more
precise than certain of the traditional notional labels
which suffer from the indeterminacy of the lexemes
POSSIBLE and NECESSARY. POSSIBLE, for example, (and hence
the derived term POSSIBILITY) can indicate either dynamic
modality (POSSIBLE FOR) or epistemic modality (POSSIBLE
THAT).

It is worth pointing out that, following Palmer, I
sometimes refer to, for example, 'epistemic COULD' when
strictly speaking this should be 'the epistemic use of
COULD' or 'COULD expressing epistemic modality'. As
Palmer (1979:36) says, "strictly only modality is
epistemic, deontic or dynamic, but it is convenient, with
little risk of confusion, to apply these terms to the
modals themselves, when they are used with the appropriate
meaning".

However, the main justification for utilising this
particular analytical framework lies in the insights it
provides into the relative factivity associated with the
modal auxiliaries. Different categories of modal meaning
are seen to relate differently to the concept of
factivity. Detailed examination of the nature and the
extent of these differences will be reserved until Chapter
4, but two pairs of examples will suffice to indicate the
sorts of meaning-difference to be discussed

(156a) He SHOULD have finished it by now (it's
due to be delivered today, for heaven's sake)

(156b) He SHOULD have finished it by now (if
my calculations are correct)

(157a) He COULD have done it (if he'd tried a
little harder)

(157b) He COULD have done it (if he hasn't

got an alibi for the night in question)

The modal auxiliary (plus stress) in (156a) expresses root modality and would normally be interpreted as contrafactive, ie the event (e) 'it be finished' is nonactual (see Chapter 3.2.3); the speaker, incidentally, is using the modal auxiliary to express an emotive evaluation of this state of affairs (ie annoyance!). The modal in 156(b) expresses epistemic modality and is nonfactive - the proposition (p) 'it be finished' is neither true nor false but there is a bias towards a factual value for (p), which is more likely to be true than false. COULD in (157a) expresses root modality and is contrafactive, ie 'he (past) do it' is nonactual. COULD in (157b) expresses epistemic modality and is nonfactive but there is a slight positive bias towards the truth of (p). Note that (157a) is an unreal past conditional; (156b) and (157b) contain open conditions so their degree of bias towards a contrafactive interpretation is less strong (see also pp 180 ff and 198 ff).

The relationship between factivity and actuality will be explored in Chapter 3 and the analysis of (156) and (157) briefly suggested here will be developed in Chapter 4. But one final element in the core meaning of the modal auxiliaries remains to be discussed in this Chapter - degrees of modality.

2.5 DEGREES OF MODALITY

In formulating any and every utterance, a speaker is confronted by many choices[53]. He cannot avoid, for example, the decision whether to signal an absolute or a relative[54] commitment to the truth of the proposition (p) or the occurrence of the event (e) expressed in his utterance. If the speaker feels unable or is unwilling to make a categorical assertion, he must indicate the

nature[55] and degree of his reservation about the truth of
(p) or occurrence of (e). He may choose to do so by means
of the modal auxiliaries[56]. This choice entails a further
decision; the speaker must select one member from this set
of verbal forms. One of the determining factors in choice
of modal will be the degree of commitment the speaker is
prepared to assert. This selection is not optional.
There is no "archimodal" (Diver's term 1964:334 ff) to
signal an unspecified degree of relative commitment[57].

Each member of the set has a different value on this
scale of commitment:

(158) The tax on jobs explains why unemployment
is still so high

(159) The tax on jobs MUST explain why
unemployment is still so high

(160) The tax on jobs MAY (or MAY NOT)
explain why unemployment is still so high[58]

(161) The tax on jobs CAN'T explain why
unemployment is still so high

(162) The tax on jobs doesn't explain
why unemployment is still so high

Interpreted in terms of a scale of relative commitment
(see above, p 43), (158) and (162) are outside the scale
because they signal an unquestioned commitment to the
truth of (p) or not-(p)[59]; within the scale, (159) can be
ranked as more committed to the truth of (p) than not-(p),
(160) expresses a commitment equally balanced between the
truth of (p) and of not-(p), and (161) is more committed
to the truth of not-(p).

Many linguists have adopted, usually explicitly but
occasionally implicitly, a scalar approach to the
semantics of the set of modal auxiliaries, as is evident
from even a passing acquaintance with the literature.
References to 'scale' or 'hierarchy' are plentiful. Diver
(1964) places the modals on a Scale of Likelihood, Riviere

(1981) on a Scale of Certainty. Hermeren (1978) reproduces Close's (1975) arrangement of the modal auxiliaries, describing it as a scale 'Uncertain - Certain', although Hermeren himself prefers the term 'hierarchy' as used by Halliday (1961); Hermeren also refers to degrees of likelihood, and proposes an analysis of the 'modalities' (ie modal meanings) in terms of three scales (see Tables 10, 11 and 12). Ehrman (1966) defines the meanings of MAY in terms of a continuum; Dirven's (1980) treatment of the modals involves reference to the continua of knowledge and volition; Lakoff (1972) classes the 'epistemic modals' in a hierarchy of definiteness or certainty, Leech (1971) puts the deontic uses of certain modals on a Scale of Intensity. Coates and Leech (1979 and 1980) prefer to make use of the terms 'cline' and 'gradience'. A number of studies (see above, Chapter 2.3) have of course preferred to analyse the meanings of the modal auxiliaries in terms of binary oppositions (eg Joos, 1964 and Anderson, 1971). However, even these authors tend to make at least some reference to the notion of scale[60].

2.5.1 Epistemic scale

Of the three types of modality distinguished in Chapter 2.4.3 and 2.4.4 above, a scalar analysis is most commonly applied to epistemic modality. At the most straightforward level, this consists of arranging some or all of the modal auxiliaries on a scale of certainty[61] or likelihood:

	MIGHT 'Uncertain'
	MAY
MUST - 'very likely'	COULD
SHOULD - 'more than likely'	CAN
MAY - 'less than likely'	SHOULD
CAN - 'possible'	OUGHT TO
	WOULD
	WILL
	MUST 'Certain'
Table 8[62]	Table 9[63]

This sort of ranking is usually determined on the basis of
a speaker's intuition of the varying degrees of
probability expressed by the different modals when set in
a frame such as

    (163)[64] If he left yesterday, he ---
    arrive today

Needless to say, not all native speakers would agree on
the same order. In <u>Table 8</u> above, for example, CAN is
rated less certain than MAY whereas the positions are
reversed in <u>Table 9</u>. Hermeren (1978:110) further confuses
rather than clarifies the issue when he argues that "the
question whether it is <u>may</u> or <u>can</u> that express the highest
degree of likelihood is rather futile since ... each of
these two modals can express two different kinds of
possibility according to context". According to this
analysis, 'POSS 1' indicates "the speaker's view of the
likelihood of an event occurring or having occurred (a
state existing or having existed)", whereas 'POSS 2'
indicates an "(ungraded) possibility of the occurrence of
an event or the existence of a state". POSS 1 is
paraphrased by 'POSSIBLE THAT' and POSS 2 by 'POSSIBLE
FOR'. But Hermeren then takes the view that POSS 1 is
stronger than POSS 2, and places them both on his scale of
'Neutral Modalities' (see below, p 88), ie epistemic
modality. I disagree with Hermeren's analysis on two
counts: POSS 2 is not an example of epistemic modality,
but is essentially dynamic, and therefore does not belong
on the same scale; and it is generally agreed that
epistemic modality (ie POSS 1) relates to propositions
rather than events or states[65].

    The problem, then, remains whether CAN or MAY
expresses a higher degree of certainty. The view taken
here is that since unnegated CAN is rarely epistemic, it
does not really belong on this scale at all, and is not
therefore competing with MAY for a higher ranking.
Negated CAN, on the other hand, clearly expresses a
stronger degree of commitment to not-(p) than MAY NOT
does:

(164) He CAN'T be going to[66] arrive in time
after all

(165) He MAY NOT (be going to) arrive in
time after all

(166) Sonia CAN'T have cut the lawn
yesterday[67]

(167) Sonia MAY NOT have cut the lawn ·
yesterday

(168) The answer CAN'T be clear

(169) The answer MAY NOT be (quite) clear[68]
PA 23 79(373)

In each pair, the example with MAY NOT expresses a less
strong likelihood that not-(p) than the version with CAN'T.
This is for the simple reason that the negative with CAN
affects the modality (ie CAN'T is an example of modal or
external negation, see above, p 64), whereas the negative
with MAY affects the proposition and not the modality. In
other words, CAN'T = 'it is not possible that (p)', while
MAY NOT = 'it is possible that not-(p)'; the former will
clearly always express a stronger negative likelihood than
the latter.

There is similar disagreement over which modal (MUST or
WILL) should take the highest position on the epistemic
scale. Joos and Perkins seem to concur that MUST makes "the
strongest possible assertion in favour of the occurrence"
(Joos, 1964:195), whereas Lakoff (1972:243) contends that in
classing the "epistemic modals in a hierarchy of ascending
certainty", CAN/MAY come out at the bottom and WILL at the
top because "will is the modal of choice when the speaker
believes the event described in the sentence to be virtually
certain of occurrence". In fact, in this case as with
CAN/MAY, the issue becomes clearer if only obviously
epistemic uses of these two modals are compared. For
example

(170) Listening to Mr Healey, I think
people MUST have wondered whether we were
all living in the same country as he was
PA 30 79(721)

(171) Listening to Mr Healey, I think
people WILL have wondered whether we were
all living in the same country as he was

(172) The Tories are against all forms of
Government aid to industry, which MUST mean
more unemployment
LA 6 79(13)

(173) The Tories are against all forms of
Government aid to industry, which WILL mean
more unemployment

I would argue that in the first pair of examples, MUST
expresses a stronger likelihood that people did wonder
whether they were living in the same country as Mr Healey,
than WILL does in the comparable sentence. Both modals are
interpreted in an epistemic sense. By contrast, although
MUST in (172) is epistemic, WILL in (173) is more likely to
be interpreted simply as a marker of future[69] tense. In
this case, WILL seems to convey a greater certainty than
MUST, largely because it is perceived as being less
subjective (for some discussion of the relationship between
modality, factivity and subjectivity, see Chapter 4.4).

However difficult it is to rank the modal auxiliaries
in an epistemic hierarchy which will remain constant for
every contextualised example, it is still true that for any
given example the choice of one member of the set rather
than another will reflect a difference, however slight, in
the speaker's commitment to the likelihood that (p):

(174) I warn you there's not much light

                      MIGHT

                      COULD

relief in this broadcast but it MAY

                      OUGHT TO

                      SHOULD

                      WILL

help you to make up your mind

CO 7 79 (7)

Even with a specific example, there is room for differences of opinion among native speakers. Does MIGHT, or COULD, express the stronger degree of certainty that 'this broadcast help you to make up your mind' (given that they are both at the 'less certain' end of the scale)? Similarly, what about the respective positions of OUGHT TO and SHOULD? Is MUST acceptable[70] in this context? Does WILL express futurity rather than (epistemic) modality - or futurity tinged with modality? But there is no doubt that SHOULD, OUGHT TO and WILL express a higher, and COULD and MIGHT a lower, degree of likelihood/certainty than MAY. A weak notion of scale, then, is appropriate for a semantic analysis of the epistemic uses of the modal auxiliaries, even though a rigid hierarchy cannot be strictly imposed.

It is this weaker sense of scale that many studies of modality have taken for granted. The existence of such a semantic scale is assumed by Joos (1964:186), for example, when he observes that "what _may happen_ has an uncontrolled probability[71] of happening ... but to the extent that a rough estimate has been made, the speaker can say things like _may perhaps_ near one extreme and _may very well_ near the other" (see also p 45 above). Riviere (1981:180), in considering whether or not SHOULD is a weaker MUST[72], argues firmly that "the scale of certainty is not an even succession of degrees. There are only two zones: (a) the event has a good chance of realisation; (b) the event has some chance of realisation". This is a slightly idiosyncratic view. More relevant to the conventional notion of a scale of varying degrees of likelihood, is Horn's (1972:141 ff) interesting attempt to determine the

'upperboundedness' of the modal scale, using the test of
compatibility with ABSOLUTELY[73]. On the grounds that any
'operator' which is not the strongest scalar element on
either a positive or a negative scale is incapable of
modification by ABSOLUTELY, he sets up what might be seen as
a tripartite division[74] of the scale, which can be
illustrated as follows

     (175) He absolutely MUST have gone

   ((176) *He absolutely MAY have gone

   ((177) *He absolutely MIGHT have gone

   ((178) *He absolutely MAY NOT have gone

     (179) He absolutely CAN'T have gone

Instead of trying to rank the (epistemic use of the)
modal auxiliaries themselves on a scale of likelihood, it is
possible to retain the explanatory advantages of a scalar
approach by discussing the concept of epistemic modality in
terms of a scale of probability, to which the auxiliaries
(and other modal expressions) can then be related. Leech
(1969:224), for example, considers "'probability' as a scale
extending from 'impossibility' (0% probability) at one end
to 'necessity' (100% probability) at the other". Lyons
similarly discusses epistemic modality in terms of
numerically quantifiable degrees of probability (ie 0-1).
He does not argue that epistemic modality ("in
non-scientific discourse") is grounded in a mathematically
precise calculation of probabilities, but he does point out
that

    ... we can express at least three different
    degrees of factuality in English by
    selecting one modal adverb rather than
    another from a set which includes
    'certainly', 'probably' and 'possibly';
    and the difference between 'probably'
    and 'possibly' ... would seem to correlate,
    at least roughly, with the difference
    between a degree of factuality that is
    greater than, and one that is less
    than, 0.5
    (1977:800)

The collocational possibilities of the modal
auxiliaries with adverbs such as POSSIBLY, PROBABLY, SURELY,
CERTAINLY, or the suitability of these adverbs as
paraphrases for the verbal forms, have frequently been cited
as evidence of the scalar values of the (epistemic uses of
the) modals:

(180) It MAY be raining = It is possibly
raining

(181) That SHOULD be John now = That is
PROBABLY John now

POSSIBLY
(182)[75] It MAY *PROBABLY happen
*SURELY

*POSSIBLY
(183) It MUST *PROBABLY happen
SURELY

From these and similar examples, it is deduced that MUST and
SHOULD express a higher degree of likelihood than MAY.
While this is true, it overlooks what a number of authors[76]
have called 'modally non-harmonic' combinations:

(184) CERTAINLY he MAY have forgotten
(ie 'I admit that it is possible that he has forgotten')

(185) SURELY it MAY happen
(ie 'Isn't it true that it is possible that it will
happen?')

(186) - Would a Labour Government abolish
the right to pay for education?
- No, not totally
- Not totally, but partially?
- Oh yes, PARTIALLY CERTAINLY
PA 30 79 (461)

(This last example is stretching the definition of modal expressions to include PARTIALLY; but see reference to SOME/ALL in Note 79 to Chapter 2.)

But it is more usual for the modal auxiliary and adverb to reinforce one another as in

> (187) PERHAPS Mr Brittan MAY wish to
> pursue that point?
> PA 30 79(123)

> (188) But a tight money policy you know
> WOULD CERTAINLY push up the interest rates
> PA 23 79(286)

Another type of collocational possibility (see above, pp 45 and 84) allows for the strengthening or weakening of the degree of likelihood associated with the auxiliary by the addition of emphasisers like (VERY) WELL or minimisers like SCARCELY.

All of these types of combination are possible with any of the modal auxiliaries, which rather invalidates Lebrun's suggestion that

> ... can and may do not themselves intimate
> whether the likelihood is great or small
> [because] the corpus ... shows that can
> and may denoting a logical possibility
> may both be used with emphatic or restrictive
> adverbs which specify the degree of
> probability
> (1965:81)

2.5.2 Logical relations

A more rigorous formulation of the relationship of logical implication between various points on the epistemic scale of probability is provided by Horn (1972:121 ff), who establishes that "CERTAIN implies (at least) PROBABLE/LIKELY, which implies (at least) POSSIBLE". In support of these implicative relationships, he gives examples such as

(189) It's POSSIBLE if not PROBABLE that
John will leave

(190) It's PROBABLE if not CERTAIN that
John will leave

Hermeren (1978:95-7) also draws attention to the existence
of "a relation of inclusion or implication" between
'modalities' on the epistemic scale (his scale of Neutral
Modalities) which he demonstrates with the examples

(191) It's CERTAIN that Sam will find a girl
and POSSIBLE that he will kiss her

(192) *It's POSSIBLE that Sam will find a
girl and CERTAIN that he will kiss her

(193) *It's CERTAIN that he will come but
it is not POSSIBLE that he will come

(192) is unacceptable because it wrongly suggests that
POSSIBLE implies CERTAIN (it cannot be certain that Sam will
kiss a girl he may only possibly meet); (193) is a
contradiction precisely because POSSIBILITY logically
follows from CERTAINTY and not vice versa - (194) is
perfectly acceptable

(194) It's POSSIBLE that he will come but
it's not CERTAIN

Hermeren isolates the following modalities on his 'Neutral'
scale

CERTAINTY
⇓
PREDICTION
CUSTOM
PRESUMPTION
⇓
PROBABILITY
⇓
POSSIBILITY (1)
↓
POSSIBILITY (2)

⇓ implies

↓ weaker
implication
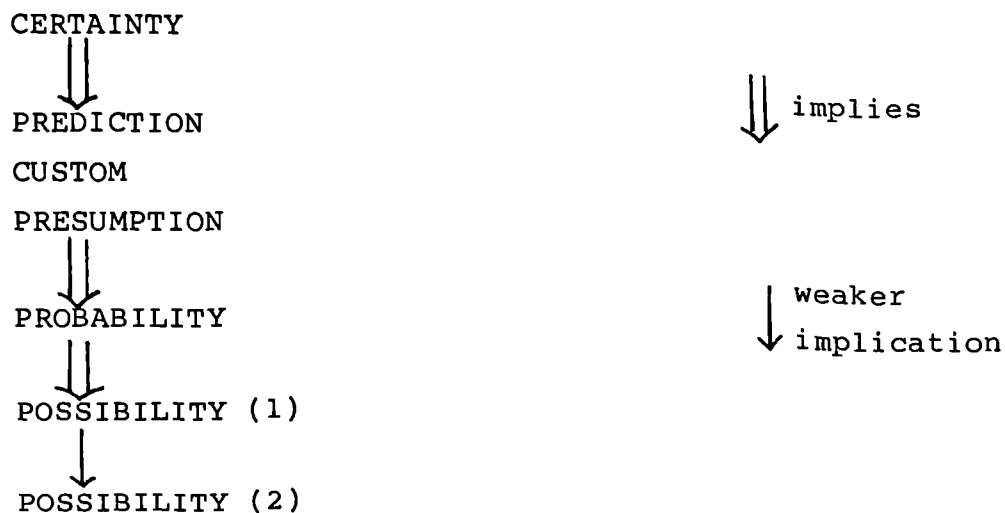
Table 10

In addition to these relationships of logical
implication, there is also a set of logical equivalences
within the scale of probability (which serves, incidentally,
as a further indication of its internal semantic cohesion).
Based on a description of the scale as composed of the
following three elements,

NEC(ESSARY)

|

PROB(ABLE)

|

POSS(IBLE)

it is a standard observation[77] that NEC and POSS are related
in terms of negation, ie

      (195) i)   NEC = not-POSS-not

           ii)   POSS = not-NEC-not

           iii)   not-NEC = POSS-not

           iv)   not-POSS = NEC-not

POSS and NEC are therefore interdefinable. These
equivalences hold because the negative can operate on either
NEC/POSS or the proposition. Since the epistemic uses of
the modal auxiliaries relate to the same semantic concept of
probability and are capable of distinguishing between
internal (propositional) and external (modal) negation,
therefore these logical equivalences also hold between
modalised sentences such as

      (196) a) He MUST be there = b) He CAN'T
NOT be there

      (197) a) That MAY be true = b) That
NEEDN'T be false[78]

      (198) a) It NEEDN'T be expensive = b) It
MAY NOT be expensive

      (199) a) He CAN'T be dead = b) (Then) he
MUSTN'T be dead (after all)

(196) illustrates the equivalence formalised in (195) i),
(197) that in (195) ii), (198) in (195) iii), and (199) in

(195) iv). These equivalences are more often illustrated by
paraphrase formulae or non-auxiliary modal expressions[79]:

    (200) It's CERTAIN that he's there = It's
    not POSSIBLE that he's not there

    (201) It's not POSSIBLE that he's dead =
    It's CERTAIN that he's not dead

(200) is parallel to (195)i) and (196), and (201) is
parallel to (195)iv) and (199).

    There is, however, no fourth term available to enter
into a relationship of logical equivalence with the
intermediate value on the scale, PROBABLE. It would seem
that

    (202) non-PROB = PROB-not

As far as the speaker's assessment of probability goes,
there is very little difference between

    (203) It is PROBABLE that this gazebo was
    not built by Wren

    (204) It is not PROBABLE that this gazebo
    was built by Wren

As Halliday (1970a:332)[80] points out in his explanation of
these examples, it makes no difference whether the negative
is associated with the thesis (proposition), as in (203), or
with the modality, as in (204). Either (or both) of these
can be expressed by

    (205) This gazebo WON'T have been built
    by Wren

Equally, it makes no difference whether we interpret

    (206) Common sense shows that it WON'T happen
    LA 13 79(81)

as roughly equivalent to

    (207) ... it is not PROBABLE (that it
    (future) happen)

or to

    (208) ... it is PROBABLE (that it (future)
    not happen)

It would seem that the distinction between internal and
external negation (which is, for the modal auxiliaries, a
semantic and not a formal distinction in any case) is not
made for this intermediate value on the epistemic scale
because it is not functional. It is, however, an important
distinction for those modal auxiliaries which express the
more extreme degrees of probability. The following sections
(Chapter 2.5.3 and 2.5.4) will show that similar logical
equivalences, dependent on the scope of negation, exist
within deontic and (to a lesser extent) dynamic modality as
well; and Chapter 2.5.5 will seek to formulate a general
explanation for these relationships, based on Leech's (1971)
theory of inverseness.

2.5.3 Deontic scale

The deontic notions of PERM(ISSION) and OBLIG(ATION),
like the epistemic concepts of POSSIBILITY and NECESSITY,
are logically related[81] through two negatives

(209) i)   OBLIG = not-PERM-not

ii)   PERM = not-OBLIG-not

iii) not-OBLIG = PERM-not

iv)   not-PERM = OBLIG-not

(Compare with (195) i)-iv) above.)

These logical equivalences can be illustrated by modalised
sentences:

(210a) He MUST do his National Service =

b) He CAN'T (just) NOT do his National
Service[82]

(211a) You MAY go =

b) You NEEDN'T stay[83]

(212a) You NEEDN'T go =

b) You CAN (always) NOT go/You MAY stay

(213a) You MAY NOT smoke in here =

b) You MUSTN'T smoke in here[84]

As in the case of epistemic uses, double negation with the modal auxiliaries in a deontic environment is often re-phrased (eg (211b) and (197b)) to avoid clumsy and unidiomatic combinations; double negatives are, however, acceptable when used in direct contradiction of a preceding assertion. (210b) might occur as a response to

(214) He's not going to do his National
Service!

or (196b) in contradiction to

(215) He's not there!

Strictly (ie logically) speaking, of course, the double negative terms are not needed; nor would it be essential to be able to express 'PERM-not' as long as the language could express 'not-OBLIG' (provided that these two terms were exactly equivalent in the language concerned – see next paragraph). For this reason, (212a) sounds more idiomatic (out of context) than (212b). Interestingly, in the case of the two equivalent epistemic terms ('not-NEC' and 'POSS-not') the position is reversed, ie 'POSS-not' is the more commonly used of the two terms, when in an epistemic context, whereas 'not-OBLIG' is the more common in a deontic context. Lyons (1977:801, 840) suggests a plausible reason for this when he argues that "in English, at least, epistemic modality is possibility [rather than necessity] based" whereas "deontic modality [is] necessity based rather than possibility based" (ie obligation is more basic than permission). Palmer (1979:54-5) gives a clear and concise account of the infrequency of occurrence of 'NEC-not' and 'not-NEC', pointing out that native speakers of English often operate with the equivalences in (195) iii) and iv) and therefore do not distinguish between 'not-NEC' and 'POSS-not' or between 'not-POSS' and 'NEC-not'. But he insists that these logical equivalences should not be overemphasised because "these distinctions can be, and sometimes are, made."

There is another reason why these logical equivalences should not be exaggerated. 'PERM' is not always exactly equivalent to 'not-OBLIG-not'. In one interpretation of 'permission' (Lyons (1977:836-7) refers to "a passive, or

weaker sense of 'permission'" but I should prefer to call it
the 'logical' rather than the 'weaker' sense), every
action/event/state-of-affairs is either permitted or
prohibited, and the logical relationships in (209) hold.
But it is not necessarily the case that the absence of
prohibition implies the existence of permission. Actions
can be deontically indeterminate. Smokers no longer
automatically assume, for example, that the absence of a No
Smoking sign means they may smoke (ie that they have the
permission of all present to do so). In the everyday use
and interpretation of language, however, we often ignore
this and choose to assume that the absence of prohibition
(where there is no 'OBLIG-not') does imply permission:

> (216) Well, she hasn't said I CAN'T go,
>
> so I'm going - even though she hasn't
>
> actually said I CAN

But these sorts of considerations are socially rather than
linguistically or logically determined and therefore belong
to the realm of pragmatics and not semantics[85].

The deontic concepts of 'permission' and 'obligation'
also lend themselves to scalar analysis. Palmer
(1979:58 ff) establishes three degrees of deontic modality:
deontic possibility expressed by CAN and MAY (essentially
'permission'); deontic necessity (equivalent to
'obligation') expressed by MUST; and SHALL[86], which provides
a third, still stronger, degree of deontic modality. Within
these three degrees, Palmer acknowledges finer graduations:

> MUST is often used in a rather weaker
>
> sense with a limited set of verbs all
>
> related to the act of conversation ...
>
> the speaker either imposes the obligations
>
> on himself and by doing so actually
>
> performs the act, or else asks his hearer
>
> to behave in a similar fashion
>
> (1979:62)

I must say that I disagree with Palmer in calling this a
'weaker' sense. In terms of the central hypothesis of this
study, the basic meaning shared by all uses of the modal
auxiliaries is nonfactivity, with varying degrees of bias

towards a factive interpretation. The deontic use of MUST expresses a <u>stronger</u> degree of bias towards factivity than the deontic meaning of MAY; and MUST in combination with a verb of conversation or speaking (SAY, ADD etc) expresses an even stronger bias towards factivity - the (speech) act referred to in the proposition of the sentence is in fact immediately actualised. This will be discussed further in Chapters 3.2.3 and 4.3.3 but is relevant here as an illustration of how the meanings of the modals vary in degree not only when compared with other members of the set in a 'frame' sentence, but also as a function of their linguistic context.

My corpus offers many examples of a number of the modal auxiliaries (expressing deontic modality) in combination with a main verb referring to an act of speaking:

MIGHT

(217) And if I MIGHT say so Tony if you're
thinking as deputy leader of going back to
the members each time you have some problem
you'll have a permanent sitting Conference
PA 14 81 (482)

COULD

(218) But if I COULD say - I promised to cut
income tax by a great deal more than is
required to cover the increases in prices
last year
PA 30 79 (634)

(219) COULD I just put it to you, why is
it that facing the same economic recession
as other countries, their average growth
over the last five years is 2.4% and yours
is 0.9%?
PA 30 79 (489)

MAY

(220) - Some people move very much to the
right as they grow older, I notice you have
yourself Mr Day

- No, you have no evidence of that at all Mr Healey, nor is it relevant ... and if I MAY say so, so will you, having been a member of the Communist Party at the age of 18
PA 30 79 (101)

(221) ... any in any case, if I MAY make a macabre joke, in the long run we'll all be dead
LA 13 79 (72)

CAN

(222) In my branch of the party we have a very active - CAN I say it's a lot of footslogging to get it like that, but it's a very active branch
PA 14 81 (447)

(223) CAN I just come back to the point? because I know why so many parents of very modest means are giving all their savings to educating their children
PA 30 79 (401)

OUGHT TO

(224) ... A Prime Minister must regard himself - I suppose I OUGHT TO say or herself - as a trustee for the whole of the nation
LA 13 79 (22)

MUST

(225) Britain is looking pretty sick now I MUST say
CO 3 79 (44)

(226) I MUST put the question to you. Is it deputy leadership or leadership?
PA 14 81 (496)

The modal auxiliaries in all of these examples express deontic modality and each is associated with a different degree of deontic 'force'. I have ranked the examples accordingly in a scale which, related to the context 'I _____ say', could be labelled 'tentativeness' or 'politeness'[87]. Leech (1971:96) refers to a scale of intensity or constraint, in terms of which MUST is more categorical than OUGHT TO. Hermeren (1978:98,114 ff) establishes an elaborate Scale of External Modalities, in which there is a relationship of implication between each modality

	[Expressed by]
NECESSITY	will, must, shall
SUGGESTION	may, will, can
APPROPRIATENESS	shall, should
WANT	shall
HOPE	may
PERMISSION	can, may

Table 11

Hermeren uses paraphrase formulae (1978:89) to establish these six 'modalities' but his classification seems to me to be counterintuitive at times. I cannot, for example, see why

(227) MAY I please drive your father's car?

should be paraphrased as 'I SUGGEST that you should PERMIT me to drive your father's car' rather than 'Do/Would you PERMIT me to drive your father's car?'; the additional elements of modal meaning (labelled SUGGESTION and HYPOTHESIS by Hermeren) derive from the interrogative structure and future time reference. Although I do not agree with his subclassification, Hermeren's analysis takes as its basis the scalar relationship of implication between

'OBLIGATION' and 'PERMISSION' which is an essential feature of the meaning contrast between modals such as MUST and MAY when used in a deontic sense. Lyons puts it very simply[88],

> ... as necessity implies possibility, so obligation implies permission.
> (1977:838)

It is because of this logical relationship that

> (228)*He is OBLIGED to come but he is not PERMITTED to come

is not acceptable, whereas

> (229) He is PERMITTED to come but he is not OBLIGED to come

is. (Compare (193) and (194)). Considering the modal auxiliaries as expressions of these concepts, it is clearly always the case that MUST has a stronger deontic force than MAY:

> (230) An MP MAY/MUST have a responsibility to his trade union[89]

This relationship of implication is scalar because it does not operate only between the two extreme values, but also for intermediate expressions such as SHOULD, ie MUST implies (at least) SHOULD which implies (at least) MAY. This is the point that Hermeren's Scale of External Modalities illustrates well, if at the expense of over-systematising intermediate values on the scale. With deontic, as with epistemic uses, a weaker notion of scale is useful as a tool in the semantic analysis of the meanings of the modal auxiliaries, but a rigid semantic hierarchy does not provide a sufficiently flexible description.

2.5.4 Dynamic scale

Of the three types of modal commitment examined in this study, dynamic modality is the least amenable to scalar analysis. The dynamic concept of ability does not seem to have degrees.[90] One can either swim/sing or one can't; admittedly, it is possible to be able to swim a few

strokes or sing a few notes - and, to the untrained
eye/ear, it is more immediately apparent if one can't swim
than if one can't sing. But one wouldn't leave a child
who couldn't do the former alone in a swimming pool, nor
invite an adult who couldn't do the latter to join a
choir.

But notional labels like 'ability' can be deceptive.
A rather wider view of dynamic modality includes at least
two distinct degrees, ie 'possible for' and 'necessary
for'.[91] Palmer (1979: Chapters 5 and 6) singles out these
two basic degrees, illustrating the former by

(231) I know the place. You CAN get all

sorts of things here

and

(232) One thing you want to avoid, if you

possibly CAN, is a present from my mother

; a similar example from my own corpus is

(233) We're determined to see that our

sums add up so we're not offering anything

unless we're certain the nation CAN afford

it

PA 30 79 (78)

A paraphrase of either 'possible for' or 'able to' could,
rather clumsily, be substituted for the modal in (231) and
(232) but only the latter would sound at all idiomatic in
(233); all three examples, however, illustrate the
semantic concept of dynamic possibility.

Palmer gives the following instance of MUST
expressing dynamic necessity

(234) Yes I MUST ask for that Monday off

; and my corpus offers

(235) Democracy doesn't mean that you MUST

always have a contest

PA 14 81 (518)

which could also be interpreted epistemically.[92]

The concept of volition, which certainly permits of
degree, is usually assumed to fall within the category of
dynamic modality. Some writers establish discrete degrees
of volition (eg Leech, 1971:78). Others (eg Ehrman,

1966:38) merely acknowledge that WILL can convey a range
of volitional force. As with epistemic and deontic
modality, Hermeren (1978: pp 99 ff) analyses dynamic modal
meaning in terms of a hierarchy, labelled in this case the
Scale of Internal Modalities:

		[Expressed by]
DETERMINATION	V	would
⇓	O L	
INTENTION	I T	will
⇓	I	
WILLINGNESS	O N	will, 'll
		would, 'd
↓		
ABILITY		can, could

Table 12

For each modality on this scale, according to Hermeren,
the action, quality, or state expressed by the main verb
of the modal is inherent in the surface subject of the
modal. But this overlooks examples such as

     (236) You WILL eat all your cabbage before
     you leave the table

and

     (237) You SHALL go to the ball

(NB There were apparently no examples of SHALL expressing
'DET' in the corpus of material that Hermeren used.)

     In both these examples, it is the speaker's, not the
surface subject's, volition that is at issue.
Interestingly, while the subject-addressee in (236) is in
all probability opposed to the speaker's wish/
determination, in (237) Cinderella is clearly of the same
mind as her Fairy Godmother; but such pragmatic factors as
the relative attractions of a plateful of cabbage and a
royal ball are of course outside the scope of this study.

     Setting aside this objection for a moment, and
following Hermeren's argument, he establishes a

relationship of implication between DET, INT, and WILL as for the Scales of Neutral (epistemic) and External (deontic) modalities; if X is DETermined to do Y that implies that he INTends to do it which in turn implies that he is WILLing to do it. These three modalities, according to Hermeren, are expressed by the auxiliaries WILL and WOULD.

However, as noted above (p 90) it is more problematical to set up formal logical equivalences involving negation for the modal WILL with the epistemic meaning roughly equating to PROBABLE, than it is for modals expressing NEC/POSS (p 89) or OBLIG/PERM (p 91). But the situation changes when WILL is used in its dynamic (volitional) sense. There does seem to be a difference between the weaker volition of

(238a) I WON'T do it if you ask me not to

and the stronger volition expressed by

(239a) I WON'T do it

which can be explained in terms of scope of negation. (238a) can be paraphrased as

(238b) I am prepared (NOT to do it) ...

ie expressing internal negation. Whereas I would paraphrase (239a) as

(239b) I am NOT prepared (to do it)

ie expressing external negation. It is of course dangerous to argue from a paraphrase since BE PREPARED TO is itself subject to transferred negation, but the paraphrases in (238b) and (239b) accord with my intuitive perception of the different meaning of the modal in the two sentences.

This distinction is obviously not formally marked by the modal auxiliary but is forced by the context, in this case the linguistic context provided by the dependent if-clause in (238). What this shows, then, is that the dynamic use of WON'T, like its epistemic use, is compatible with both internal and external negation; but that when WON'T expresses volition and not probability there is a significant difference in meaning associated with the scope of negation. So although 'It is NOT

probable (that X)' is approximately equal to 'It is
probable (that NOT X)', it is not the case that 'I am NOT
prepared (to do X)' is the same as 'I am prepared (NOT to
do X)'. Rather than follow Perkins' (1980:86) view in
leaving open the question of scope of negation with WON'T,
I would argue that this semantic distinction is
neutralised in epistemic uses of this auxiliary, but that
it is relevant for WON'T in dynamic contexts.

Dynamic modal meanings, then, do not display the same
formally marked logical relationships that are apparent in
epistemic and deontic modality. Nor are the different
degrees of volition distinguished by Hermeren on his scale
of Internal Modalities formally marked. I take the view
that an arbitrary division between shades of volitional
force is not helpful because these distinctions in degree
of meaning are context dependent. In other words, I agree
with Wekker that

> ... it is virtually impossible to distinguish
> discrete meanings of <u>will</u> and <u>shall</u> according
> to volitional strength, given the variety
> and subtlety of volitional meanings that
> both auxiliaries may express in specific
> contexts, and ... little is to be gained by
> a classification of this sort
> (1976:4)

Nor are different degrees of volition, unlike those of
dynamic possibility/ability and necessity, consistently
associated with different modal auxiliaries, ie it is not
the case that WILL always expresses stronger volition than
SHALL or WOULD.

Dynamic modal meanings form a less homogeneous,
hierarchical set than meanings commonly distinguished on
the epistemic and deontic scales. Even Hermeren has to
modify his argument for subsuming 'Ability' and 'Volition'
under the same Scale (an argument already open to
criticism, see above, p 99) in the light of the different
behaviour of ABLE and WILL under passivisation[93], ie

(240a) They were willing to help

(240b) They were willing to be helped

(241a) They were able to help

(241b) They were able to be helped

(240b) does not imply that someone was willing to help them; (241b), on the other hand, does imply that someone was able to help them.

Hermeren's scarcely supported assertion that there is a relationship of 'weaker implication' between Willingness and Ability is open to doubt. It is perfectly possible - indeed common - to be able to do something but not willing to do it; it is equally possible to be willing but not able; it is perhaps less common to be both willing <u>and</u> able. Hence the frequency of the following useful excuses

(242) I'D be happy to help you if I COULD

but I'm hopeless in the kitchen

(243) I'D love to come but I CAN'T that

evening

Nevertheless, even if these examples do illustrate the logical independence of the two concepts, they also show how commonly the two are linked.[94] So, accepting a tenuous link between volition and ability, granting the wider concept of dynamic possibility and necessity, and recognising varying, contextually determined degrees of volitional strength, it seems that a weak notion of scale is useful in analysing even dynamic modality. The recognition that dynamic force can and does vary is as fundamental to understanding this as the other semantic concepts expressed by the modal auxiliaries.

2.5.5 <u>Between the scales</u>

All three types of modal meaning, then, display scalar characteristics to a greater or lesser extent. Each scale possesses a semantic coherence and also displays certain internal logical relationships. I want now to show that, as suggested at the end of Chapter 2.5.3, these logical equivalences can be explained

in terms of one general principle: that the modal
auxiliaries, in expressing meanings on these three scales,
do so in a regular or systematic manner; and that the
meanings of one scale shade into those on another, forming
yet another scale, or "cline", between scales.

The three scales of modal meaning are not only
similar in that they all exhibit relationships of logical
equivalence involving negation (epistemic possibility and
necessity are discussed in Chapter 2.5.2, deontic
permission and obligation in Chapter 2.5.3, and the less
obvious relationship between weak and strong dynamic/
volitional meaning is examined in Chapter 2.5.4); these
logical equivalences can all be accounted for under the
same general explanation, viz Leech's principle of
inversion. In both his 1969 and 1971 studies of modality,
Leech draws together the "special kind of meaning contrast
between permission and obligation and between possibility
and necessity" (1971:74) which he calls INVERSENESS; later
(p 83, ibid) he points out that the same contrast exists
between weak *and strong volition* (willingness and
insistence). He explains the 'principle of inversion
systems' like this

> If one term is substituted for the other
> and the position of the negative changed,
> the utterance undergoes no change of meaning
> (1969:205)

He gives the following examples

> (244a) Students are not permitted to earn
> money in the vacation
>
> =
>
> (244b) Students are obliged not to earn
> money in the vacation

which can of course be expressed with modal auxiliaries

> (244a′) Students CAN NOT/MAY NOT earn
> money in the vacation
>
> =
>
> (244b′) Students MUST NOT earn money in the
> vacation

; and

(245a) I am willing not to interfere

=

(245b) I do not insist on interfering

This latter distinction is much harder to illustrate with the modal auxiliaries, since WILL - and SHALL - are the only auxiliaries available to express both strong and weak volition; see discussion on p 100.

The system of modal semantics also follows logic in the inter-scalar relations exhibited by each modal auxiliary. This observation was implicit in much of the discussion of root and epistemic modality in Chapter 2.4.3, see for example Table 3 on p 55. As Horn (1972:128) - quoting a study by Newmeyer - observes, "... it is not coincidental that the modal whose epistemic sense is possible has the deontic sense permitted rather than obligatory. The ambiguity of syntactic modals is indeed systematic, not random". No modal auxiliary expresses, say, epistemic possibility but deontic obligation. Taking MAY and MUST as examples, the following pattern in the meanings they can express emerges clearly

	Epistemic	Deontic	Dynamic
MAY	Possibility (possible that)	Permission	Possibility (possible for)
MUST	Necessity (necessary that)	Obligation	Necessity (necessary for)

Table 13

In other words, MUST is always 'stronger' than MAY, whichever scale/type of modal meaning is in question.

This regularity, observable in each of the modal auxiliaries, is one of the reasons why Perkins (1980; 1982) is able to analyse each modal auxiliary in terms of a basic 'frame', consisting of a constant relationship between three or four variables, which represents the core

meaning of that auxiliary, adaptable to its various
epistemic, deontic, and dynamic uses by changes in the
value of the variables. The four variables are

K = a system of organised beliefs

C = a set of circumstances

X = the truth of a proposition or the
occurrence of an event

Z = a condition

where K refers to the laws/principles which govern one of
three 'possible worlds' - see Chapter 2.4.4, p 74:
rational laws, to which epistemic modality relates; social
laws, to which deontic modality conforms; and natural
laws, invoked by dynamic modality. Z is introduced to
distinguish the secondary modals from their primary
counterparts.

The three basic frames are

K(C does not preclude X)

K(C is disposed towards X)

K(C entails X)

Perkins provides the following gloss for each of these
semantic relationships

'does not preclude': ... neither X nor not-X
is a logical consequence of C ... ie C has
neither a positive nor a negative bias
towards X
(1980:74)

'is disposed towards: ... neither X nor its
negation is entailed by C ... [but] there
is a definite bias towards X as opposed to
not-X, and disposed ... should be understood
in the sense of 'positively disposed' (ibid)

So, 'C is disposed towards X' lies somewhere
between 'C does not preclude X' and 'C entails
X' (ibid)

These three frames fairly obviously form a scale of
'strength' although Perkins does not explicitly draw this
conclusion. So it is not clear exactly how he would rank

the modals, having assigned each a particular frame. One
possible interpretation could be

Less	K(Z(C does not preclude X)	COULD, MIGHT
likely	K(C does not preclude X)	CAN, MAY
↑	K(Z(C is disposed towards X)	WOULD, SHOULD
↓	K(C is disposed towards X)	WILL, SHALL
More	K(Z(C entails X)	OUGHT TO
likely	K(C entails X)	MUST

Table 14

But Perkins sensibly avoids committing himself
explicitly to any strict ordering and the concomitant
implication that this will hold constant between every
modal, irrespective of their various uses. For while MUST
will always be 'stronger' than MAY, this only strictly
applies when both modals are expressing the same kind –
epistemic, deontic, or dynamic – of modality. To take an
example from Leech and Coates (1980:82-3)

> (246a) You CAN'T do that – everybody would
> think you were mad (ie a breach of
> conventions of acceptable behaviour)

> (246b) You CAN'T do that – it wouldn't be
> right

; one cannot insist on "a strict ordering of universes"
(ie possible worlds) because "it is not the case ... that
the universe of social acceptability presupposed by [246a]
is a sub-universe of the ethical universe presupposed by
[246b], for it is quite conceivable that what is forbidden
by an ethical code will be permitted by social convention,
and vice versa". Hermeren (1978:96) summarises the
general point, "only modalities of the same type are
comparable". This is the reason why this study does not
attempt to order all uses of the modal auxiliaries on one
scale. In other words, although there is a logical
relationship between the different meanings of each modal
and therefore the relative position of each modal on each

scale is predictable, it is not the case that there are predictable logical relations (eg of implication and inclusion) between modal meanings on different scales.

This is clearly illustrated by comparing the dynamic and epistemic scales of possibility/necessity: they obviously share a common semantic element, but the two types of possibility can and do operate independently; for example

> (247) He COULD catch the bus if he leaves
>
> in time, but he's so disorganised that I
>
> think it's unlikely that he WILL

The event (= he catch the bus) is dynamically possible but epistemically improbable.[95] (Compare the independence of 'ability/dynamic possibility' and 'volition', p 102 above). The epistemic probability of the truth of a proposition cannot necessarily be deduced from the dynamic probability of the occurrence of a (co-referential) event, although it is easier to do so when the speaker and the subject are the same, ie the subject is in the first person (see Note 94).

> (248) - CAN he get here in time?
>
>   - Yes he CAN but I don't know whether
>
>   or not he WILL

> (249) - CAN you get here in time?
>
>   - Yes I CAN (implies, 'and WILL')

Pairs of sentences with CAN and MAY clearly illustrate the distinction between the two kinds of possibility

> (250a) The road MAY be blocked = It is
>
> possible that the road is blocked

> (250b) The road CAN be blocked = It is
>
> possible for the road to be blocked

> (251a) The pound MAY be devalued = It is
>
> possible that the pound will be devalued

> (251b) The pound CAN be devalued = It is
>
> possible for the pound to be devalued

These sentences are discussed by Leech (1971:76 ff) as
examples of 'factual' possibility ('possible that',
ie epistemic modality) and 'theoretical' possibility[96]
('possible for', ie dynamic modality). Unnegated CAN does
not express epistemic possibility (see above, p 81) but
MAY is sometimes used in formal texts for dynamic
possibility, as in the following taken from Jennifer
Coates' article 'On the non-equivalence of MAY and CAN'

> **(252) But some years of experience**
>
> **suggest two or three guiding principles by**
>
> **which the speaker's effort MAY be judged**

Leech sees a parallel factual/theoretical distinction in
the concept of necessity as expressed by MUST and HAVE
(GOT) TO; I personally find this distinction harder to
detect, but Coates and Leech (1979:24) make the same point
in diagrammatic form:

	Root		Epistemic	
CAN	permission	possibility	possibility	MAY
MAY		[poss for]	[poss that]	
MUST	obligation	necessity	necessity	MUST
HAVE TO		[nec for]	[nec that]	(HAVE TO)

Table 15

This diagram also illustrates Coates and Leech's
argument that epistemic uses of the modals are categorical
while the root (dynamic and deontic) uses are not, so that
only the latter uses manifest gradients of meaning. This
view has already been mentioned (p 71 above), and the
gradient of Restriction, operating between the root
possibility and permission uses of CAN, discussed in some
detail (p 75).

In further illustration of the "semantic gradience of
modality", Leech and Coates (1980:83 ff) postulate a gradient
of Inherency between the root possibility and ability senses
of CAN; the cline in this case refers to the degree to which
the possibility of the action/event is determined by inherent

properties of the subject or by circumstances independent of the participants.

Relating Leech and Coates' analysis to my scalar approach it would seem that there are scales, clines, or gradients between the scales of deontic and dynamic modality, which might be represented something like this:

Epistemic   Root

                  Dynamic   Deontic

POSSIBILITY   POSSIBILITY

              ABILITY   PERMISSION

                      OBLIGATION

NECESSITY   NECESSITY

                                          = gradients

Table 16   = scales
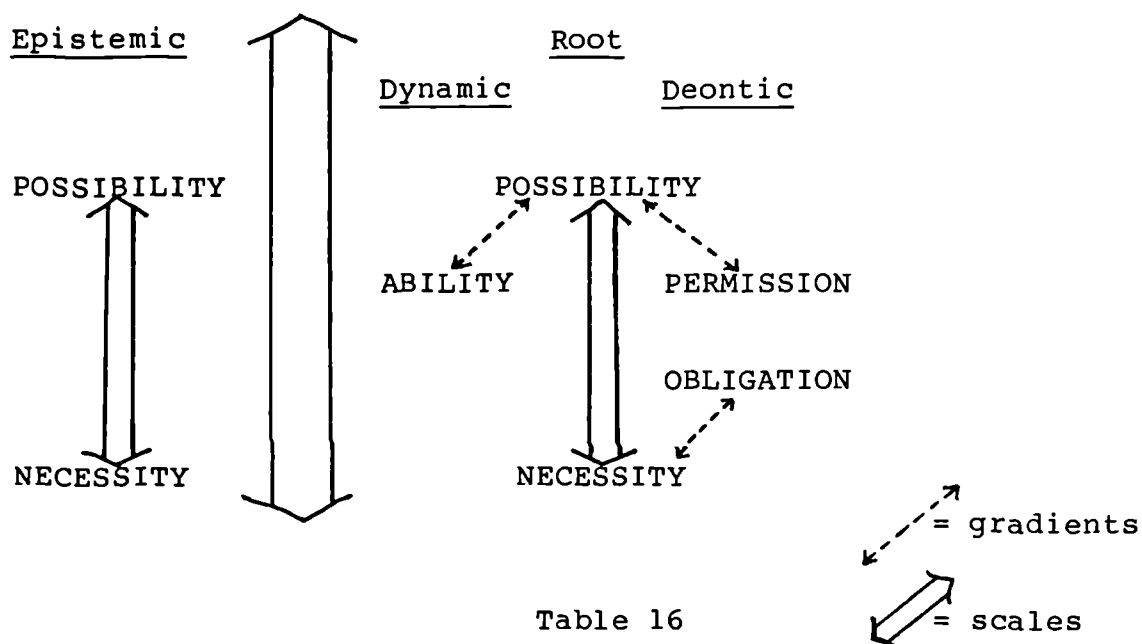
(Although Leech and Coates do not provide a comparable analysis for *MUST* as for *CAN*, it seems to me that the deontic and dynamic uses of MUST might also be analysed in terms of a gradient from one to the other interpretation.)

The notion of semantic gradience provides a good explanation for various well-attested instances of indeterminacy between modal meanings. Palmer (1979:177), for example, notes that "it is often very difficult to decide between a deontic and a dynamic interpretation [for MUST] ... the issue ... concerns the personal involvement of the speaker". He also observes (p 176, ibid) that, with CAN "it is not always easy to draw a clear distinction between ability ... and mere possibility".

But gradience is not the only kind of modal indeterminacy. It also exists between root and epistemic meanings, despite the 'clearcut boundary' on which Leech and Coates insist (see discussion on p 71 above). Perkins argues for either an epistemic or a dynamic interpretation of

(253) Cigarettes CAN seriously damage your
health

depending on "whether one feels one is dealing with physical
circumstances as physical circumstances, or else as evidence
from which the truth status of a proposition may be inferred"
(1980:62); he continues by saying that it is just possible
that the speaker of (253) meant both at the same time. It
could, in other words (and in Leech and Coates' terminology)
be either a rare case of 'ambiguity' ("a token yielding more
than one interpretation ... in an either-or relationship"),
or of 'merger' ("where a token yields two interpretations and
... the meanings are mutually compatible in a reading of the
passage, ie are in a both-and relationship"). Leech and
Coates would, however, deny that it could be an instance of
gradience (which is the third of the three kinds of modal
indeterminacy that they distinguish), because no gradients
cut across the epistemic/root boundary.

Tregidgo (1982:83), on the other hand (despite quoting
from Leech and Coates), argues that "we should regard
epistemic MUST simply as a special and extreme case of the
deontic, lying at the end of the deontic gradient". But
despite some acute observations, Tregidgo's use of
terminology is a little loose, as when he analyses

(254) If I had not jumped out of the way,
I MUST have been killed

as a case of merger: "epistemically, this would mean 'reason
demands that one should conclude that this would have
happened'. Deontically it would mean 'the natural laws of
cause and effect demand that this should have been brought
about'. The practical difference is negligible ..." (p 84,
ibid). For "deontically", one should read 'dynamically' but
the analysis is otherwise valid. As an example of "more
crucial ambiguity" (ie where the two interpretations are in
an either-or relationship rather than a both-and one) he
gives

(255) The children MUST be happy

which, out of context, could bear either a deontic
interpretation or an epistemic one. In context, of course,
there would be no ambiguity, and the more appropriate meaning

would be selected.   Similarly, in textual isolation

> (256) Applicants MAY have completed their
> national service in industry instead of
> in the armed forces

could be "interpreted epistemically, as indicating not
what is permitted but what is possibly true" (p 86, ibid).
Lyons discusses an example with WILL which could be
analysed as either a statement of epistemic or of deontic
necessity

> (257) The successful candidate WILL be a
> woman in her mid thirties of demonstrated
> ability

because "in respect of utterances by an omnipotent and
omniscient being ... the two kinds of modality are hardly
distinguishable" (1977:846).

In both (256) and (257) we are fairly clearly - even
divorced from context - in the realm of deontic rules and
regulations, though the two modal auxiliaries can be
interpreted in an epistemic sense for the reason Lyons
gives.   My own corpus offers an *example of MUST which*
could also bear an epistemic or a deontic *meaning* but
which is less obviously regulatory even if the tone is
rather pedagogical

> (258) Now this is a very tricky problem.
> The right social services cost a lot of
> money and yet we all know that too much
> Government spending causes inflation.
> So what's the answer?   It MUST be a
> question of priorities
> CO 9 79 (67)

This is a moral assessment/value judgement masking itself
as a logical imperative.

Tregidgo also gives examples (p 85, ibid) of merger
between deontic and epistemic interpretations such as

> (259) I don't spend every evening at the
> pub.   Sometimes I MAY not go out at all

which, he argues, is 'neutral' between the interpretation
'Chance permits this to occur' and 'Sometimes it is
permissible to predict that I will not go out at all'.

Palmer (1979:49, 50) offers some good examples of indeterminacy between epistemic and dynamic uses of SHOULD, and also a convincing pragmatic explanation of why this occurs, "if we consider that it is reasonable for an act to take place, we may equally consider that it is reasonable to expect that it will". Examples include

(260) SHOULD only take three days for the
survey report to be in to the building
society

(261) There's no reason why they SHOULD
be simultaneous

To quote one more example of merger, Leech and Coates give the following

(262) With tone, individual differences MAY
be greater than the *linguistic contrasts*
which are superimposed on them

This use of MAY satisfies certain semantic tests applicable to epistemic uses of the modal, eg collocation with WELL, POSSIBLY, or MAY NOT, but also permits substitution with CAN which usually only root meaning allows.

This sort of indeterminacy, or merger, between epistemic and root meanings exists by virtue of the common semantic element in the meanings of each modal expression. In the case of CAN and COULD, Lebrun (1965:93) puts it like this, "the lexical meanings conveyed ... are ... physical possibility, moral possibility, logical possibility. The idea common to the three meanings is 'absence of an obstacle of some sort'". Leech and Coates (1980:86), referring to CAN and MAY, speak even more simply of 'possibility' as the 'unmarked' meaning or 'common semantic element' in all uses of these two auxiliaries. This is another (see above, p 104) of the reasons why Perkins is able to analyse each auxiliary in terms of only one basic 'frame'.

In Chapter 4, I shall show that the semantic element common to all modal auxiliaries is the property of nonfactivity. But the final section in this chapter will

look at a few more reasons why modality is essentially a
gradable or scalar concept.

2.5.6 Beyond the scales

As pointed out above (pp 27, 29), modality can be
expressed in English both gramatically and lexically. In
other words, modal concepts can be conveyed at various
points on the Grammar-Lexis continuum:

SUBJUNCTIVE _ _ _ _ _   MODAL   _ _ _ _ _   LEXICAL
    MOOD   AUXILIARIES   VERBS

as illustrated by these examples

(263) If it WERE to happen, I wouldn't
be surprised

(264) It MAY happen

(265) I ALLOW there's a possibility of
it happening

It seems that the grammatical *as well as the semantic*
characteristics of the modal auxiliaries fit into a scalar
analysis. There have, of course, been many studies of the
formal properties of this set of verbs (see above,
Chapter 2.1) distinguishing them from full or lexical
verbs. Palmer (Lingua 1979) offers one of the clearest
treatments, adopting the position that "the modals are
further along the continuum towards main verbs than are
the other auxiliaries" (ibid, p 11).

Returning to the semantic concept of modality and the
Grammar-Lexis continuum, Lyons (1977:800), discussing
objective epistemic modality, makes the point that
"different language systems may well grammaticalise or
lexicalise distinctions along this scale in terms of more
or finer degrees [of probability]"; but "the modal
auxiliary verbs occupy a more central position in the
grammatical structure of English than do modal adjectives
or adverbs" (ibid, p 802). Again, it is notable how often

comparative descriptions are required in any treatment of modality.

Perkins (1980; 1982) has perhaps looked most closely at the different ways of expressing modality in English. Here, too, a scalar analysis is appropriate. Perkins accounts for the differences between auxiliary and non auxiliary (modal) expressions (for examples of the latter, see above, p 28) in terms of a scale of formal explicitness. Having established the set of variables which he uses to analyse all modal expressions (see above, pp 105-6), Perkins then shows that "modal forms vary with regard to the degree and sophistication of knowledge of the laws of nature, of reason and of society which they presuppose" (1980:215). The different modal expressions are also ranked according to their grammatical flexibility. The modal auxiliaries are the least formally explicit of all the modal expressions, merely specifying the nature of the relationship between the variables, whereas the non auxiliary forms do include specific information about one or more of the variables. Perkins (1980:167) provides the following summary

a) Modal auxiliaries: unmarked

b) Quasi-auxiliaries: (i) more specific information about the nature of C
(ii) less restricted than a) with regard to tense

c) Modal adverbs: (i) explicitly objective (except PERHAPS and MAYBE)
(ii) explicitly epistemic (or boulomaic)[97]
(iii) may be thematised, interpolated or adjoined

d) Modal adjectival and participial
expressions: (i) explicitly objective
              (ii) more versatile than a), b),
c) with regard to tense
              (iii) C often identified with a
specific act/state
              (iv) widely modifiable

e) Modal nominal expressions: similar to d)
except more widely modifiable

f) Modal lexical verbs: (i) may be explicitly
subjective
                    (ii) may be thematised etc
                    (iii) C may be explicitly
identified with current *utterance*

Modal auxiliaries may therefore be said to be singled out
as more central to the expression of modality in English
because they are the least marked and most straightforward
means of expressing modality that the language possesses.
Their lack of markedness is bound up with their
integration within the structure of the clause since "the
more fully something is grammaticalised rather than
lexicalised, and integrated with the syntax in terms of
government and agreement, the more central it is in the
system" (Perkins 1980:168). Non auxiliary modal
expressions, by contrast, tend to be realised lexically
and are thus grammatically more peripheral.

    Focussing on the semantics of the modal auxiliaries
again, there is a further sense not yet discussed in which
scalar analysis is appropriate. This applies to the
meaning relationships between the primary and secondary
modals:

CAN	COULD
MAY	MIGHT
WILL	WOULD
SHALL	SHOULD
MUST	OUGHT TO

As Palmer observes (1979:48), "might is used exactly as may is. It merely indicates a little less certainty about the possibility". Perkins (1982:265-268) generalises this observation when he says that all of the secondary modals share a common semantic feature which is not present, at least in the same degree, in the primary modals. This feature is interpreted differently according to context. It may, for example, be located at a point on one of the following pragmatic scales

Non-hypothetical .... Hypothetical

Non-past .... Past

Non-formal .... Formal

Non-polite .... Polite

Non-tentative .... Tentative

Non-indirect .... Indirect

; all of which can be subsumed under the single scale

NON-CONDITIONAL .... CONDITIONAL

The secondary modals indicate more conditionality than the primary modals, but this difference is only relative because the primary modals are themselves already some distance from the leftmost extreme of the scale. Compare

(266) Close the door!

(267) CAN you close the door?

(268) COULD you close the door?

Perkins stresses that the left-hand terms are defined negatively in terms of those on the right because the scales relate to modal expressions and therefore "the greater the degree of modality or conditionality of an expression, the more marked it is, whereas the less modal or conditional an expression, the less marked it is". He concludes that "'conditionality', therefore, turns out to be more or less the same thing as modality, and we can say that the secondary modals are more 'modal' than the primary modals".

However, the present analysis of the modals centres upon the element of conditional truth or actuality (ie nonfactivity) that the auxiliary contributes to a sentence. Under my analysis, then, the superordinate scale becomes

FACTIVE .... NONFACTIVE

where modal expressions are located on the right of the scale with the secondary modals again further away from the leftmost extreme:

It IS here .... It MAY be here .... It MIGHT be here

Irrespective of terminological differences, it is clear that some modal expressions are more modal than others. It is also the case that an auxiliary may be more modal in some of its uses than in others and therefore that some auxiliaries, by virtue of their typical uses,[98] may be less modal - more factive - than others. CAN is a prime example. Certain studies argue that "can is a modal verb ... only when it is an alternative form for may (or, in the case of cannot, must)" (Boyd and Thorne, 1969:71). Under this interpretation there are three nonmodal cans:

(i) where it is equivalent to BE ABLE TO, eg
(269) He CAN swim over a mile

(ii) acting as the marker of progressive
aspect with 'achievement' verbs, eg
(270) I CAN understand what he is saying

(iii) and as a marker of sporadic aspect, eg
(271) Cocktail parties CAN be boring
(See further discussion in Chapter 4.3.3, p 292.)

Leech (1971:70), on the other hand, speaks of CAN losing its distinctive modal meaning with verbs of inert perception and cognition where "there is really no difference between ability and accomplishment"

(272a) I CAN remember being six
(272b) I remember being six

(273a) I CAN hear music
(273b) I hear music
(This is similar to Boyd and Thorne's second nonmodal use.)

The factive status of these examples will be further examined in Chapter 4 as will similar examples of MAY, such as

(274) An ashtray MAY be found in the armrest
(see also pp 137-138 below).

Modality, then, is an intrinsically gradable concept - a matter of 'more or less' rather that 'either/or'. This, of course, is part of the reason why it is so hard to define. But it is my contention that the common core of meaning shared by all of the various kinds and degrees of modality expressed by the modal auxiliaries is nonfactivity, and that each case of a modal auxiliary apparently losing its modality can be explained in terms of the determinate factual (ie factive or contrafactive) status of the context in which it appears.

Having dealt with modality and its scalar properties and characteristics in this chapter, I shall discuss the second of the two major terms in this equation, factivity, in the next chapter, before examining the details of the relationships between modality and factivity in Chapter 4.

CHAPTER THREE   <u>FACTIVITY AND ACTUALITY</u>

It may be hard to define exactly what modality is,
but at least the term is fairly freely used and most
people - most people interested in language, that is -
have an idea that they know roughly what it means.
Factivity, on the other hand, while much less current in
everyday English, is, thankfully, much easier to define.
Factivity is the presupposition of truth. When a speaker
uses a predicate which has the property of factivity, he
presupposes that the embedded complement expresses a true
proposition[1]. By extension, one can talk about factive
sentences, complements, and clauses as well as factive
predicates[2] or simply 'factives'.

Factivity was first extensively examined by linguists
in terms of its syntactic repercussions in sentential
complementation (including subjects). But, as Kiparsky
and Kiparsky suggest in their seminal article 'Fact',
factivity is relevant to much else in syntax besides
sentential complementation (1970:167). Leech (1974:309),
for example, draws a parallel between the quantifier ANY
and a nonfactive predicate[3]

(275a) Please forgive the inaccuracies in
the report I sent you yesterday

(275b) Please forgive any inaccuracies in
the report I sent you yesterday

(275a) presupposes that the report has some inaccuracies,
while (275b) does not. And in the present study, I am
suggesting that factivity (or, more accurately,
<u>non</u>factivity) is also relevant, indeed central, to an
understanding of the semantics of the syntactic set of
modal auxiliaries.

A brief account of the standard analysis of factivity
has already been given (see above, p 3) but the following
selective survey of the literature aims to give a rather
fuller explanation on which to base my exploration of the
relationship between factivity and modality. The survey

is selective on several counts. It aims only to cover the
basic analysis of factivity and some of the later, more
significant modifications to that analysis, before I pass
on to its implications for modality. The authors and
articles cited by no means form an exhaustive bibliography
on the subject. Not all of the works referred to are
solely or even primarily concerned with factivity (or, for
that matter, modality) eg Huddleston (1971) or Lyons
(1977). In certain cases, the immediate context of an
author's discussion of factivity offers significant
support for my thesis that modality is closely bound up
with factivity; for example, many of the relevant
references in Lyons (1977) occur in his Chapter 17 on
'Modality'.

3.1 SURVEY OF THE LITERATURE

Kiparsky and Kiparsky's article 'Fact', originally
published in 1968, was the first to draw attention to the
syntactic repercussions of the semantic property of
factivity. Almost all subsequent articles on the subject
refer to it. In exploring the interrelationship of syntax
and semantics in the English complement system, Kiparsky
and Kiparsky establish two classes of predicates, factive
and nonfactive, and then proceed to illustrate a series of
syntactic characteristics typical of each class, which
they relate to the semantic property of factivity (as
defined on the previous page) concluding that

> All predicates which behave syntactically
> as factives have this semantic property,
> and almost none of those which behave
> syntactically as nonfactives have it
> (1970:147)

They argue that factivity depends on presupposition (as
opposed to assertion), so that factive sentences are
constant under negation and interrogation:

> (276a) It is odd that the door is closed
> (276b) It is not odd that the door is closed

(277a) John regrets that the door is closed

(277b) John doesn't regret that the door
is closed

All four sentences presuppose that the door is closed, because BE ODD and REGRET are both factive predicates which presuppose the truth of their embedded clause regardless of whether the main clause is positive or negative.[4]

(278) and (279), on the other hand, do not remain constant under negation in this way

(278a) It is likely that the door is closed

(278b) It is not likely that the door
is closed

(279a) It seems that the door is closed

(279b) It doesn't seem that the door
is closed

In none of the four sentences is the proposition (p) 'the door be closed' factive or presupposed to be true. In (278a) and (279a) the speaker asserts that (p) is more likely to be true than false, whereas in (278b) and (279b) (p) is more likely to be false than true. The meaning of a nonfactive complement is altered when the main clause is negated.

Compare the effect of negation[5] on sentences containing a modal auxiliary. Here the picture is complicated by the different semantic effects of modal versus propositional negation, but nevertheless modalised sentences behave more like nonfactive than factive ones: (p) is rarely presupposed to be true[6] and, where it is, is not constant under negation, eg

(280a) I CAN see stars

(280b) I CAN'T see stars

where the proposition 'I see stars' is true in (280a) and false in (280b)[7]; in the majority of cases, formal negation of a modal auxiliary either affects (p) in the same way as the negated nonfactive predicates in (278) and (279) affect their complements - when the modal itself is semantically negated - or the negation operates directly

on (p), in which case (p) is obviously not constant. A
few examples make this clear

(281a) The door MAY be closed

(281b) The door MAY not be closed

(282a) The door CAN be closed

(282b) The door CAN'T be closed

(281a) can be interpreted epistemically (possible that),
dynamically (possible for), or deontically (in the sense
of permission); so can (281b) but the effect of the
negative varies:

(i) Epistemic meaning/propositional negation

'It is possible that the door is not closed'

(ii) Dynamic meaning/modal negation

'It is not possible for the door to be closed'

(iii) Deontic meaning/modal negation

'It is not permitted to close the door/for

the door to be closed'

(282a) permits only dynamic or deontic readings, but
(282b) can express the same range of meanings as (281b),
with the difference that it is the modal auxiliary that is
semantically negated in all three cases (ie 'not possible
that', 'not possible for', 'not permitted to/for').

Factive presuppositions are similarly constant under
interrogation (though Kiparsky and Kiparsky (1970:151)
point out that only Yes-No questions are revealing).

(283a) You are dismayed that our money is gone

(283b) Are you dismayed that our money is gone?

The speaker of (283b) does not doubt that the money is
gone - any more than he does in (283a) - but takes it for
granted and asks his addressee about his reaction to the
<u>fact</u> that it has gone[8].

Kiparsky and Kiparsky also observe (ibid) that other
kinds of presuppositions - ie presuppositions other than
of truth[9] - are likewise constant under questioning, so
that to say, for example

(284a) They deprived him of a visit to
his parents

presupposes that he wanted the visit. This presupposition
remains in

(284b) Have they deprived him of a visit
to his parents?

Nonfactive (or modalised) sentences, on the other
hand, contain not presuppositions but assertions which are
questioned in interrogative environments

(285a) You[10] are sure that our money is gone

(285b) Are you sure that our money is gone?

(286a) It MUST have gone

(286b) MUST it have gone?

Kiparsky and Kiparsky demonstrate various other
syntactic[11] characteristics of factive and nonfactive
predicates. I do not always agree with their
restrictions, for example the assertion that only factive
predicates allow the full range of gerundial constructions
and adjectival nominalisation in -ness to stand in place
of the that clause. They illustrate this restriction with
the following examples

(287a) His being found guilty is tragic

(287b) *His being found guilty is false

(288a) Their suddenly insisting on very
detailed reports matters

(288b) *Their suddenly insisting on very
detailed reports seems

However, I would find

(287c) His being found guilty is likely/
possible

(288c) Their suddenly insisting on very
detailed reports is likely/possible

just about acceptable; and if one alters the predicate
from BE + adjective to BE + noun, the semantic difference

between a factive and nonfactive predicate is no longer
reflected in different syntactic behaviour:

(287d) His being found guilty is a tragedy

(287e) His being found guilty is a
possibility

(288d) Their suddenly insisting on very
detailed reports is a pity

(288e) Their sudden ly insisting on very
detailed reports is a possibility

Nevertheless, the tendency remains and many of Kiparsky
and Kiparsky's examples do resist strongly combination
with any nonfactive predicate

(289a) The whiteness of the whale is odd

(289b) *The whiteness of the whale seems

(289c) *The whiteness of the whale is
possible

(289d) *The whiteness of the whale is
a possibility

Some of the other semantic characteristics
demonstrated, when applied to modalised sentences, confirm
the affinity already indicated between nonfactive
predicates and modal auxiliaries. Kiparsky and Kiparsky's
observation about extraposition is relevant here. With
factive predicates extraposition (the placing of the
complement at the end of a sentence) is optional, whereas
for nonfactive predicates it is obligatory so that

(290a) That there are porcupines in our
basement makes sense to me

(290b) It makes sense to me that there
are porcupines in our basement

are "optional variants" (ibid p 145); whereas

(290c) *That there are porcupines in our

basement seems to me

is ungrammatical, although

(290d) It seems to me that there are

porcupines in our basement

is acceptable (because the complement is extraposed).

In this syntactic operation also, modalised sentences
tend to behave like sentences containing a nonfactive
predicate:

(290e) *That there are porcupines in our

basement MAY be

(290f) It MAY be that there are porcupines

in our basement

Like (290c), but unlike (290a), (290e) is unacceptable;
the complement must be placed at the end for the sentence
to be grammatically well formed.

However, many of the characteristics of nonfactive
predicates as proposed by Kiparsky and Kiparsky simply do
not apply to the modal auxiliaries. The different
grammatical status of the set of modals means that they
cannot always be inserted into comparable syntactic
structures. For example, the 'rule' that only[12]
nonfactive predicates allow the accusative and infinitive
construction cannot be applied to modal auxiliaries since
they cannot appear in the following sort of frame

(291a) I believe Mary to have been the

one who did it

(291b) *I resent Mary to have been the

one who did it

But note the compatibility of a modal auxiliary with the
nonfactive, but not the factive, sentence

(291c) I believe Mary WILL/MUST have been

the one who did it

(291d) *I resent Mary MUST have been

the one who did it

Similarly, the sequence of tense rules which apply
differently to factive and nonfactive verbs cannot be

related to modal auxiliaries: the rule which changes a
certain type of present tense into a past tense in an
embedded sentence if the containing sentence is past, is
obligatory in nonfactives but optional in factives:

      (292a) John claimed that the earth was flat

      (292b) *John claimed that the earth is flat

      (292c) John grasped that the earth is round

      (292d) John grasped that the earth was round

These are Kiparsky and Kiparsky's examples (1970:163), but
it makes no difference to the argument whether John is
claiming/grasping that the earth is round or flat.
Factivity depends on the presupposition of truth (of the
proposition in the embedded clause) by the subject of the
main sentence (the subject of the factive predicate) and
not on actual or objective truth - whatever that may be.
However, I would argue that (292c) is additionally marked
by the intrusion of the <u>speaker's</u> point of view. The use
of the present rather than the past form of BE in the
complement of (292c) - by contrast with (292d) - signals
the speaker's assessment of the truth of (p), implying
something like 'I the speaker know that the earth is round
and John has finally grasped this truth'. There is less
'speaker participation' in (282d); nevertheless GRASPED is
factive in both examples.

    Note, incidentally, that all four of the above
examples would be acceptable with the embedded clause 'the
earth MUST be flat/round', although (292b) might sound
marginally more correct with 'MUST have been'.

    Having given an idea of the terms in which Kiparsky
and Kiparsky analyse factivity, I should like to mention
one or two related points which they make, before moving
on to subsequent modifications of their analysis.

    At one point, Kiparsky and Kiparsky imply that
certain sentences may be ambiguous between a factive and a
nonfactive interpretation. More precisely, they say
(1970:168) that certain sentences can have a forced as
well as an unforced reading, one of which will be factive,
the other nonfactive. For example

(293a) UPI reported that Smith had arrived

(293b) It was reported by UPI that Smith
had arrived

In neither of these sentences does the speaker take any
stand on the truth of the report; but

(293c) That Smith had arrived was
reported by UPI

"normally conveys the meaning that the speaker assumes the
report to be true" (ibid); Kiparsky and Kiparsky explain
this by saying that there is a general tendency for
sentence-initial clauses to get understood factively.
While I accept the general tendency, I disagree with the
assumption that (293c) is factive. Kiparsky and Kiparsky
say that the speaker <u>assumes</u> the report is true but –
remembering that they insist factivity depends on
presupposition – they appear, deliberately, to hold back
from saying that it is <u>presupposed</u> to be true. Of course,
they may be ascribing (as I do) to the same,
pretheoretical, view as Lyons (quoted on p 151 below) when
he says that ASSUME is more or less synonymous with
PRESUPPOSE. But whatever the Kiparskys' intentions,
(293c) is not factive; a speaker's commitment to the truth
of a proposition does not make that proposition true no
matter how strong the commitment, because the introduction
of a subjective element automatically reinforces the
relative nature (the relative factivity) of the
proposition (see discussion of subjectivity in Chapter
4.4). I would argue that (293c) is strongly biased
towards a factive interpretation without being strictly
factive; but that, for the purpose of everyday speech, it
is the 'almost factive', not the 'just nonfactive' element
of meaning that is significant.

It is worth repeating again (see above, pp 6 and 119)
Kiparsky and Kiparsky's observations that factivity is
relevant to much else in syntax besides sentential
complementation. The role of sentence-initial position is
one such example. Specific reference is another factor
closely related both semantically and syntactically to

truth. Factive verbs, ie those which presuppose that
their sentential object expresses a true proposition, also
presuppose that their nonsentential object refers to a
specific thing (ibid, p 167). For example

    (294a) I ignored an ant on my plate

    (294b) I imagined an ant on my plate

In (294a) the factive verb IGNORE presupposes that there
was a (specific) ant on my plate, but the nonfactive verb
IMAGINE in (294b) does not. Incidentally, replacing the
indefinite article with the definite article (see above,
p 119), as in

    (295a) I ignored the ant on my plate

    (295b) I imagined the ant on my plate

would increase the sense of specifically referring to a
particular ant, although the verb in (295b) would still
not presuppose that the specific ant being imagined was
actually on my plate.

The other interesting issue, from the point of the
present study, which Kiparsky and Kiparsky raise in their
article is that of emotivity. This, in their terminology,
is a semantic distinction which cuts orthogonally across
that of factivity (see Table 18 on p 142) and which, like
factivity, also has syntactic repercussions in sentential
complementation. Emotive predicates express the
subjective value of a proposition rather than its truth
value, and emotive complements are those in which the
speaker expresses a subjective, emotional or evaluative
reaction. Both factive and emotive complements, in other
words, express different kinds of speaker's (or subject's)
judgement[13] about the content of the complement sentence.
Of the syntactic properties associated with emotivity,
Kiparsky and Kiparsky list

    - Occurrence with for-to complements

    (296) It bothers me for John to have
    hallucinations

    (297) ?I regret for you to be in this fix

Personally, I find (297) unacceptable, and feel that
Kiparsky and Kiparsky's 'rule' tends to apply more readily

to emotive predicates which take subject rather than object clauses, such as

(298) It is instructive for him to watch

(299) It is a tragedy for him to live
like that

both of which are also factive; and nonfactive emotive predicates like

(300) It is nonsense for him to believe that

(301) It is vital for him to come

Certain emotive predicates can take <u>for-to</u> object clauses but they tend to be adjectival rather than verbal:

(302) I am eager for it to happen   )

(303) I am anxious for him to win   ) nonfactive

(304) ?I (would) prefer for him to win)

(305) *He resents for her to get the job)

(306) *I deplore for it to happen/   ) factive
to have happened   )

Kiparsky and Kiparsky say that <u>for-to</u> complements are limited to occurrence with emotive predicates, but they list LIKELY as a nonemotive (nonfactive) predicate and I would find

(307) ?It is likely for him to be late

marginally acceptable. Similarly, they cite PREDICT as a nonemotive predicate and BE PREDICTABLE is quite likely to occur with a <u>for-to</u> subject clause:

(308) It is predictable for that to happen

One can quite readily think of other nonemotive nonfactive adjectival predicates which are acceptable with this structure:

(309) It is conceivable for it to happen

- Emotives may optionally contain the subjunctive marker SHOULD (1970:171):

(310) It's interesting that you SHOULD
have said so

(311) *It's well known that you SHOULD
have said so

(312) I'm anxious that he (SHOULD) be found

(313) It's urgent that he (SHOULD) be found
(See discussion of 'putative' SHOULD, Chapter 4.3.1
below.)

 - Emotive complements can contain exclamatory degree
adverbs like AT ALL or unstressed SO, SUCH (ibid):

(314) It's interesting that he came
at all

(315) *It's well known that he came
at all

(316) It's crazy that he felt it so

(317) *It's clear that he felt it so
 - One of the conditions for relativisation by <u>as</u> is
that the clause be nonemotive (ibid):

(318) *As is interesting, John is
in India

(319) As is well known, John is in India
 In addition to the direct reference Kiparsky and
Kiparsky make to one (use of one) modal auxiliary (SHOULD)
in discussing emotivity, there is an interesting
connection between emotivity and modal - particularly
deontic - meanings (see pp 40-42 and 313). I agree with
Kiparsky and Kiparsky that sentences containing a
nonfactive predicate can be emotive, as can modalised
sentences. In other words, Rosenberg's Principle of
Emotional Reaction (see below, p 139) ignores the very
human ability to react emotionally to imagined or
predicted/dreaded/wished for events or states of affairs.
When Margaret Thatcher said in the 1979 General Election
campaign that

(320) We MUST cut tax on earnings

CO 9 79 (120)

(321) We MUST cut tax on pensioners'

income because that's a matter of

elementary justice

CO 9 79 (121)

(322) The answer MUST be not to put

tax on essentials

CO 9 79 (81)

each of the propositions contained in these sentences is
so clearly desirable that the deontic force of the modal
inevitably takes on an emotive flavour. Even making a
simple judgement of the truth of a proposition can become
emotive if the proposition itself has pejorative or
favourable overtones, eg

(323) That WILL be the postman now

when the postman's arrival has been long and eagerly
awaited; or

(324) We CAN'T let people lose their jobs

LA 6 79 (102)

where the emotive impact of unemployment adds a deontic
element - it isn't possible for us to/isn't possible that
we will let people lose their jobs, because of some moral
imperative.

Of course, this is moving into the realm of
pragmatics. The property of emotivity is to some extent a
result of pragmatic factors rather than just an inherent
semantic characteristic or, at least, it is strengthened
by co-occurrence with other semantic elements in the
sentence. Kiparsky and Kiparsky classify (BE) WELL KNOWN
as factive and nonemotive, but if used to contradict
someone or something this predicate could take on
considerable emotive (usually argumentative) overtones.
But for further discussion of the relationship between
modality, factivity, emotivity (and subjectivity) see
Chapter 4.4.

A few years after Kiparsky and Kiparsky's paper first
appeared, Lauri Karttunen published 'Some Observations on
Factivity' (1971) in which he pointed out "three types of
anomalies that present serious problems for the standard
analysis of factivity" (1971:55) according to which a
sentence with a factive predicate is said to presuppose
the truth of its complement sentence. His first objection
is that nobody quite knows what is meant by the term
'presupposition'. He then explains the three kinds of
anomalies:

(1) It is not always possible to think of the
presupposition as something that can be neatly separated
from the main sentence. It may be possible with a
sentence like

(325) ASSERTION: Bruce regrets that Sheila
is no longer young

PRESUPPOSITION: Sheila is no longer
young

But if the sentence contains a variable which is bound by
a quantifier outside the complement structure, as in

(326) Some senators regret that they voted
for the PAN

then the complement cannot be said to constitute an
independent proposition and cannot therefore be true or
false.[14]

(2) The main verb does not alone determine whether
the complement is actually presupposed to be true; the
mood of the main sentence and the type of complement
structure also have an effect. Poss-ing complements and
that complements, depending on a factive verb, behave
differently in "subjunctive" sentences (Karttunen's usage
- he would analyse sentences like (328b) as "subjunctive
conditionals" whereas I would prefer to describe them as
conditional or hypothetical sentences) than they do in
indicative ones.

(327a) That his dog is not a pedigree
bothers Harry

(327b) His dog's not being pedigree
bothers Harry

(328a) That his dog is not a pedigree
would bother Harry if he knew about it

(328b) His dog's not being pedigree would
bother Harry if he knew about it

(327a) and b) and (328a) are all factive. (328b) is not.
This is because poss-ing complements "may be used to
introduce a hypothetical state of affairs, and what is
presupposed there need not hold in the surrounding
context" (Karttunen, 1971:65). Harry, in (328b), might
not have a dog at all, mongrel or not.

In order to avoid regarding BOTHER as a factive verb
in the first two indicative sentences as well as in the
third sentence but not in the fourth, Karttunen argues
(ibid, p 61) that poss-ing constructions in a 'subjunctive
environment' should be analysed as "the antecedents of
subjunctive conditionals serving to introduce a
hypothetical situation"; that complements, on the other
hand, require truth in the actual world. Perkins (1980;
109 ff) makes a similar general point, viz that that
complements are generally concerned with 'factual' as
opposed to 'theoretical' meaning.

(3) The class of factive verbs is less uniform than
is usually believed; they do not all meet the same
criteria for factivity.

Karttunen recognises at least two distinct types of
factive verb, factives and semifactives. The standard
analysis of factivity predicts that presuppositions remain
constant over negative, interrogative and conditional
transformations; Karttunen points out that semifactives
lose their factivity in contexts that involve certain
modal operators such as questions and If clauses.[15]

(329) John didn't a) REGRET
                 b) REALISE
                 c) DISCOVER that he had
not told the truth

(330) Did you a) REGRET

b) REALISE

c) DISCOVER that you had

not told the truth?

(331) If I a) REGRET

b) REALISE

c) DISCOVER later that I have

not told the truth I will confess it to

everyone

All three main verbs in (329) meet the test of negation;
in (330), DISCOVER (and perhaps also REALISE) could be
interpreted nonfactively, ie as sincere requests for
information about the complement proposition; both
DISCOVER and REALISE have definitely lost their factivity
in (331).

Karttunen argues (ibid, p 64) that a conditional
sentence conversationally implies that, in the view of the
speaker, it is at least possible for the antecedent to
turn out to be true. According to this analysis (331a),
b) and c) conversationally imply the following sentences

(332) It is possible that I will

a) REGRET

b) REALISE

c) DISCOVER later that I have not told

the truth

From the fact that it is possible that I may regret
something, I can conclude that this something is in fact
the case. But I cannot draw the same conclusion from the
fact that it is possible that I may DISCOVER (or NOTICE,
FIND OUT, SEE, LEARN) something.

Karttunen perhaps overlooks certain indications in
the Kiparsky and Kiparsky paper that they did actually
recognise that the class of factive predicates was not
completely uniform. For example, they note (1970:166)
that certain verbs, eg EXPECT are 'indifferent' to
factivity and will be interpreted as factive or nonfactive

according to context; they also note (ibid, p 147) that
verbs like KNOW and REALISE are semantically factive
but syntactically nonfactive, ie cannot occur in factive
constructions like

(333) *I REALISE John's being here

(334) *I KNOW the fact that John is here

Kiparsky and Kiparsky do not, though, appear to realise
that REALISE is not in fact even semantically factive in a
context such as (331).

As for the semantic difference between true and
semifactives, Hooper (1975) defines it as follows

The true factives express a subjective
attitude about the complement proposition,
but semifactives describe processes of
knowing or coming to know.
(1975:117, my underlining)

This definition seems to me to hint at one obvious point
about semifactives and the contexts which prompt them to
lose their factivity - not mentioned by either Kiparsky
and Kiparsky or Karttunen - namely that the context often
refers to future time, ie is potential. Just as the
future is somehow more modal than past or present time, it
is also essentially nonfactive. The speaker/subject in
(331a) knows at the moment of speaking that he has not
told the truth; what is questioned is his subsequent
attitude to having done so. But in (331b) and c) any
decision on the truth or falsity of the proposition 'I
have not told the truth' is postponed until "later" - a
time which no-one really knows anything about and which
may never come. I have not pursued the issue, but it
seems striking to me that in various other future time
contexts semifactives behave quite differently, both
semantically and syntactically, than factives do, for
example

(335) Will you a) REGRET

b) *REALISE

c) *DISCOVER (later) not

having told the truth?

(336) Will you a) REGRET

                b) ?REALISE

                c) ?DISCOVER (later) that

you did not tell the truth?

Both sets of sentences are, of course, also interrogative.

Karttunen, then, rejects the standard analysis of factivity and prefers instead to characterise factivity in terms[16] of <u>commitment</u>. Factive sentences "carry along a commitment to the view that the complement proposition is true" (1971:63); whereas nonfactive predicates are 'noncommittal' (ibid, p 61) with regard to the truth/ factual status of the complement.

I disagree with Karttunen's choice of 'noncommittal' to describe nonfactive sentences. How can the following – all nonfactive – sentences accurately be described as noncommittal about the truth of their complements?

(337) It is a) IMPROBABLE

            b) UNLIKELY

            c) POSSIBLE

            d) LIKELY

            e) PROBABLE that it will happen

(338) I am a) RELUCTANT

             b) ANXIOUS that it should happen

The speaker of (337a) to e) is clearly committed to an explicit assessment of the probability of 'it' happening (or, at a higher level of abstraction, to an explicit assessment of the degree of truth he associates with the proposition 'it future happen'). The position is a little less obvious in (338). The speaker/subject has distinct views on the <u>desirability</u> of 'it'; in the case of (338a) I want it not to happen; in the case of (338b) I do want it to happen.[17] Nevertheless, it is true that what the speaker/subject wants does not necessarily have any bearing on the truth/actuality of 'it'. This is why deontic modality is less directly related to (non)factivity than epistemic modality (see Chapter 4).

In short, it seems to me that any explicit assessment of the probability of an event occurring or of a proposition being true cannot, by definition, be noncommittal. Even an assessment that the probability is 50/50 is not noncommittal, since the speaker/subject is still asserting, or committing himself to, a specific view.

With a nonfactive predicate (or a modal auxiliary), commitment to the truth of a proposition can be stronger or weaker but it can never be total. If one is totally committed to, or convinced of, the truth of something, there is no need to <u>assert</u> that commitment.[18] I have, therefore, adopted a slightly modified version of Kiparsky and Kiparsky's position, according to which nonfactives (and modals) <u>assert</u> - to varying degrees - and factives <u>presuppose</u> the truth of their complement proposition. But Karttunen's notion of commitment is useful, provided it acknowledges that, while factives carry total commitment, nonfactives can express varying degrees of commitment short of that; in other words, nonfactive verbs can be ranged on a scale, as can modal meanings.

Other aspects of Karttunen's analysis which fit in with my own approach are his recognition of the importance of contextual features (in his case, mood and complement type) in determining the factivity of a sentence; the scalar implications of the notion of commitment; and his acknowledgement of a class of semifactives, verbs which can be factive in one context and not in another. I see a clear parallel here with modal auxiliaries such as CAN and MAY which are usually nonfactive (ie do not presuppose the truth of their sentence proposition) as in

> (339) ... That type of party democracy
> CAN mean the end of parliamentary
> democracy
> PA 14 81 (117)

> (340) Whether I personally would approve
> of whatever the proportions MAY be, will
> be irrelevant
> PA 14 81 (584)

; but which can be interpreted factively in certain
contexts:

(341) Be quiet! I CAN hear someone coming

(342) It MAY be hot today, but I'm still

not letting you go without a coat

(ie 'even though it's hot today ...'.)
Note that the main clause of (342), standing alone, would
not presuppose that it is hot - it could be a prediction
made early in the morning about the day to come, ie about
the future. Nevertheless, MAY is compatible with a
factive interpretation in certain contexts. For
discussion of these and similar examples, see Chapter 4,
but it is interesting to observe here the parallel with
factive verbs: factive verbs, in certain contexts, can
lose their factivity; modal auxiliaries, similarly, can
lose their nonfactive status so that the sentences in
which they occur presuppose the truth of the proposition
expressed.

Rosenberg (1975) takes the importance of contextual
features a step further and criticises previous analyses
of factivity as an invariant logical property. He
considers, instead, that "pragmatic accounts of factivity
are superior to accounts of factivity in terms of
logically defined relations such as entailment and
presupposition"[19] (1975:485).

Among the 'pragmatic' factors which Rosenberg
considers crucial for presuppositions are

(i) Time

(ii) Person (of subject)

(iii) Complement type

(iv) Type of interrogative structure

(v) Emotivity

(vi) Sensory experience

I disagree with Rosenberg that all of these are
pragmatic features; (i) - (iv) are clearly grammatical,
part of the linguistic context and not a pragmatic factor
like, for example, the relationship between speaker and
addressee. Nevertheless, his general point, not

sufficiently acknowledged in earlier accounts of factivity, is well-made - namely that 'pragmatic' factors are as crucial for presupposition as any semantic material inherent in the verbal predicate.

Rosenberg examines many of his pragmatic factors in the context of what he calls the 'Principle of Emotional Reaction', which he states as follows

> People react emotionally to states and
> events that exist (rather than to non-
> existent, fictitious or hypothetical ones)
> (1975:478)

He argues (ibid p 484) that this principle goes a long way towards explaining why presuppositions are obtained for emotive predicates; but, as I observed above (p 130), it overlooks the fact that people often react emotionally to imagined or possible future events/states-of-affairs. Rosenberg does, however, acknowledge that people can react to things they believe to be true:

> In general, people's reactions are based
> on real situations that either they
> experience personally or that they <u>believe</u>
> to be true based on reports[20]
> (1975:477, my underlining)

This element of mistaken belief, or the difference in knowledge available to speaker and subject, explains why the bracketed complement in (343) is not presupposed for the <u>speaker</u>

> (343) John is angry that [the mail hasn't
> arrived yet], but he doesn't know that the
> maid picked it up ten minutes ago

A similar sentence could not be constructed with a first person subject because, in Rosenberg's words (ibid, p 478), such a sentence would mean that "I have an emotional reaction to X, a situation I know is not the case".[21]

Rosenberg explains the semantic behaviour of sensory predicates in an analagous way, in that "people's sensory experiences are construed as yielding correct data" - a conclusion which is "normal but not necessary" (ibid) as the following example shows

(344) John heard (that) the footsteps
were getting closer [but Jane just kept
turning up the volume control]

As an illustration of the effect time and the person
of the subject have on presupposition, Rosenberg looks at
Karttunen's example already quoted above as (331a). He
observes that (331a) has a first person subject and the
time adverbial LATER (compare my remarks on p 135), both
of which are "crucial to a presupposition judgement with
REGRET as is its emotivity" (ibid, p 476); Rosenberg then
gives examples of If sentences with first and third person
subjects with REGRET, but without LATER, which have non-
presuppositional readings.

Rosenberg considers that all of these factors can be
accounted for in terms of "two pragmatic principles that
interact with the meanings of certain predicates which
better explain why certain lexical items are normally
factive" (ibid, p 476); these two principles are
essentially Grice's conversational implicatures, and
general knowledge of the world.

My own position is that, while I fully agree on the
importance of what I prefer to call contextual features,
and recognise that such factors can occasionally cause a
normally factive predicate to be interpreted nonfactively
(or vice versa, in the case of modal auxiliaries),
nevertheless I consider that "semantics is logically prior
to pragmatics"; it is easier to work from "the abstract
logical sense of a sentence to its pragmatic force"
(Leech, 1980:81) than vice versa. It is for this reason
that the "inherent semantic material" (Rosenberg,
1975:475) of, say, a factive predicate or a modal
auxiliary needs to be established first, before its
interaction with pragmatic principles or contextual
features can usefully be examined. In previous analyses
of the meanings of the modal auxiliaries (see Chapter 2.2
and 2.3) it has been a common mistake to try to abstract a
list of meanings from the contexts in which the modals can
appear. It is my contention that it is more valuable
first to isolate the 'inherent semantic material' - that

is common to all (or virtually all) contexts - of all the modal auxiliaries, and then to examine how that meaning is modified in particular contexts.

Many other studies refer to Kiparsky and Kiparsky's work - Givon (1972), Lysvag (1975), Hooper (1975), Gazdar (1979), to name a few. They frequently offer their own modifications to the standard analysis. Peterson (1979), for example, points out that the Kiparskys' syntactic tests for factivity fail to predict all and only those predicates characterised as factive by the semantic test of preservation of presupposition through negation; whereas KNOW (as Kiparsky and Kiparsky realise) would be classified as factive according to semantic criteria, it would be nonfactive according to syntactic criteria. Peterson provides a new definition[22] (which I find unhelpful) or syntactic test which, he argues, predicts those predicates to be factive which pass the semantic test. He also notes that certain "communication" and "conjecture" verbs (presumably equivalent to the Kiparskys' Indifferent verbs, see Table 19) prove to be "half factive", ie are significantly ambiguous between factive and nonfactive uses.

I shall not go into detail about the various other modifications proposed. For the purpose of this study it is the general semantic concept of (non)factivity and the fact that it does have syntactic correspondences, which matter more than the details of those syntactic characteristics. Many of the syntactic tests for (non)factivity do not, in any case, apply to modalised sentences lacking the complement structures of factive or nonfactive predicates; and the defining syntactic characteristics of the modal auxiliaries as a set are already well established (see Chapter 2.1). It is the defining semantic characteristic(s) of the modals with which I am primarily concerned.

With the exception of the distinction drawn by Karttunen and subsequent authors between true and semifactives, there is relatively little dispute over the Kiparskys' original classification of predicates, illustrated in Table 18:

KIPARSKY AND KIPARSKY (1970): Classification of predicates

FACTIVE		NONFACTIVE	
significant	grasp	likely	allege
odd	comprehend	sure	assume
tragic	take into account	possible	claim
exciting	take into consideration	true	charge
relevant	bear in mind	false	maintain
matters	ignore	seems	believe
counts	make clear	appears	conclude
makes sense	mind	happens	conjecture
amuses	forget (about)	chances	intimate
bothers	deplore	turns out	deem
regret	resent	suppose	fancy
be aware (of)	care (about)	assert	figure

Table 17

EMOTIVE			NONEMOTIVE
	important	nauseate	well-known
F	crazy	exhilarate	clear
A	odd	defy comment	self evident
C	relevant	surpass belief	goes without saying
T	instructive	a tragedy	be aware (of)
I	sad	no laughing matter	bear in mind
V	suffice		make clear
E	bother	regret	forget
	alarm	resent	take into account
	fascinate	deplore	

N	improbable	willing	probable	say
O	unlikely	eager	likely	suppose
N	a pipedream		turn out	conclude
F	nonsense		seem	
A	urgent		imminent	
C	vital		in the works	
T	intend		predict	
I	prefer		anticipate	
V	reluctant		foresee	
E	anxious			

Table 18

Rather contrary to my expectations, Kiparsky and Kiparsky's category of verbs which occur 'indifferently' with factive and nonfactive complements does not correlate at all closely with Hooper's (1975) expanded list of Karttunen's semifactives (see Table 19):

SEMIFACTIVE PREDICATES (Karttunen; Hooper)	INDIFFERENT PREDICATES (Kiparsky and Kiparsky)
discover	acknowledge
find out	admit
learn	announce
note	anticipate
notice	deduce
observe	emphasise
perceive	report
realise	suspect
recall	
reveal	
see	
remember	remember

Table 19

The Kiparskys do not characterise their category of Indifferent verbs as carefully as Karttunen does his class of semifactives, ie no indication is given of the semantic effect of syntactic environment on these predicates. I understand Kiparsky and Kiparsky to mean that not all predicates can be categorised as either factive or nonfactive, but that some many be ambiguous with respect to this distinction.

It is worth noting that none of Perkins' (1980) modal expressions, listed in Table 20, are either factive or semifactive. To qualify as modal, these expressions have to be nonfactive - like the modal auxiliaries are.

This chapter seeks to explain actuality as well as factivity, although so far only the latter has been discussed because I consider it to be the superordinate,

PERKINS (1980)

Modal expressions incorporating non-verbally derived adjectives in the frame BE ... TO/THAT	Modal expressions incorporating verbally derived adjectives and participles in the frame BE ... TO/THAT	Modal lexical verbs
sure	alleged	affirm
certain	asserted	argue
likely	claimed	observe
	predicted	state
	said	
		calculate
possible	advised	estimate
necessary	asked	hypothesise
	demanded	regard
probable	forbidden	
	permitted	call
		declare
clear	assumed	nominate
apparent	believed	stipulate
evident	felt	
obvious	surmised	ask
	thought	command
imperative		prohibit
compulsory	desired	require
obligatory	feared	
	hoped	advise
legitimate		exhort
legal to	allowed	suggest
lawful	constrained	warn
etc	forced to	etc
	needed	
	obliged	
	required	
	etc	

Table 20

and therefore more widely applicable, term. The
relationship between the two is essentially simple: they
refer to different levels of abstraction.[23] <u>Factivity</u>
relates to (the truth of) propositions, ie is concerned
with third-order entities. <u>Actuality</u> relates to (the
occurrence of) events, ie is concerned with second-order
entities. Just as a proposition (p) may be true, false,
or accorded a relative truth value (eg it may be likely/
possible/improbable that it is true), so an event (e) may
be actual (ie have occurred or be occurring), nonactual,
or the possibility of its occurrence may still be
open/unverified. As already stated (see p 8) there is
clearly a direct relationship between the occurrence of an
event and the truth of the proposition which refers to it,
hence the closeness between actuality and factivity.

In the literature, only Palmer (1977, 1979, 1980)
consistently uses the term actuality when discussing
issues more often raised in papers on factivity; in his
most recent work (1986) on modality, this term is
supplanted by 'factuality' (see p 6). But he is primarily
concerned with the implications of actuality associated
with root (specifically dynamic) modality which I shall be
looking at in Chapter 4.3.3. For the moment, I intend
only to make a few general observations on the use and
scope of reference of the term actuality compared with
factivity.

According to Palmer (1977:5) actuality is "where the
event actually took place ... where the factual status of
the event is known". When actuality is implied, the
implication is that "the event did, does or will take
place" (1979:163). Obviously actuality is a much more
transparent term than factivity, but for the purpose of
the present study it has serious drawbacks, both
terminological and conceptual. Firstly, it has a more
limited scope of reference than factivity, being more
strictly bound to second-order entities than factivity is
to third, and cannot naturally be applied to epistemic
modality, for example. Secondly, actuality is
particularly time-bound, in that it frequently refers to

the <u>future</u> occurrence of events and, as Palmer points out (1979:164), "future actuality[24] is ... not actuality at all but another kind of modality" - and it would make no sense to try to analyse one kind of modality in terms of another. Thirdly, there is a deficiency in terminology associated with the concept of actuality; Palmer uses 'positive' and 'negative' actuality but there is no intermediate term with a scope of reference comparable to that covered by 'nonfactivity'; (I shall use 'not actual' in the next few pages - see also comparison of terms on p 158). This is a severe handicap because the system of modality - which is, after all, Palmer's primary concern, as well as mine - is particularly suited to draw fine semantic distinctions between events (and propositions) of an undetermined or relative occurrence/truth value[25]. Thus Palmer, having provided himself with only polar terms, has to use circumlocutions like 'with a strong implication of' either positive or negative actuality. Finally - and it is perhaps the most significant difference between the concepts of actuality and factivity - the extent to which each seems to be correlated with predictable syntactic characteristics varies. The semantic feature 'factive' is, as we have seen, associated with certain syntactic criteria; 'actual', on the other hand, appears to be more arbitrarily assigned to individual lexemes.

The implication of actuality has not been consistently related to syntactic characteristics nor to logically based semantic ones, although where logical grounds for the distribution of the semantic feature 'actual' do exist, they are adhered to. For example, (dynamic) COULDN'T is nonactual because 'negative ability' is logically inconsistent with 'positive actuality'. If he couldn't, he didn't - "negative possibility must always imply negative actuality" (Palmer, 1979:165).

    (345) He ran fast but COULDN'T catch
    the bus

Palmer does try to find a syntactically based explanation for the acceptability of (346) but not (347)

(346) I ran fast and was able to catch
the bus

(347) *I ran fast and COULD catch the bus
((346) is, of course, an 'actual' sentence, in that I did
catch the bus; it is therefore, in a certain sense,
comparable[26] to a factive sentence like

(348) It's clear that, by running fast,
I was able to catch the bus.)
For Palmer, the answer why (346) is well-formed and (347)
is not

... lies in the difference of the status
in the grammar of the language of CAN on
the one hand, and BE ABLE TO ... on the
other ... the modal auxiliaries form a
tight grammatical system, to which BE
ABLE TO does not belong ... It is not
surprising if the grammar of the language
affects the semantic possibilities, and if
CAN is more strictly modal in its semantics
than ... BE ABLE TO ... and so cannot be
used where the factual status of the event
is communicated.
(1977:6)

Perkins (1980:112 ff) offers a similar but more detailed
explanation, involving the internal grammar of the phrase
BE ABLE TO. He argues that since to predicate a state-of-
affairs by using the verb BE is to categorically assert
that state-of-affairs, the effect of BE in a modal phrase
is to categorically assert the modality expressed by it.
Consequently, whereas (349) merely expresses the nature of
Ali's ability at the age of 25, (350) claims that his
ability was actually realised

(349) Ali COULD defeat anyone he fought
with when he was 25

(350) Ali was able to defeat anyone he
fought with when he was 25

(350) is factive and actual; (349) is nonfactive - its
actuality is undetermined. Perkins concludes that the
'implication' of actuality conveyed by (350) but not by
(349) must derive from the contribution of BE to the
expression BE ABLE TO, since the semantic feature of
'actual' is not a constituent of the inherent meaning of
ABLE, since none of the following sentences

    (351) Ali looked able) to defeat anyone he
    (352) Ali seemed able) fought with when
    (353) Ali felt able)   he was 25

is actual.

Unfortunately for Perkins' argument, neither is a
sentence like (345) actual

    (354) Ali was capable of defeating anyone
    he fought with when he was 25

Using Perkins' terminology, BE CAPABLE OF signals an
objectifivation of the notion of ability (the objectivity
being a function of the fact that the modality itself is
actually asserted by the categorical BE) but it does not
assume that the ability was realised. The semantic
feature 'actual' cannot be predicted from the grammatical
characteristics of the internal structure of modal
expressions incorporating BE.

But nor can 'not actual' always be predicted for the
syntactically definable set of modal auxiliaries.
Accepting, for the moment, Palmer's statement
(eg 1979:110) that (volitional) WILL "always has the
implication of future actuality", while BE WILLING TO has
no implication of actuality, whereas the situation is
reversed with CAN and BE ABLE TO, then one could abstract
the following set of values[27]

    CAN (not actual)   BE ABLE TO (actual)
    WILL (actual)   BE WILLING TO (not actual)

But even this is too neat. Palmer elsewhere says
(1979:163) that CAN, too, often implies future actuality;
so if this implication is sufficiently strong to call WILL
actual, then it must at least question CAN's status - even
without considering the use of CAN with verbs of
sensation. Although I would (and will, see below, p 159)

argue that an <u>implication</u> of <u>future</u> actuality does not amount to being actual anyway; (as Palmer (1977:5) puts it, "future actuality does not involve factual status - for predicted events still may or may not take place"). Future events can be actualised but they cannot be actual.

There is no logical reason why, for example, BE ABLE TO should always be actual (Palmer would say, implies actuality[28] with past tense) whereas BE CAPABLE OF and (dynamic) CAN are not. Implications of this kind are not predictable (Palmer, 1977:6) either from inherent semantic properties or from syntactic characteristics. CAN, BE ABLE TO and BE CAPABLE OF all express the semantic notion of ability which may, equally logically, be either realised or not realised. Nevertheless, I disagree with Palmer that "to say that someone can do something does not imply that he will *do it*" *(1977:3); this is not the case* where the subject is in the first person. Conversational convention comes into play here, over-riding logic, so that the usual assumption if you hear someone say 'I CAN do it' is that they will do it; if the speaker wishes to avoid giving this impression he must add something like '... but I won't/it isn't convenient right now'. The same applies to volition, another dynamic modal concept, although here the implication of future actuality is usually (but not invariably) even stronger (see also discussion of Ability and Volition on pp 102 and 107 and Note 94 to Chapter 2).

Deontic modal meanings have a similar but not identical relationship with actuality. Giving someone permission to do something does not mean that he will do it; nor does obliging him to. This is, of course, closely bound up with the fact that the person giving the permission or imposing the obligation is not the one who will make the event occur. Nevertheless, you rarely give someone permission to do something he doesn't want to do (and has possibly even asked for permission to do); hence it is fairly likely that he will do it. Equally, the imposition of a strong moral obligation to do something

must increase the chances of it happening, even if it cannot guarantee it.

It is not, therefore, too surprising that the root meanings of the modal auxiliaries should sometimes be compatible with 'actual' contexts. However, the situation is different with epistemic modal meanings where there are no such conversational implications at work to strengthen the degree of relative factivity signalled by the modal auxiliary. I agree here with Palmer that "to say that it is possible that something is so, is not to imply that it is so" (1977:3). Speakers generally make "the strongest commitment for which [they] have epistemic warrant" (Lyons, quoted above, p 43). Therefore, to say that a proposition (p) MUST be true does not imply that (p) is true - it asserts that there is a strong possibility of (p) being true - and no normal addressee will infer that the speaker really intends to imply that he knows for a fact (p) is true (or he would have said so). There may be pragmatic reasons, eg politeness or syncophancy (see Note 25 to Chapter 3) for laying claim to less knowledge than one actually possesses, for example

> (355) - The earth is flat
>
> - Well, it MAY be, Professor, but
>
> many would disagree

But the principle stated by Lyons generally holds.

So nonfactivity is the fundamental semantic property of the modal auxiliaries. Modalised sentences do not presuppose the truth of the proposition they express; what they do is assert (with epistemic meanings) or imply (with root meanings) that (p) has a certain probability of being true, or the event referred to in the proposition of being actual. The proposition may turn out to be true or, more likely, the event may occur. But the point is that the modals may, in certain circumstances, be compatible with, but they rarely presuppose, a factual context.

This leads me into a discussion of terminology and concludes my brief survey of the literature on factivity (and actuality).

3.2 TERMS AND DEFINITIONS

The basic terminology is already established. But it
may be helpful to state explicitly how the various terms
will be used here.

3.2.1 Presupposition, Assertion and Implication

Karttunen (1971) suggests that nobody quite knows
what presupposition means. From a logical or
philosophical point of view he is probably correct. But
this is neither a philosophical study nor one primarily
about modal logic, and does not explore problems of either
logic or philosophy.

I use 'presupposition' in the everyday sense of to
take something for granted, but restrict it, for the
purpose of my analysis, to 'factive' presupposition,
ie taking the truth of something (a *proposition*) *for*
granted. Lyons calls this the pre-theoretical sense:

> ... the verb 'presuppose' in its pre-
> theoretical sense, is more or less
> synonymous with 'assume' ...
> (1977:600)

> Pre-theoretically ... what is presupposed
> is what the speaker takes for granted
> and assumes that the addressee will take
> for granted as part of the contextual
> background
> (1977:606)

In this usage, it is interdefinable with assertion. If
you, as speaker, take something for granted and expect it
to be so taken by your addressee, you will not need to
assert (or insist upon) it in any formally marked way. If
you have to assert your (degree of) commitment to the
truth of a proposition then, by definition, you and your
addressee are not taking its truth for granted.

Martin Joos (1964) makes a similar distinction
between 'Factual Assertion', where "the specified event
itself is asserted, and the assertion has truth value: it
is true or false" (1964:149), and 'Relative Assertion',

where "there is no such truth value with respect to the occurrence of the event, what is asserted is instead a specific <u>relation</u> between that event and the factual world, a set of <u>terms of admission</u> for allowing real world status" (ibid). Factual assertion equates to (factive) presupposition, where the former refers to the direct or unmarked form, and the latter to the indirect, marked or formally explicit form:

(356) FACTUAL ASSERTION: Sheila is sick

(357) (FACTIVE) PRESUPPOSITION: It is
sad that Sheila is sick

Relative Assertion (marked in the verb phrase by the presence of one of the modal auxiliaries) is Joos' term for what is elsewhere referred to simply as 'assertion':

(358) RELATIVE ASSERTION: Sheila may
be sick

(359) ASSERTION: It is possible that
Sheila is sick

(RELATIVE) ASSERTION		FACTUAL ASSERTION/ (FACTIVE) PRESUPPOSITION
←————————→		Direct
Sheila MIGHT be sick	Sheila MUST be sick	Sheila is sick
It is possible that Sheila is sick	It is certain that Sheila is sick	Indirect
I think that Sheila is sick	I maintain that Sheila is sick	It is sad that Sheila is sick

Table 21

Just as there are other types of presupposition, so
assertion need not always relate to the truth of a
proposition (or occurrence of an event). A factive
predicate, for example, presupposes the truth of its
complement proposition <u>and</u> makes some assertion about that
proposition, ie

(360) **Bruce is sad that Sheila is sick**

which presupposes that Sheila is sick, and asserts how
Bruce feels about that.

Modal auxiliaries, used epistemically, assert their
relative factivity. When used deontically or dynamically,
they <u>imply</u> that an event has a certain degree of
likelihood of occurring, by making some assertion about
(the subject and) that event, viz that the subject is able
to do it, willing to do it, obliged to do it or has
permission to do it. The relative actuality (the relative
likelihood of it occurring) is not directly asserted.

An <u>implication</u> is indirect. Again, I am using the
term in its everyday rather than logical sense, as does
Lyons:

> What is implicated is what the addressee
> can reasonably infer, but is not necessarily
> intended to infer, in the context in which
> the utterance occurs, from what is said or
> not said
> (1977:606)

For Palmer, too, the meaning of implication is "what a
reasonable hearer would infer from a reasonable speaker"
(1977:1), and is close to Grice's Implicature.

Lyons' notion of implication is also derived from
Grice. Lyons explains that implication rests upon a
distinction between two kinds of 'saying':

> SAY$_1$, ie to assert the proposition that
> SAY$_2$, ie to utter intelligible sounds
>
> For example, in saying$_1$ 'It is cold where
> one is (by saying$_2$ 'It is cold in here')
> one might mean, or <u>be implying</u>, that the
> heating should be turned up ... ie this
> additional information is <u>implicated</u>
> (1977:593, my underlining)

Grice distinguishes two kinds of Implicature, a term
which is intended to "cover some of the difference between
the broader, everyday notion of implication and the
narrower, philosophical notion of entailment" (Lyons,
1977:592):

> - Conventional implicature, which depends
> on something additional to what is truth
> conditional in the normal (ie conventional)
> meaning of words; and

> - Conversational implicature, which derives
> from a set of more general conditions, or
> 'maxims' which determine the proper conduct
> of conversation

As an example of the former type, Palmer lists a number of
conventional implicatures associated with the modals, eg
"Deontic CAN in assertion may be used more as a command
than simply to give permission" (1979:166). Examples of
the latter would be the general principles about ability
and (epistemic) commitment mentioned above (pp 149 and 150
respectively).

I am more interested in the latter than the former
type of implicature, and concentrate on implications
relating to the occurrence or non-occurrence of an event,
the truth or falsity of a proposition. Note that an
implication of actuality or factivity[29], however strong,
can never amount to (factive or actual) presupposition. I
therefore disagree with Palmer's use of implication where
he says, for example, that "CAN is not used if there is an
implication ... of actuality (ie that the event took
place) in the past because the factual status of the event
is known ..." (1980:91); to my mind, if the factual status
of the event is known, eg it is known to have occurred,
then there is actuality of the event, not an implication
of actuality. Similarly, for the following sentences

(361a) I COULD have done it if he'd been there

(361b) I COULDN'T have done it if he'd been there

it is not accurate to say "the implications are ... I was
unable/able to do it (respectively)" (1977:15). There is

no doubt in (361a) that I did not do it (ie there is
nonactuality of the event), nor in (361b) that I did
(ie the event is actual/did occur). It does not seem
appropriate to talk of 'implications' in such
circumstances. On the other hand, in both

> (362) He COULD do it (if he tried)

and

> (363) He COULD have committed the crime
>
> (I suppose)

there is an implication of actuality: in (362) the future
actualisation of the event is a possibility; and in (363)
it is a present possibility that he committed a past crime
(in both cases epistemic possibility and dynamic ability
are bound up closely together).

To recapitulate, factives presuppose the truth of a
proposition; modal auxiliaries, used epistemically, assert
the relative factivity of a proposition; used in a root
sense, modal auxiliaries generally[30] imply the relative
actuality of an event by making some assertion about the
relationship between the subject and the event. The
modals can make even very strong implications of factivity
or actuality, and remain nonfactive.

3.2.2 Factivity and related terms

Factivity is the presupposition of truth. Factive
predicates or factives such as REGRET or BE SIGNIFICANT[31]
presuppose the truth of the proposition expressed in their
complement, and make some assertion about that
proposition. Nonfactive predicates or nonfactives such as
ALLEGE or BE POSSIBLE assert that their complement
proposition has a relative (but specific, ie they are not
noncommittal) truth value. Semifactive predicates or
semifactives such as REALISE or DISCOVER lose their
factivity (and become nonfactive) in certain interrogative
and conditional environments.

Factives presuppose total commitment to the truth of
their complement proposition. Nonfactives assert a
specific degree of commitment to the truth of their
complement proposition. Relative factivity refers to the

degree of speaker's commitment to the truth of a
proposition (p) or - using factivity as the superordinate
term - to the occurrence of an event (e) expressed by a
nonfactive (or modalised) sentence; relative factivity may
be <u>strong</u>, ie with a strong bias towards a factive
interpretation, or <u>weak</u>.

Predicates can be classified as factive, nonfactive
or semifactive; they can also be indifferent to this
distinction (eg ADMIT, ANNOUNCE). A <u>predicate</u> is that
constituent of a clause or simple sentence which remains
after the subject is removed. Within the predicate, there
is a head word (lexeme), usually a verb or adjective,
which controls the types of complement that appear to its
right. (Strictly speaking, when examples of factives are
given, it is the head lexeme only, not the whole
predicate, which is listed.) Sentences, structures,
complements, clauses - even "things"[32] - have all been
described, by extension, as factive or nonfactive because
they contain, or depend upon, one or the other type of
predicate/head lexeme. (A sentence, clause or complement
could not, on the other hand, be described as semifactive
because a semifactive is by definition a predicate
which is factive in one syntactic context - where it would
have a factive complement, for example - and is nonfactive
in another - where the sentence containing it would be
nonfactive.)

Nouns can also be described as factive or nonfactive.
Examples of factive nouns (taken from Quirk et al
(1972:872-76)) are: FACT, MATTER, REPLY, ANSWER.
DISCOVERY and REALISATION could be classified as
semifactive nouns (although I have not read of anyone
doing so); but their interpretation as factive or
nonfactive would, of course, also be influenced by
features of the linguistic context, particularly choice of
an indefinite, or the definite article. Perkins (1980)
gives a full indication of the range of modal/nonfactive
nominal expressions.

One other useful term not yet defined is
<u>contrafactivity</u>, which is, in effect, negative factivity,

ie the presupposition that a proposition is false. (Note
that the equivalent term for second order entities is
nonactuality.) Lyons neatly points up the contrast
between nonfactivity and contrafactivity:

> The use of a nonfactive predicator commits
> the speaker to neither the truth nor the
> falsity of the proposition expressed by
> its complement clause ... [while a]
> contrafactive utterance ... commits the
> speaker ... to the falsity of the
> proposition ... expressed by one or
> more of its constituent clauses ...
> (1977:795)

Lyons gives as "the most obvious examples of contrafactive
utterances", wishes and unreal (or counter-factual)
conditionals with past time reference such as

> (364) It he had been to Paris, he WOULD
> have visited Montmartre
> (1977:795)

It seems that sentences, clauses and complements can
be <u>contrafactive</u> but there are no contrafactive lexical
verbs as such; to say 'I deny that X' would be to make a
(negative) assertion. If you want to presuppose the
falsity of the proposition 'John BE ill' you have to say

> (365) I'm glad John isn't ill

ie negate the complement so that, in fact, you are
presupposing the truth of a negative proposition.

Contrafactivity, then, can be asserted. More
interestingly, it would appear that modal auxiliaries can
presuppose the falsity of a proposition and make an
assertion about that (negative) fact, in other words, be
contrafactive. For example

> (366) He COULD/SHOULD have done it a) by now
>
> b) it's a shame
> he didn't

(366a) expresses epistemic modality with COULD or SHOULD
and is nonfactive (the speaker doesn't know whether he has
done it or not). The modal auxiliaries in (366b) are used
deontically (COULD might also be dynamic) and are

contrafactive (and, incidentally, would be stressed). The
additional clauses are only to disambiguate the deontic/
dynamic and epistemic uses - context alone could do this
in real conversation, where, in the case of b), SHOULD
would convey disapproval, and COULD something like
disappointment that 'it' was not done; (Palmer would call
this nonactuality rather than contrafactivity). The
relationship between modality and contrafactivity will be
further examined in Chapter 4.

I sometimes, after Palmer, mention the _factual_ status
of a sentence or complement, which can conveniently mean
either the truth/falsity of the proposition it expresses
or to the occurrence/non-occurrence of the event it refers
to. Generally, though, I stick to 'factivity' and related
terms.

3.2.3 Actuality and related terms

When a proposition is factive, it is presupposed to
be true. When an event is _actual_, it is presupposed to
have occurred or be occurring. Since the usual means of
coming to know that an event has taken place involves
physical rather than mental verification, _actuality_ is
often simply defined directly as the occurrence of an
event. If actuality is implied (and the root uses of the
modal auxiliaries do imply actuality), then the event is
not - at least not yet - actual. Nor is it _nonactual_,
which would mean that the event was known (or presupposed)
not to have occurred. The relationship to the 'third
order' terms defined in the previous section is therefore
as follows

    actuality//factivity

      actual//factive

   nonactual//contrafactive

       - //semifactive

       - //nonfactive

('-' = no term available; see above, p 146).

I occasionally use actuality and related terms in an
extended sense (see above, p 156) to apply to the whole

sentence, the clause or verb, but the everyday use of
'actual' and 'actually' tends to interfere (which is
another reason for preferring to use the superordinate
term factivity).

'Future actuality', a phrase used by Palmer (1979),
seems to me anomalous, as already indicated (see above,
pp 146 and 149). If a sentence implies the future
actualisation of the event, then it is nonfactive, though
its relative factivity is strong, ie it is biased towards
a factive rather than a contrafactive interpretation. I
will, however, make use of the term 'immediate
actualisation' in Chapter 4 to describe the relationship
between the modal and the event in sentences like

> (367) And in any case, if I MAY remind you,
> it was the last Conservative government
> that abolished the provisions under which
> certain groups of public services had to
> accept no-strike agreements
> PA 30 79 (238)

> (368) But MAY I say this: there's nothing
> wrong with elections
> PA 14 81 (702)

> (369) I MUST say it brings a lump to your
> throat
> CO 3 79 (140)

3.2.4 Semantics, Pragmatics, Context and Co-text

I have previously indicated (eg p 11, Note 13, and
p 140) that this study is primarily concerned with
semantic rather than pragmatic meaning. In other words, I
am interested in the semantic structure of sentences and
sentence units, specifically the modal auxiliaries, "in
abstraction from speaker and addressee" (Leech, 1980:80),
more than in pragmatic meaning which "deals with ...
meaning as it is interpreted interactively in a given
speech situation" (Leech, ibid). However, I shall be
concerned with features of the linguistic context (or

co-text). Throughout earlier Chapters, I have mentioned
the importance of <u>contextual features</u> such as time
reference, person, and negation in influencing the
relative factivity signalled by each modal auxiliary in a
given <u>utterance</u>, (where 'utterance' is defined as a unique
spatiotemporal realisation of a sentence). I am therefore
interested in contextual meaning (in the sense of formal
co-text) as well as in the 'abstract' core meaning or
inherent semantic material (insofar as meaning can be
context-free) of the modal auxiliaries. The pragmatic
<u>force</u> of an utterance will be taken into account only
where it has a bearing on the relative factivity of the
modal.

3.3   NONFACTIVE PREDICATES AND MODALISED SENTENCES

Having established that nonfactive predicates, unlike
their factive counterparts, do not presuppose the truth of
their embedded clause, asserting instead a degree of
commitment to its truth, I shall now argue that modalised
sentences behave semantically like nonfactive predicates;
I have already illustrated (in Chapter 3.1) certain ways
in which modalised sentences behave syntactially more like
nonfactive than factive predicates. But in proposing this
semantic correspondence, there is one basic syntactic
problem - modal auxiliaries do not take embedded clauses.

In making the comparison, then, the following
syntactic parallels will be assumed to hold: the sentence,
excluding the modal auxiliary, takes the place of the
embedded clause (sentential complement) in a factive or
nonfactive predicate. The sentence, including the modal
auxiliary, corresponds to the predicate. The modal
auxiliary corresponds to the head word of the predicate.
I am therefore assuming that a modalised sentence
corresponds to a nonfactive predicate. I am also, of
course, working on the assumption that it is illuminating
to consider the meanings of the modal auxiliaries from
this perspective, on the thrice-quoted[33] grounds that
factivity is relevant to much else in syntax besides
sentential complementation.

These correspondences can be illustrated as follows

(370) It is possible that it is raining
in Mexico City

(371) It MIGHT be raining in Mexico City

The embedded clause in (370), ie 'it is raining in Mexico City' equates to the sentence (371) minus the modal auxiliary, ie 'it ... be raining in Mexico City'. The nonfactive predicate[34] in (370) is '(BE) possible that it is raining in Mexico City', which corresponds to 'MIGHT be raining in Mexico City'. The proposition (p)[35] in both cases is 'it (PRESENT) be raining in Mexico City', and both sentences assert commitment to the possible truth of (p).

In (370) and (371) the subject of the sentence is dummy It and can be ignored. But, as observed above, pp 139-140, the role (or, rather, the person) of the subject can be a significant factor influencing the relative factivity signalled by the modal auxiliary/nonfactive verb. And here the syntactic behaviour of modalised sentences and nonfactive predicates again differs, with semantic consequences

(372) Bruce assumes that he will meet
up with Sheila in Guatemala

(373) Bruce SHOULD meet up with Sheila
in Guatemala

Ignoring, for my purpose, the semantic differences between ASSUME and (epistemic) SHOULD and focusing only on the fact that both signal a high degree of commitment to the truth of the same proposition (p_1) 'Bruce (FUTURE) meet up with Sheila in Guatemala', there are still semantic differences between the two sentences which can be explained in terms of the subject in each. In both cases 'Bruce' is the surface subject. But in (372) Bruce is the one making the (relative) commitment to the truth of (p_1), so that it would be perfectly acceptable for the speaker to add his own gloss, thus

(374) ... but he doesn't know that Sheila's
planning to be with Bob

The combination of (372) and (374) offers two different
views within the one sentence on the likelihood of (p_1)
being true.

However, in (373) Bruce, despite being the surface
subject, is not the one committing himself to the
probability of (p_1) being true. The speaker is the one
making the assessment and the commitment. Therefore (374)
added to (373) would sound distinctly odd, with the same
source offering two different assessments of the
probability of the same proposition being true.

There are, then, syntactic contexts in which
modalised sentences and nonfactive predicates behave in
semantically different ways. But this is only to be
expected given the different grammatical status of modal
auxiliaries and lexical (nonfactive) verbs. Even where
they do differ, it is interesting to note that the subject
- an important contextual factor influencing factivity -
plays a determining role in each case. So the underlying,
essentially semantic correspondence between modalised
sentences and nonfactive predicates is still valid, and
will be taken for granted in the next Chapter.

CHAPTER FOUR   <u>MODALITY AND FACTIVITY</u>

I have already defined modality as a semantic system expressed by the modal auxiliaries which enables a speaker[1] to signal the degree and indicate the nature of his commitment to the truth of a proposition or to the occurrence of an event (pp 42-3). Modality, therefore, is clearly concerned with the semantic concept of nonfactivity and judgements of relative factivity as defined in the previous Chapter.

Each modal auxiliary, in signalling the degree of commitment associated with the type of modality it indicates, eg epistemic possibility or deontic obligation, also interacts with various features of its linguistic context, so that the modalised sentence expresses a particular degree of bias towards a factive/actual (or contrafactive/nonactual) interpretation. This 'particular degree of bias' is its relative factivity (see above, pp 155-6). The relative factivity of any given token of a modal auxiliary is therefore determined by (i) the nature of the modality it indicates; (ii) the degree of commitment it signals, which is itself a function of (i) and the comparative scalar value within the set of modal auxiliaries capable of expressing the same type of modal meaning; and (iii) the interaction of (i) and (ii) with features of its immediate linguistic context.

This Chapter aims to show that there is a correspondence between the 'degrees of modality' discussed in Chapter 2.5 and the relative factivity or degree of commitment to the factual status of what is being said. The first section will discuss why the relationship with factivity varies according to the nature of the modal meaning, while the precise correspondences evidenced by individual examples will be examined in Chapter 4.3. The approach adopted in that section is to consider in turn instances of each of the three types of modal meaning established in Chapter 2.4.3 and 2.4.4, and to analyse their relative factivity in the light of interaction with

certain contextual features listed and discussed in
Chapter 4.2. I shall work on the assumption that the
majority of examples will be nonfactive. I therefore
concentrate on trying to explain those which seem to be of
determinate factual status, ie factive, actual,
contrafactive or nonactual. The analysis offered in
Chapter 4.3 will be selective rather than comprehensive; I
do not claim to cover every type of factual context in
which modal auxiliaries can appear, but only to indicate
that although nonfactivity remains their core meaning,
they can and do occur in contexts of determinate factual
status, and to seek to explain this in terms of the type
of modality expressed and features of the linguistic
context such as time reference, aspect or negation. In
such contexts the modal auxiliaries will be seen to be
semantically least modal. The final section of this
Chapter will summarise the results obtained and touch on
further lines for study suggested by my analysis.

4.1   THE NATURE OF THE RELATIONSHIP

It was indicated in Chapter 2 (p 77) that dynamic,
deontic and epistemic modality relate differently to
factivity; the point was illustrated with modal tokens
that can express more than one type of modal meaning in a
given sentence. In the examples offered ((156) and
(157)), deontic SHOULD have is contrafactive, whereas with
the epistemic interpretation it would be nonfactive
(biased towards factivity); dynamic COULD have is
contrafactive (the event is nonactual), while epistemic
COULD have is nonfactive with a positive bias again
towards factivity, but less strong than in the case of
SHOULD have. In both examples the epistemic
interpretation has a less determinate factual status than
the deontic or dynamic alternative.

One of the explanations for this seems to be related
to the root/epistemic distinction. Root meanings are
associated with second order entities, ie events, states
of affairs - fairly tangible things, the factual status of

which (particularly in the past, see Chapter 4.2) is more easily determined than in the case of third order entities which are the domain of epistemic meanings.

But in another sense, epistemic modality relates more directly to truth than deontic or dynamic modality does to actuality. This is because epistemic modals[2], like nonfactive verbs, assess the relative truth value of the propositional content of their sentence:

(375a) That CAN'T be a rednecked crane, but doesn't it look like one?

(375b) I doubt that's a rednecked crane, but you never know

(376a) That MIGHT be a rednecked crane, but don't they breed only in Japan?

(376b) That appears to be a rednecked crane, though it would be odd to find one here

(377a) That WILL be a rednecked crane; it's the right colour and this is its breeding ground

(377b) From its appearance and our geographical position, I conclude that that's a rednecked crane

Epistemic modality, then, relates directly to judgements of truth, like the notion of factivity.

Root modality, on the other hand, is concerned with currently nonactual events and their disposition towards occurrence. As explained above (p 153) deontic and dynamic modality assert some relationship between the subject or speaker and an event, thereby implying that the event has a certain degree of likelihood of occurring or being actualised. Deontic and dynamic modals, therefore, have an indirect relationship to factivity/actuality.

Lyons, discussing deontic modality only, makes the same
point

> ... the notion of truth is not ...
> irrelevant to the analysis of directives
> (the only class of deontically modalised
> utterances that we have so far been
> concerned with) but it applies less
> directly than it does in the analysis of
> subjectively or objectively [epistemic]
> modalised statements
> (1977:824)

> Deontic statements do not assert the
> potential occurrence of events ... what
> they assert is the actual existence of
> permissions and obligations ...
> (ibid p 834)

> ... [they indicate] the speaker's will
> or desire that something should be done
> (ibid p 848)

This less direct relationship between dynamic modality and
factivity explains why:

EPISTEMIC   (378) The road MAY be blocked = It is
POSSIBILITY   possible <u>that</u> the road is blocked

feels more immediate than

DYNAMIC   (379) The road CAN be blocked = It is
POSSIBILITY   possible <u>for</u> the road to be blocked

Leech (1971:76) calls the first sentence an example of
factual possibility and the second one of theoretical
possibility, arguing that (379) describes "a theoretical
conceivable happening, whereas [(378)] feels more
immediate because the actual likelihood of an event is
being considered". (379) does not assess the probability
of the road currently being blocked, in other words, it
only asserts that it would be possible to block it in some
unspecified time and on some unspecified occasion.

There is another, complementary way of looking at the
general relationship between the three types of modal

meaning and judgements about truth and actuality. We can
consider the three sets of principles characterising the
'possible worlds' (see above, p 74) defined by epistemic,
deontic and dynamic modality, ie rational, social and
natural (or physical) laws. Seen from this perspective,
one can generalise that human knowledge derived from
natural laws or physical observation is somehow held to be
more trustworthy than knowledge derived from rational
deduction; least dependable is 'knowledge' related to
social or moral principles, widely regarded as inherently
relative - one person's sense of a binding obligation is
another's faint inclination to do something. It is
easier, in other words, to decide and to come to general
agreement on whether an event has or has not occurred
(verifiable by physical observation) than whether it
'should' (or even 'should have done') or not, or than it
is to assess the relative truth of a proposition. This is
bound up with the fact that epistemic modality, in
everyday language, is usually subjective (see Chapter 4.4
for further discussion) and the "evidence" associated with
objective modality is generally considered to be "more
conclusive" than that associated with subjective modality
(Perkins, 1980:102).

Other authors have made similar observations:

There is an understandable feeling that
knowledge acquired indirectly, by inference,
is less certain than knowledge acquired by
direct experience
(Leech, 1971:72)

...[There is] a general conversational
principle by which indirect knowledge -
that is, knowledge based on logical
inferences - is valued less highly
than 'direct' knowledge that involves
no reasoning
(Karttunen, 1972:13)

So although epistemic modal meanings can be seen to relate
more directly to assessments of truth, they are less

likely than, in particular, dynamic meanings to be
credited with anything approaching 'absolute' status. And
this general conversational principle is in fact reflected
in the behaviour of the modal auxiliaries. Modals used to
express dynamic meanings can be compatible with - indeed,
in certain environments, actually signal - actuality:

> (380) I CAN hear the doorbell
>
> (381) John CAN swim
>
> (382) I COULD walk for miles when I was
>   younger

These three sentences are obviously actual in different
ways. (380) means I am hearing the doorbell now; (382)
means I used to be able to and did, on various occasions,
walk for miles in a specified past period of time; and
(381) means that John currently possesses the ability to
swim, not that he is doing so at the time of speaking.
Coates decides to describe an example like (381) as
factive

> on the grounds that speakers do not use
> this form of words unless they believe
> that (for example) [the subject] does
> swim. However, it could be argued that
> examples like this, with Iterative aspect,
> do not necessarily imply the truth of the
> main predication. It is, in fact, possible
> to contextualise (albeit tortuously) an
> utterance such as 'Jane can swim but she
> doesn't' (because she gave it up after her
> brother was drowned). In normal everyday
> language, however, it can be taken that
> examples of 'ability' CAN with Interative
> aspect are factive, since it is not likely
> that, if a person possesses an ability, he
> will not exercise it
> (1983:100)

Setting aside Coates' use of 'imply' (see Chapter 3.2.1,
p 154), this is a very clear illustration of the
flexibility of modal meanings. Most uses of the modals
are nonfactive but compatible with factive or

contrafactive interpretations in certain contexts; dynamic
CAN is most readily associated with actuality but here is
compatible with the (explicitly asserted) opposite
interpretation, nonactuality. Note that it is not Joan's
ability to swim that is denied, but the realisation or
actualisation of that ability.

Other, similar examples of factive CAN will be
discussed further in Chapter 4.3.3, but serve here to
illustrate the difference between dynamic uses of the
modals which may be actual, and epistemic uses which can
never[3] be factive (though they can, as we shall see, be
contrafactive) because the epistemically strongest
statement (see above, p 43) is a categorical assertion,
not a modalised sentence. Palmer (1977:3) points out, in
a rare comparison of dynamic and epistemic modal meanings,
that "epistemic CAN does not imply actuality", ie is never
factive. The positive form <u>can</u> is never used
epistemically anyway (see above, p 108, and below, p 292)
but the generalisation applies to all epistemic meanings.

Deontic modality behaves, in this respect, more like
epistemic than dynamic modality. There is in English no
means of expressing within the modal system an explicit,
totally binding obligation or prohibition

    (383) You MUST not feed the animals[4]

According to non-verbal context, (383) may have the force
of a plea rather than a command. Both logic and
experience prove that one does not always take advantage
of permission, nor fulfil all obligations (see above,
p 149). Social, like rational principles, tend to be
perceived as less 'absolute' than physical laws.

Another sense in which deontic modal meanings behave
more like epistemic than dynamic ones was prefigured in
Chapter 2.5. It is more difficult to place dynamic
meanings such as 'potential', 'hope', 'capacity',
'desire'[5] on a factive-nonfactive-contrafactive scale,
than it is to grade in this way epistemic or deontic
meanings. 'Necessity' is clearly more positively biased
towards factivity than 'possibility', just as 'obligation'
is stronger than 'permission' and is more positively

biased (albeit indirectly) towards actuality. 'Ability'
and 'volition', on the other hand, are related more
idosyncratically to actuality.

But I would not go as far as Leech (who, in 1969,
proposed an analysis of certain modal meanings in terms of
an 'actuality' or 'fulfilment' "formator" which he
introduced to explain the difference between the notion of
"causation" - which is $+\psi$ - and that of "authority" -
which is $-\psi$) in saying that the "actual circumstances
determining ... [an implication of fulfilment] are obscure
and may[6] remain so for the purpose of this study"
(1969:206). Later he says that "in English, there are no
general rules determining the syntactic expression of an
'actual' predication" (ibid p 210). This seems to me both
an inaccurate and an unnecessarily pessimistic attitude.
Kiparsky and Kiparsky have demonstrated that certain
syntactic constructions are indeed associated with
factivity and nonfactivity respectively; and one of the
aims of the present study - as listed in the Introduction
- is to show that certain types (and degrees) of modal
meaning, combined with certain contextual features, are
also significantly related to the factive interpretation
of a modalised utterance.

Relative factivity, then, varies according to the
nature (or type) and degree of modality signalled by the
auxiliary. Some of the other factors which serve to
determine the precise degree of factivity associated with
a particular modal token include:

- logical implications, which, for example, provide an
explanation for the determinate factual status with which
dynamic uses of the modal auxiliaries are sometimes
compatible;

- pragmatic factors, such as the authority of the
speaker, which affect the relative factivity of deontic
modal meanings in particular;

- perceptions of the subjective or objective nature of
the modality expressed;

- conversational implications, which offer a clue to the
strength of the implication of factivity in certain cases;

modal meanings lend themselves readily to use in indirect
speech acts, for example, because "the sincerity
conditions that are asserted or questioned in the
performance of indirect illocutionary acts [so-called
indirect speech acts] all have to do with the knowledge,
beliefs, will and abilities of the participants; and these
... are the factors which are involved in epistemic and
deontic modality". (Lyons, 1977:785).

In the course of the analyses offered in Chapter 4.3,
I shall mention these factors. But the next section is
devoted to what I consider the most important factor
influencing the relative factivity of a given modal token
- features of the linguistic context. These features will
be seen to interact differently with each of the three
types of modality, but in each case they contribute to the
relative factivity associated with the modal auxiliary. I
consider them the most important factor because this is
essentially a grammatical study and all of the above
mentioned elements belong more to the realm of pragmatics
than to that of grammar, syntax or semantics.

4.2   THE IMPORTANCE OF CONTEXTUAL FEATURES

The interdependence of modal meanings and
contextual features such as aspect,
agentivity and negation has been assumed
(but largely on intuitive grounds) in
many previous studies
(Coates and Leech, 1979:23)

Coates and Leech examine various contextual features in
terms of their significance for the root/epistemic
distinction, as was done on pp 59-70 above. Their aim was
to build up "a quantitative profile" of each modal,
listing all "significant correlations" with particular
contextual features, which would then play a corroborative
role in the semantic classification of modal auxiliary
tokens. In this they considered themselves successful
(but see the reservations voiced on p 70 above),
establishing that "the variables Agentive verb, Animate

subject, Negation and Passive voice co-occur significantly with root meaning. [However] the implication values of these variables are usually lower than those found with variables associated with epistemic meaning [such as] Existential subject, Aspect (Progressive and Perfective) and Quasimodal verbs [eg HAVE TO]"; an association is also established between epistemic meaning and stative verbs, but with a lower probability (or implication) value. (Coates and Leech, ibid pp 28-29).

These correlations seemed sufficiently strong to suggest to me that it would be worth looking at the same (or similar) contextual features in terms of their impact on the relative factivity associated with a given modal token. My reasoning was that if such linguistic features and modal meanings are indeed interdependent, then they must have a significant effect upon the most basic meaning shared by all the modals, ie nonfactivity.

In view of my own rather different focus on the importance of contextual features for modal meaning, and working in the first instance from an intuitive feeling about which might influence relative factivity more, I selected a slightly differently structured list of features to examine:

      i) Time and aspect
     ii) Negation and interrogation
    iii) Agentivity
     iv) Conditionality
      v) Pragmatic factors

Of the seven features discussed in Chapter 2.4.3, I exclude voice, nature of subject and of verb - or rather, I consider them under the more general heading 'agentivity' insofar as they are relevant to relative factivity. If clauses I regard as one example of conditionality.

One omission deserves special mention. Prosodic and paralinguistic expressions of modality - stress and intonation, raising one's eyebrows or shrugging one's shoulders - do not come within the scope of this study. I recognise that they have a significant influence on modal

meaning; Coates (1980b:340), for example, points out that the "combination of onset and nuclear stress occurs typically with examples of epistemic OUGHT TO, but is unusual with non .epistemic (dynamic) OUGHT TO", and I do in fact occasionally make use of this typical feature to disambiguate modal auxiliary tokens. I also recognise that prosodic and paralinguistic features can have a significant impact on the relative factivity associated with a particular modalised utterance. For example,

> (384) You think John MUST come tonight,
>
> do you?

gives quite a different impression of the speaker's judgement of the likelihood of John's coming - and of his opinion of the subject's judgement - if uttered with marked prosidic features than if used to ask a straight question about the addressee's epistemic (possibly deontic) judgement, with unmarked prosodic features. There are of course other factors at work as well (note the interrogative structure for example), in particular the evidently subjective nature of the modality expressed and its emotive (not to say pejorative) overtones, issues which will be touched upon in Chapter 4.4 But in general, analysis of the semantic significance of stress and intonation patterns is outside the scope of the present study.

I shall, therefore, look at each of the five mentioned features in turn,[7] concentrating in this section on their general effect on relative factivity according to the nature of the modality expressed by the auxiliary, and in the next (Chapter 4.3), on their specific influence in individual examples.

(i) Time and aspect

It would seem a logical assumption that aspect, concerned as it is with concepts like (in)completion and (limited) duration, must influence the relative factivity of the modal auxiliary with which it is combined. Analysis of the interaction between the modals and aspect (eg Macaulay, 1971: Chapter VII) has usually focused on

the restricted occurrence of progressive and perfective
aspect with root meanings (see above, pp 59-60),as have
studies of modality which consider aspect. I offered
(ibid) a pragmatic explanation in terms of temporal
reference for why root modality rarely occurs with
aspectual marking. Similarly, I take the view that it is
not aspect alone, but aspect combined (as it is) with time
reference that is significant for relative factivity.

Nevertheless, there are a few points worth making
about the influence on relative factivity of aspect
considered on its own. Firstly, it is relevant that
progressive and perfective aspect (whatever the period of
time - past, present or future - referred to) occur most
freely with epistemic meanings, which, unlike say the
dynamic meaning of ability, are not inclined to lose their
non-factivity. It is as though epistemic modality is
'strong' enough to impose a nonfactive reading and
overcome the usual meanings associated with aspect which
do assume that the event referred to in the propositional
content of the sentence took or is taking place, albeit in
some 'qualified' way, eg by currently occurring, but
temporarily, or by being past but with current relevant.
The addition of any epistemic modal to a verb phrase (VP)
marked for aspect has the effect of turning a categorical
assertion into a relative assertion[8], ie with nonfactive
status; modal (epistemic) meaning in this sense
'over-rides' aspectual meaning. It also has the effect of
reducing the number of aspectual distinctions that can be
made formally. When the VP contains a modal, there is no
way of making formally explicit the difference between a
present and a past perfect, not between a present and past
perfect progressive, although the distinction between a
present and a past progressive is maintained, as the
following examples show

	(385a) Mrs Thatcher has won the election (Norman Tebbitt is smiling)
PRESENT PERFECT	(385b) Mrs Thatcher MUST have won the election (Norman Tebbitt is smiling)
	(386a) Mrs Thatcher had won the election (before the campaign was over)
PAST PERFECT	(386b) Mrs Thatcher MUST have won the election (before the campaign was over)
	(387a) Mr Kinnock is gaining in the opinion polls (every day)
PRESENT PROGRESSIVE	(387b) Mr Kinnock MUST be gaining in the opinion polls (every day)
	(388a) Mr Kinnock was gaining in the opinion polls (until this incident)
PAST PROGRESSIVE	(388b) Mr Kinnock MUST have been gaining in the opinion polls (until this incident)
	(389a) Dr Owen has been campaigning hard (all this week)
PRESENT PERFECT PROGRESSIVE	(389b) Dr Owen MUST have been campaining hard (all this week)
	(390a) Dr Owen had been campaigning hard (before he lost his voice)
PAST PERFECT PROGRESSIVE	(390b) Dr Owen MUST have been campaigning hard (before he lost his voice)

Notice that in each pair of sentences a) would be perfectly acceptable as a complete sentence in itself without the bracketed material, whereas b) would be somehow incomplete. In each example, b) implies the

existence of a 'because', a causal element, ie the logical grounds on which the deduction has been made that (p) is strongly likely to be true. In (385b), the evidence is a smiling Mr Tebbitt; in the other examples, the only explicit specification of the context is its temporal reference. Where the time reference is past, the absence of a logical 'cause' is felt most strongly.

Another generalisation that can be made about aspect and modality relates to dynamic CAN which, when combined with verbs of sensation (and, significantly, a first personal singular subject, see pp 194-197 below) functions rather like a suppletive for the progressive marker BE-ing (see Quirk and Greenbaum (1973:53), and reference to Boyd and Thorne (1969) on p 292).

     (391a) *I am seeing the moon

     (391b) I CAN see the moon

Palmer (1986:75) makes a more general observation about the connection between sensation and modality, pointing out that "English does not normally present information about sensation with simple declarative statements, but chooses instead to use a form that is much less categorical". Nevertheless, a sentence like (391b) means that "the speaker has the sensation, not that he has the ability to have it". Dynamic CAN seems to fulfil a similar function with many (but not all) of the verbs of inert perception and cognition listed by Quirk et al (1972:96) which, in their stative use, do not permit progressive aspect

     (392a) *I am believing that!

     (392b) I CAN believe that!

     (393a) *I am seeing what you mean

     (393b) I CAN see what you mean

     (394a) *I am understanding your point of view

     (394b) I CAN understand your point of view

In all of these examples CAN means something like 'I am able to and am actually doing so' which is not far from the meaning of 'present but temporary or of limited

duration' that progressive aspect contributes to a VP in
which the head verb is dynamic rather than stative.

      (395a) Johann plays the piano

      (395b) Johann is playing the piano

Leech (1971:70) puts it this way:

> With verbs of inert perception [feel, hear,
> see, smell, taste] and inert cognition [know,
> suppose, understand, believe, forget, hope,
> imagine] ... there is really no difference
> between ability and accomplishment, so <u>can</u>
> tends to lose its distinctive modal meaning.
> 'I can remember' scarcely differs from 'I
> remember' ... With verbs of inert perception
> ... <u>can</u> not only loses its modal value, but has
> the additional special function of denoting a
> state rather than an event. As the simple
> present with these verbs has only an
> 'instantaneous' meaning ... the main
> difference between 'I can hear' and 'I hear'
> ... is one of 'state of perception' versus
> 'momentary perception'.

Where the verb is neither stative nor one of sensation,
inert perception or cognition, and the marker of
progressive aspect is acceptable, as in (395), then CAN
may also be used but with a meaning closer to that·of the
simple VP than the VP marked for aspect. For example

      (395c) Johann CAN play the piano

means that he knows how to - possesses the ability to -
play the piano, not that he is currently doing so (see p 168).

      WOULD can also be aspectual in effect (Quirk and
Greenbaum, 1973:53). It is compatible with the sort of
'past plus current relevance ' context usually associated
with perfective aspect

      (396) Hitherto) he WOULD always have done
             Up to now) it willingly

WOULD can also signal some of the meanings associated with
the past progressive, eg characteristic activity[9]

      (397a) Sarah was always arriving late

      (397b) Sarah WOULD always arrive late

Quirk et al (1972:93 Note) point out that the verbs KEEP (ON), GO ON etc have a similar function to the regular progressive auxiliary BE. WOULD can take the place of the whole BE -ing structure

    (398a) He was always asking silly questions

    (398b) He always kept on asking silly questions

    (398c) He WOULD always ask silly questions

The fact that

    (398d) ?He WOULD always be asking silly questions

is also acceptable, if only marginally according to dialect or idiolect[10], is indicative of the compatibility of the meaning expressed by WOULD and the past progressive; (389d) is a more emphatic version of (398c).

But the interaction of <u>time</u> with modality runs far deeper than the effect of aspect on modal meaning. Indeed, looking at modality from a 'possible worlds' framework (see above, p 74) "time can be regarded as a modality in its own right insofar as a noncurrent state of the actual world may be understood in terms of its existence in a world which differs from the current actual world" (Perkins, 1980:169); Lyons (1977:820) at one point describes tense as a specific kind of modality.

It is, of course, important to distinguish the grammatical category of tense from temporal reference. English, strictly speaking, has no future tense - although it has a number of ways of referring to future time. The -ED morpheme or marker of past tense is regularly used to signal various kinds of remoteness; in Joos' terminology (1964) there are only two tenses, actual and remote. There are essentially two kinds of remoteness in this analysis - past and unreality. Examples of the unreal use of the past tense are

    (399) If I tried that, I'D fail

    (400) I wish I lived in London

It can also signal, for example, greater politeness

    (401) I thought I'D give you a hand

All three examples can be seen as expressing a kind of 'modal remoteness' (Lyons, 1977:819).

If we consider time from the point of view of
factivity, then the past is clearly the period of time
which is most factual - it is easier to 'know' whether
something has happened, than whether it is happening or is
about to happen; the future is obviously the least factual
period of time, with the present somewhere in between.
The future, in other words, is 'potential' by comparison
with present or past time which are 'actual(ised)' or
'realised'. Many authors have made similar observations.
Tregidgo (1982:86), for example, says that "the future,
unlike the present or past, can never be confirmed until
it is no longer future"; any modalised utterance which
refers to future time must therefore be nonfactive.
Coates (1983:91) puts the general point across very
clearly when she says simply that "factivity is very much
tied up with the time reference of the main predication".

In certain circumstances , the
grammatical category of past tense may be used to convert
a nonfactive into a contrafactive utterance. Lyons
(1977:818) makes the point most clearly, although I
dispute his second example ; see also p 309c below.

    (402) If he hadn't missed the plane, he
WOULD now be in London

    (403) ?If he hadn't missed the plane, he
WILL now be in LONDON

    (404) If he hasn't missed the plane, he
WILL now be in London

WOULD in (402) is clearly contrafactive - he is <u>not</u> now in
London (because he <u>did</u> miss the plane). Lyons offers
(403) as the nonfactive equivalent of (402); but I find it
a non-acceptable sentence. In my use of English, the non-
factive equivalent of (402) would have to be an open
condition, as in (404).

    Accepting (with qualifications) the conventional
tripartite division into past, present and future, Lyons
(ibid, p 820) characterises each in terms of a combination
of remoteness and factivity, as follows

Past   - remoteness and factivity

Present - nonremoteness and factivity

Future   - (?) nonremoteness and nonfactivity

This last, which I have queried, is surely a mistake
(repeated in Perkins, 1980:173). The meaning of 'future'
must be a product of remoteness and nonfactivity[11].

The factivity (or, in the case of the future,
nonfactivity) associated with time reference must
therefore have an effect on the relative factivity of
modal meanings when the two are combined. Hence modal
meanings are more likely to be of determinate factual
status when they have past time reference. And when they
are in a negative past time environment they are
particularly likely to be contrafactive, on the general
grounds that it is easier to disprove something
(especially in the past) than it is to prove it.

Leech (1971:106 ff) explores the influence of time on
modality in the context of hypothetical meaning. Looking
at 'Meaning and the English Verb', Leech argues that
Modern English, instead of making use of the semantic
contrast between subjunctive and indicative moods,
distinguishes between factual, theoretical and
hypothetical meaning. The modal auxiliaries, of course,
feature in the realms of theoretical and hypothetical
meaning. Factual sentences are described as "truth
committed"; theoretical sentences are "truth neutral";
hypothetical constructions imply "negative truth
commitment", but this can be weakened. Leech is, in
effect, operating with a factive/nonfactive/contrafactive
classification.

Significantly, time reference is the factor which can
weaken the negative truth commitment of hypothetical
meaning - "the exact interpretation varies in accordance
with past, present and future time". Reference to
imaginary past events has the categorical sense of
contrary to fact "since it is not difficult to have
definite knowledge of past events". Leech gives the
example

(405) If your father had caught us, he

WOULD have been furious

(405), like (402), is contrafactive. Both are unreal past
conditionals. (402), because of the negative in the if
clause, says that if X hadn't happened, Y would have
happened - but he did miss the plane so he isn't now in
London; (405) says that if X had happened, Y would have
followed - but he didn't catch us so he isn't/wasn't
furious.

Nonpast imaginary happenings do not usually have such
'uncompromising' implications. In the present, the sense
is contrary to assumption:

(406) If you really loved me, you WOULD

buy me everything I want (but I assume that

you don't love me)

; in the future, it is weakened further to contrary to
expectation:

(407)[12] If it snowed tomorrow, the match

WOULD have to be cancelled (but I don't

expect it will snow)

Palmer, in the course of his various discussions of
(dynamic) modality and actuality (1977; 1979:163-165;
1980), comes to the conclusion that the problematic
occurrences of dynamic CAN/COULD[13] and WILL/WOULD implying
actuality can be explained principally in terms of
temporal reference (and negation). The facts of usage he
is seeking to explain are as follows

(a) past tense positive COULD and WOULD
cannot be used to refer to a single action in the past,
where actuality would be implied[14]:

(408) *I ran fast and COULD catch the bus

(409) *I asked him and he WOULD come

(b) negative COULDN'T and WOULDN'T are acceptable in
such an environment, where they clearly deny the actuality
of the event:

(410) I ran fast but COULDN'T catch the bus

(411) I asked him but he WOULDN'T come

(c) COULD and WOULD may be used where there is
reference to habitual or repeated actions:

(412a) I used to run fast and COULD always
catch the bus

(413a) I used to ask him and he WOULD
(always) come

(d) even with present time reference, CAN is less
likely to be used (than BE ABLE TO) if there is the strong
implication of actuality:

(414) In this way we are able to carry
out research

(415) ?In this way we CAN carry out research

(e) dynamic CAN often and (volitional) WILL always
imply future actuality:

(416) Liverpool CAN win the cup next year

(417) Everton WILL win the cup next year

(a), (d) and (c) can be explained in terms of the factual
status associated with past, present and future time
respectively, as described above (p 180). (408) and (409)
are unacceptable because the factual status of a past,
single event is too determinate to be compatible with the
essentially nonfactive concepts of ability and volition.
Present events, too, tend to have a readily determined
factual status, hence (414) is preferred over (415).
There is no problem about using CAN in a sentence like
(416) with future time reference since the future, as was
noted on p 180, is itself nonfactive; there is, therefore,
no incompatibility between the relative factivity (ie
nonfactive, biased to a factive interpretation) of CAN and
the future time reference.

(b) is explicable in terms of the logical implication
following from the negation of ability (see above, p 146
and pp 187-193 below).

Palmer provides no explanation for the acceptability
of (412a) and (413a). My own, tentative, account would
relate this use of COULD and WOULD to aspectual meaning.
Both auxiliaries, used to express dynamic modal meanings,
are compatible with a factive interpretation when [15] (i)
they have past time reference, and (ii) they signal

characteristic activity, a meaning usually associated with past progressive aspect. Note that CATCH and COME can only have habitual rather than iterative uses in the contexts given and so do not permit the grammatical marker of progressive aspect[16]:

> (412b) *I used to run fast and was always catching the bus

> (413b) *I used to ask him and he was always coming

So this may be another example of modal auxiliaries functioning with aspectual meaning. Without going so far as to say that this meaning is still essentially nonfactive, it is interesting that all the examples of such usage given so far (ie (396), (412a) and (413a)) assume that the activity in question is no longer continuing; it is, in other words, currently nonactual and was only true, or actual, in a remote (ie past) sense.

(ii) Negation and interrogation

Negation and interrogation can both be regarded as nonassertion (cf Quirk et al, 1972:54) in that, for example, a yes/no question normally challenges the validity of a proposition and can be either positive or negative - CAN you do it? CAN'T you do it? - while negation rejects the proposition. It is therefore convenient to deal with both together, although from the point of view of their interaction with relative factivity, negation has the more definite effect on the meanings of the modal auxiliaries[17], as could be predicted from its semantics.

The main function of language associated with the syntactic class of interrogative sentences is to ask questions. Questions may be defined semantically as "the expression of a speaker's ignorance or doubt with regard to the truth of a proposition or the actuality of a state of affairs" (Perkins, 1980:177). Questions can therefore be considered a means of conveying modality. (The formal realisations associated with questions, ie interrogative

structures, should not, however, be regarded as exclusively modal devices - see below, p 187.) From this semantic definition it would appear that questions must be nonfactive, ie because they cast doubt upon the truth of a proposition rather than presupposing it. In fact, as we shall see, this holds for epistemic and dynamic modalised utterances, but not for deontic modal meanings in certain contexts (see below, p 185). Generally though, interrogative structure serves to reinforce the nonfactive status of a modalised utterance, doing so by focusing on either the nature or the degree of the modality expressed

(418a) The Conservatives MIGHT win the
next General Election

(418b) MIGHT the Conservative win the next
General Election?

(418b) could be querying that the (epistemic) possibility of the Conservatives winning even exists, expecting the answer 'No', in which case one appropriate reply would be, 'No, no chance'; or the focus could be on the degree of probability of the party doing so - in effect, querying the relative factivity associated with the auxiliary MIGHT - when the answer could well be, 'Not only MIGHT, they WILL'. (It would also be possible for the speaker to be asking, say, the former question, and the addressee - wilfully or mistakenly - to answer as if it were the latter. But this sort of speculation goes well into the realm of pragmatics and will not be pursued here.) This focus of interrogation is not formally marked; the semantic distinction is contextually determined. But, under whatever interpretation, the nonfactivity of the utterance is reinforced by the interrogative structure.

The introduction of an interrogative element cannot make a nonfactive use of a modal auxiliary either factive or contrafactive. What it can do is question the factivity of an otherwise factive dynamic modal; the operation usually involves a significant change from first to second person subject

(419a) I CAN see the volcanoes

(419b) CAN you see the volcanoes?

(419a) is factive; it means I am seeing the volcanoes
now[18]. (419b) is nonfactive - the actuality of the event
'You (present) see the volcanoes' is not taken for
granted.

Interrogative structure can also affect the
factivity of a positive or negative deontic modal with
past time reference.

(420a) You OUGHT TO have done it

(420b) OUGHT you TO have done it?

(421a) You OUGHTN'T TO have done it

(421b) OUGHTN'T you TO have done it?

In each pair, the a) example is of determinate factual
status; OUGHT TO is contrafactive in (420a) - the speaker
is taking it for granted that you have not done it, and
making a deontic judgement about the state of affairs.
The speaker in (421a) is equally exercised about the fact
that you have done it. The interrogative b) examples, by
contrast, are less definite. (420b) is compatible with at
least two interpretations (i) you didn't do it but the
speaker thinks you ought to have done, (ii) you did do it
and the speaker thinks you shouldn't have done. (The
extent to which the speaker is genuinely asking the
addressee for his deontic judgement - rather than
expressing his own opinion but choosing to do so in
question form for reasons of, for example, politeness or
deference - will vary; see brief discussion of indirect
speech acts, p 187 below.) One could therefore argue that
(420b) can have either (i) a contrafactive or (ii) a
factive reading; but the important point about each
interpretation is that the focus of attention is on the
speaker's reservations - the important thing is not
whether 'it' happened or not, but the speaker's judgement
of its desirability, suitability, etc.

With the negative interrogative structure of (421b)
only the interpretation that you didn't do it (reversing,
in other words, the polarity of (421a)) is possible

although the speaker considers that perhaps you should
have done (and may be inviting you to agree). Again, the
speaker is taking it for granted that 'it' has a
determinate factual status - not asserting that it either
has or hasn't happened but presupposing that it hasn't/you
didn't and expressing a deontic judgement on the state of
affairs, queried by the speaker. Comparing and
contrasting (420a) and (421b), then, both are seen to be
contrafactive but the former clearly conveys the speaker's
judgement while the latter suggests the speaker's attitude
(by using the negative interrogative form expecting the
answer 'Yes') but actually asks for the subject/
addressee's opinion.

Similar relationships hold between the following
pairs of examples where the subject is in the first person

(422a) I SHOULD have done it

(422b) SHOULD I have done it?

(423a) I SHOULDN'T have done it

(423b) SHOULDN'T I have done it?

with the exception that the deontic judgement clearly
comes from the speaker/subject in the a) examples, whereas
(unless the speaker is musing out loud) the b) examples
will be interpreted as asking for the addressee's opinion.
As explained on the previous page, the speaker's doubt -
formally marked by the interrogative structure in the b)
examples - relates not to the actuality of the event but
to the social or moral principles in terms of which the
event is being assessed, as signalled by the modal
auxiliary.

As the above examples indicate, one contextual
feature alone rarely conditions the relative factivity of
the modal auxiliary. It is the combination of, say in the
case of (423b), interrogative form, negation, past time
reference and first person subject that determines the
precise factual status associated with SHOULD and thus the
whole utterance.

Interrogative structures, then, can reinforce the
nonfactive status of a modal auxiliary/modalised

utterance, or they can restore the nonfactivity of a modal
used in a context which would without the interrogative
element have determinate factual status; where, unusually,
an utterance with the force of a question does contain a
proposition that is presupposed to be true/actual, the
element of doubt or qualification focuses on the deontic
evaluation (see Chapter 4.3.2 and 4.4) of the event.

One final general observation: it was pointed out
above that interrogative forms need not always be used to
ask questions. Modals involved in the performance of
indirect speech acts (see above, p 171) provide good
examples of this

(424) WOULD you mind turning your radio down?

(425) CAN you shut the door?

(426) COULD you tell me the time?

These would not normally be interpreted as questions about
the addressee's volition or ability; they are requests for
action. However (acknowledging that I have scarcely
touched on even a minority of the issues dealt with in the
extensive literature on questions and indirect speech
acts), the relevant point for the perspective on modal
meaning offered in this study is that such formally
interrogative sentences are nonfactive whether they are
used directly to ask a question or indirectly to make a
request.

The concept of doubt involved in questions can be
readily assimilated to the more general semantic concept
of nonfactivity. The essentially discrete or determinate
nature of the meaning 'negation', by contrast,
distinguishes this type of nonassertion very clearly from
the scalar modal meanings. Perkins (1980:83) sensibly
declines to call negation a modal device since "to talk of
the negation of a proposition in terms of the truth of the
proposition being made relative to its falsity, or of the
negation of an event in terms of the occurrence of the
event being made relative to its nonoccurence, is somewhat
odd, if not absurd". This semantic 'absoluteness',
coupled with the freedom with which negation co-occurs
with the modals and the alternation between auxiliary and

main verb negation (see above, pp64-65), makes for
interesting results when negation is combined with the
various degrees of nonfactivity expressed by the modal
auxiliaries.

Palmer (1980:98) makes the interesting observation
that "negative modality implies negative actuality [but]
positive modality does not, or does not so clearly, imply
positive actuality". This is a valuable first assumption
about the effect of negation on modality, but requires
qualification. It is true for negative dynamic modality
(see above, p 146). For example

> (427a) I COULDN'T get any meat (the butcher's
>
> was closed)

where the speaker clearly expects his hearer to take it
for granted that he didn't get any meat (because he has
asserted that he was not able to). In other words, if you
can't you don't, and if you couldn't you didn't. This
contrafactive effect is obtained with past and present
time reference, although future, hypothetical or
interrogative environments qualify the contrafactivity of
the negated dynamic modal meaning, as in

> (427b) COULDN'T you get any meat?

More surprisingly, the generalisation also holds for
dynamic (ie volitional) WILL/WOULD. It is surprising
because nonactuality need not logically follow from
volition-not, ie

> (428) I wasn't willing to do it but I did

(compare

> (429) *I wasn't able to do it but I did)

But in fact volition-not expressed by negative WOULD with
past time reference does presuppose nonactuality:

> (430) *I WOULDN'T do it but I did

Note that, however, negation alone is not sufficient to
force a nonactual reading of dynamic WILL

> (431) I WON'T do it

which has present stretching into the future time reference
and is nonfactive, expressing the speaker/subject's

will that something not happen, but certainly not taking
it for granted that it isn't going to.

The above arguments make the reasonable assumption
that only modal negation is possible with negated dynamic
modality. An internal (main verb/propositional) negation
interpretation can also be teased out for dynamic
modals[19], given the appropriate discourse context and
stress patterns. For example

(432) - Pretend you're ill, that would
get you out of going
- I COULD (simply) NOT go

(433) - I won't be able to drink, I'm on
antibiotics
- You CAN (always) NOT drink

The negated dynamic modal auxiliary in each example is
nonfactive. But both also have future time reference,
which would in any case force a nonfactive reading. It is
hard to construct a similar example (with main verb
negation) in the past. Perhaps:

(434a) - I could only[20] get in by breaking
the window
- You COULD NOT have done that

(although

(434b) - You NEEDN'T have done that

would sound far more natural). In this case the actuality
of the event would be taken for granted, ie that you did
do it, but it would have been dynamically possible not to
have done it; this contrasts with the nonactuality taken
for granted in (427a).

But since negated dynamic modality so rarely exhibits
internal negation the general assumption that negative
dynamic meanings are contrafactive is still valid.

There is not as neat a correspondence as this with
other types of modal meaning. That negation should not
have such a 'definite' effect on epistemic or deontic
modality fits in with a logical analysis of the meanings
concerned. In the case of deontic meanings an explanation
has already been suggested (see p 149). It makes no

difference whether the negative semantically affects the
modal or the main verb, the sentence is still nonfactive

(435) You MAY NOT leave the table

(modal negation)

(436) You MUST NOT leave the table

(main verb negation)

However, as we have seen, negated deontic meaning
expressed by SHOULD and OUGHT TO (ie strong obligation or
social/moral necessity) with past time reference can
presuppose that the event was actual, as in (421a) and
(423a) for example.

Turning to <u>epistemic</u> meanings, negated possibility is
no more contrafactive than, at the other end of the
probability scale, epistemic certainty is factive.
Not-possible (with semantic negation of the modal) is,
however, more strongly biased towards a contrafactive
interpretation than possible-not (with semantic negation
of the main verb)

(437) You CAN'T be right   (modal negation)

(438) You MAY NOT be right   (main verb negation)

Unlike deontic modality, negated epistemic meaning with
past time reference is not usually compatible with a
factive interpretation:

(439a) It MUST NOT have been raining

when you left

; although prosodic features can prompt a factive reading:

(440) It SHÒULD NOT have been the

butler who did it[21]

ie the butler did it, but logical reasoning led to a
different conclusion. The combination of stress, past
time reference, negation and this particular modal
auxiliary is required to give the factive reading.

These two last examples both exhibit main verb
negation, but a similar example in which the negation
semantically affects the modal is also nonfactive

(439b) It CAN'T have been raining when

you left

In unreal or hypothetical environments, negated epistemic modality can be contrafactive. To adapt an example from Leech (1971)

(441) If your father had caught us, he WOULDN'T have been pleased

(but he didn't, so his displeasure wasn't felt).

A number of generalisations can be drawn from the above discussion:

i) Negated modal auxiliaries are more likely to be contrafactive (occasionally factive) than positive modal auxiliaries are to be factive. I argue that this is because of the semantic 'absoluteness' of negation, and because pragmatically speaking it is easier to disprove something (especially in the past) than it is to prove it.

ii) Modal negation is more likely to force a contrafactive reading than main verb negation is, although in the latter case the relative factivity of the modal will be strongly biased (according to the degree of modality expressed by the auxiliary in question) towards contrafactivity.

iii) Negated dynamic modals are contrafactive; this holds for the ability sense of CAN/COULD and, with qualifications related to time reference, to volitional WILL/WOULD.

iv) Negated deontic modals can be factive with past time reference.

v) Negated epistemic modals can only be contrafactive in unreal environments.

There are two further general points worth making about negation and the relative factivity of the modals. The first is prompted by Palmer's discussion (1980:94 ff) of COULD and actuality. Recalling his observation that positive COULD is not used to refer to a single completed action, but that there is no similar restriction on negative COULDN'T, Palmer explains the following examples by arguing that positive COULD may occur with the "implication" of actuality in any semantically negative environment; 'semantic negation' includes "not only non-occurrence of the event, but also its occurrence under difficult circumstances, or its 'almost non-occurrence'" (ibid):

(442) He was laughing so much he COULD hardly get a word out

(443) He COULD scarcely get a word out

(444) Well she was the only one of the family there who COULD do it

(445) I COULD just reach the branch

(446) The door was open, so I COULD get in

(447) I COULD almost reach the branch

Palmer's concern is to explain the acceptability of (442) to (446) which appear to break his 'rule'; (447) does not 'imply' actuality so does not present him with a problem. I am more interested in the fact that all the examples are of determinate factual status: (442) to (446) are all factive and (447) is contrafactive. That is to say, while 'ordinary' negation makes dynamic modals contrafactive, this more widely defined sort of semantic negation in most cases makes them factive. Either way, the negation confers determinate factual status on the dynamic auxiliary.

Neither seminegatives[22] like HARDLY, SCARCELY and ONLY nor the semantically negative (in the sense of

'almost non-occurrence') JUST have the same determinate
effect on epistemic or deontic modals

> (448) He MUST just have left

EPISTEMIC

> (449) He WILL hardly have arrived yet

> (450) Only Johnny MAY[23] leave the table

DEONTIC

> (451) You SHOULD just have finished by now

None of these examples is factive or contrafactive.

The other point also relates to an observation made
by Palmer in the same context, ie discussion of the
occurrence of COULD with the "implication" of actuality,
but in an earlier work (1979:26-7, 81). Without
developing the idea, he mentions that the sort of
seminegative context provided by, for example, HARDLY, may
also be called 'affective'; COULD, he says "may occur if
the context is affective". I shall take up this argument
in Chapter 4.4, suggesting that modal auxiliary tokens of
determinate factual status very often provide an
evaluative or emotive judgement of the (true) proposition
or the (actual) event. But even in such contexts, the
focus of attention is still on the modal 'gloss' rather
than on the actuality.

(iii) Agentivity

I shall use the term 'agentivity' to cover a rather
wider range of semantic-syntactic behaviour than it
usually encompasses. Quirk et al (1972:350), for example,
introduce the topic in their semantic consideration (in
terms of "participants") of clause elements: "The most
typical semantic role of a subject is AGENTIVE, that is,
the animate being instigating or causing the happening
denoted by the verb". Leech (1969:205) also links
"agency" and causation: "Agency I take to be a particular
instance of the broad concept of causation ... namely a
limitation of that notion to human causes". He is careful
to distinguish it from "authority", which "is different
from causation, since if one is permitted to perform a

certain action, it does not necessarily follow that that action is performed". Coates (1983:231) treats agentivity, for descriptive convenience, as a feature of verbs while pointing out that, strictly speaking, it is "a relational feature which obtains between a verb and a noun".

While acknowledging the significance of Leech's distinction between causation and authority for judgements of relative factivity, I adopt the view that an agent need only <u>instigate</u> an event or action, which therefore may or may not come to pass. So the presence or absence of an agentive element in a modalised sentence need not presuppose that the event or proposition referred to is actual/true.

Agentivity in the sense of an 'instigating source' relates more obviously to deontic and dynamic meanings (permission and obligation, ability and volition) than it does to epistemic modality where the 'source' expresses a judgement of probability or a degree of commitment to a proposition being true - it assesses the likelihood of the action/event (referred to in the proposition) rather than instigating it. The epistemic 'source' is not an agent. It is for this reason that Coates and Leech (1979) found a high probability of occurrence between agentive verbs/ animate subjects and root meanings. It is also for this reason that, despite the fairly obvious connection, I prefer to separate my discussion of agentivity from that of subjectivity; the latter I deal with in Chapter 4.4, initially relating it to epistemic modality.

Under the heading 'agentivity', then, I include the following issues which can all have an effect on the relative factivity of a modalised sentence

- Whether the agent or instigating source is the subject, and/or the speaker, or a third participant (who may be identified or not). When the subject, the speaker and the instigating source are co-referential, the sentence will express the strongest possible bias towards actuality consistent with the degree of modality

associated with the modal auxiliary (eg deontic MUST will always be 'stronger' than deontic MAY). Compare

     (452a) I CAN do it

with

     (452b) You CAN do it

The first is not factive/actual, because one assumes that 'it' will be done in the future (maybe the immediate future); but it is very strongly biased towards an actual reading, because one assumes that the speaker=subject knows his own capabilities - no-one can be in a better position to know what you can do (in the dynamic sense) than you yourself. In (452b), on the other hand, the speaker is not the agent of the (future) action; although the speaker could perhaps be called the indirect instigating source, in that (452b), rather than functioning as a simple assertion, is likely to be uttered as encouragement to the subject *to do it (or to believe he* can do it). But whatever the pragmatic force of (452b), the fact that the speaker is not also the dynamic agent of the future action serves to weaken the relative factivity of the utterance and its modal auxiliary.

     There are other cases where the instigating source could be seen as the <u>indirect</u> agent. Deontic obligation, expressed by MUST, offers one such example. With this modal meaning, the bias towards actuality will vary according to pragmatic factors (see below, p 205 ff) like the power/authority of the speaker vis-à-vis the addressee; but the relative factivity of such an utterance will also depend upon whether the speaker is the deontic source, or is only reporting the command of a third person in which case the relative factivity is usually weakened. Compare

     (453a) You MUST come in now (I say so)

and

     (453b) You MUST come in now (Mummy says so)

     If the direct agent is unexpressed, as is usual with passive sentences, this may serve to strengthen the sense of, for example, a binding obligation, and thus the implication of actuality. A possible explanation of this

effect is that, in the absence of a named direct agent
(which may be unrecoverable - see Quirk et al, 1972:807),
the impression is given that the obligation conforms to
some generally binding social or moral principle. It is
felt to be more objective (see Chapter 4.4 below), less
the product of an individual's will, and hence carries
more authority than if imposed by a single, named
individual or institution. The following corpus examples,
(454a) and (456a), have a more imperative effect in the
original passive (even though in both cases the potential
agent is recoverable from the text)

> (454a) Now, unless we [revive business
> confidence] ... we cannot create new jobs
> ... nor can we create new opportunities
> for our young. Challenging careers MUST
> be opened up for them
> PA 23 79 (41)

> (454b) ... We [the Conservative Party]
> MUST open up challenging careers for them

There seems to be a tendency (noted also by Kiparsky and
Kiparsky (1970:168) among others) for items in sentence -
initial position to be associated with a factive
interpretation (see above, p 127). In other words, it
appears that

> (455a) We MUST do X

conveys a weaker bias towards actuality than

> (455b) X MUST be done

My other corpus example illustrates the same tendency

> (456a) Of course we will [continue the
> aid programme to industry] and any change
> MUST be done gradually
> PA 23 79 (459)

> (456b) ... We MUST do/make any change
> gradually

- As a corollary of the remarks above about the co-
referentiality of the speaker, the subject and the agent,

it obviously matters from the point of view of relative
factivity whether the subject is in the first, second or
third person. It can also make a difference whether the
subject is animate (see above, pp 67-68), human, or
existential, as well as whether it has an agentive or non
agentive (eg 'instrumental', 'affected', or 'recipient' -
see Quirk et al, 1972:349 ff) role. For example

    (457a) That table MUST go

    (457b) That student MUST go

Both a) and b) express the speaker's firm wish[24] that X
go, but any reasonable hearer would assume that the
speaker is more likely to be in a position to ensure that
the table actually does go, while there may be obstacles
to actualising b), because there are other factors
involved as well as the speaker's volition, in particular,
the human subject's probably contradictory wishes. (457a)
would therefore have a stronger relative factivity than
(457b).

- The nature of the main verb, too, will influence the
relative factivity of the modal: whether the lexical verb
requires an animate subject - a human agent; whether it is
dynamic (ie denotes events or processes) or stative (ie
denotes states) see above, pp 69 and 176-177; whether it
denotes an activity that involves <u>learnt</u> behaviour
(necessarily involving a human agent) - for example
reading (as opposed to, say, seeing) which is something
one must learn. It therefore makes sense to assert that

    (458a) I CAN read Dostoyevsky (in the original)

even if I am not actually doing so at the moment; whereas
there is no point in saying

    (458b) I CAN see a copy of The Possessed

unless I am actually looking at it as I speak. That is,
it makes no sense for a speaker to assert that he can do
something that almost every human being can do naturally
from birth, unless he wants to draw attention to the fact
that he is either doing it at the moment of speaking or he
is doing it with reference to a specific [25] object - both
of which conditions can be presumed to apply in (458b).

This is admittedly a somewhat cursory and idiosyncratic treatment of agentivity. I have included it to give a semblance of completeness to the list of contextual features I consider important in the determination of the precise degree of nonfactivity associated with a particular modal token; the factors mentioned above will be involved in the analysis of corpus examples offered in Chapter 4.3 below.

I justify the rather scant treatment of the topic on two main grounds: firstly, the issues gathered under the heading of agentivity - with the exception of the person of the subject - tend to be of less relevance to the degree of modality than to its nature (cf the correlations established by Coates and Leech, mentioned above, pp 68 and 194); they therefore have less influence on relative factivity than other contextual features already discussed at greater length, eg negation and time reference. And secondly, discussion of these issues is inclined to slip very quickly into the realm of pragmatics - an area of meaning the importance of which I fully acknowledge but which does not fall within the scope of the present study.

(iv) Conditionality

Conditional sentences not only contain modal auxiliaries, but also show considerable semantic affinity with the meanings expressed by them. Palmer (1979:142) says that "modality itself is in some ways conditional". Perkins (1980:175-177) puts it the other way round and chooses to regard if clauses as a modal device; he considers if an index of conditionality, "ie an index of modality" and points out that if clauses provide another means by which the speaker can qualify his commitment to the truth of a proposition or the actuality of an event. Since this study considers modality only as it is expressed by the modal auxiliaries, my interest in if clauses is limited to their occurrence in the protasis of conditional sentences and I do not discuss, for example, non hypothetical if clauses like 'there's beer in the

fridge if you're thirsty'. But the general point still
applies - the concepts of modality and conditionality are
closely related.

It seems reasonable to assume that the modality of
modal auxiliaries - their essentially relative or
qualified meaning, ie their nonfactivity - will be
reinforced or underlined by an environment that is
syntactically and semantically explicitly conditional. It
is not so much that the relative factivity of the modal
auxiliary itself is weakened, as that attention is
explicitly drawn to the specific conditions under which a
proposition is possibly/likely/probably true, or an event
possible/likely/probable to occur; the modality applies to
an already conditional proposition, so that the relative
factivity of the utterance as a whole is weakened by this
double qualification. Both clauses are nonfactive. This
generalisation, however, is subject to modification
according to time reference (ie unreal past conditionals
can be of determinate factual status, that is,
contrafactive - see above, pp 178-183) and whether the
condition is real or unreal.

Real, or open, conditions (Leech (1971:110) and
Palmer (1979:137) among others use the former term, Quirk
et al (1972:747) use the latter) give no indication
whether or not the condition is or will be fulfilled. For
example

> (459) He MUST be lying, if he told
> you that

> (460) When demand exceeds supply, prices
> WILL rise

Any of the modal auxiliaries can occur in the main clause
(apodosis) of a real conditional; a non-modal, usually
present tense, form is used in the protasis (the _if_ or
conditional clause). Both clauses are nonfactive; that
is, "neither indicates that an event has occurred (or is
occurring or will occur); the sentence merely indicates
the dependence of the truth of one proposition upon the
truth of another" (Palmer, 1986[26]: 189). The relative

factivity of the conditional sentence as a whole depends partly, of course, upon the degree of modality associated with the auxiliary used. Compare

> (461a) If demand exceeds supply, prices
> WILL rise

> (461b) If demand exceeds supply, prices
> MAY rise

a) expresses (conditional) probability; b) expresses (conditional) possibility. But both these sentences are two steps away from being factive: even if the condition is fulfilled, the proposition is still only probably or possibly true. The proposition does not become true when the condition is fulfilled (although when the condition is not fulfilled the proposition can become false).

Unreal or hypothetical conditionals convey negative belief in the proposition/event, ie that the condition has not been, is not being, or will not be fulfilled. They are either contrafactive or biased towards contrafactivity. For example

> (462a) If you paid attention, you WOULDN'T
> make so many mistakes

> (462b) If you had paid attention, you
> WOULDN'T have made so many mistakes

Whether the conditional is 'contrary to assumption', ie strongly biased towards a contrafactive interpretation, as in a), or 'contrary to fact', ie contrafactive, as in b), depends - as we demonstrated above (pp 180-181) - on time reference.

Conditional sentences, then, are doubly modal[27]: real conditions have a nonfactive protasis and are also marked for the degree of nonfactivity associated with the modal auxiliary used in the apodosis; unreal conditionals have either a contrafactive protasis or one biased towards contrafactivity, plus a main clause the relative factivity of which varies according to the modal auxiliary used, viz the difference between (462a) and b) above and

(462c) If you paid attention, you
MIGHTN'T make so many mistakes

(462d) If you had paid attention, you
MIGHTN'T have made so many mistakes

The following examples illustrate the behaviour of both types of condition in terms of relative factivity, according to (a) the nature of modality expressed by the modal auxiliary, and (b) the time reference; (the degree of modality signalled by the auxiliary, eg using deontic MUST in place of MAY, or epistemic WILL instead of MIGHT, has a predictable effect on the relative factivity of the main clause)

REAL CONDITIONS

Most real conditions refer to future events:

DEONTIC   (463) If you promise not to be late,
           you MAY go

DYNAMIC   (464) If he tries hard enough, he
           CAN do it

EPISTEMIC (465) If it rains tomorrow, the trip
           MIGHT be postponed

In each case, the modal auxiliary, future time reference and conditional clause all reinforce the nonfactive status of the sentence.

But real conditions are not restricted to the future - "any proposition concerning an event at any time may be conditionally dependent on another" (Palmer, 1986:190) - nor need the tenses in the two clauses refer to the same time. This is easiest to illustrate with epistemic modals. There are severe restrictions on deontic modals with past time reference, although they do occur (and are nonfactive) in indirect speech:

PAST/PAST (466) He said she MIGHT go, if
   everyone else was going

Deontic MAY can also be used when the protasis has past time reference, as long as the event to which the

permission relates will occur in the future, ie the apodosis has future time reference:

PAST/FUTURE   (467) If you said you would

                    go, you MAY

Dynamic modals occur a little more freely in non-future as well as future contexts, remaining nonfactive:

PRESENT/FUTURE   (468) Unless the gate is locked,

                    he CAN get out

PAST/PAST   (469) Unless the gate was locked,

                    he COULD have got out

But the fullest range of temporal options is apparent with epistemic modals:

FUTURE/FUTURE   (470) If it rains tomorrow, the

                    trip MAY be postponed

FUTURE/PAST   (471) If it rains tomorrow, all

                    your watering WILL have been

                    wasted

PRESENT/PRESENT   (472) If it is raining, they

                    CAN'T be swimming

PRESENT/FUTURE   (473) If it is raining, they

                    MIGHT come later

PAST/PAST   (474) If it was raining, they

                    MUSTN'T have left

PAST/FUTURE   (475) If it rained yesterday,

                    you WON'T need to water the

                    garden today

Regardless of the nature (or degree) of modality or the time reference, then, real conditions are always nonfactive.

UNREAL CONDITIONS

Unreal conditions can have past, present or future time reference. Whether an epistemic or a dynamic modal is used, their relative factivity will depend on their time reference (see above, p 200).

PAST (476) If you had revised, you
       MIGHT have passed the exam

EPISTEMIC PRESENT (477) If you revised hard, you
       WOULD pass the exam

FUTURE (478) If you revised tomorrow,
       you MIGHT (still) pass the exam

PAST (479) If you had revised, you
       COULD have passed the exam

DYNAMIC PRESENT (480) If you revised hard, you
       COULD pass the exam

FUTURE (481) If you revised tomorrow,
       you COULD (still) pass the exam

The protasis of an unreal conditional is always marked for
past tense; in (476) and (479) it has two past tense
markers - one for past time reference and one (with HAVE)
for unreality. In all the other examples, the ED morpheme
signals modal not temporal remoteness, ie some degree of
negative belief.

  With _epistemic_ modals, the unreality often relates
not to the modality but to the proposition. (476), for
example, means 'It is possible that, if you had revised,
you would have passed the exam'. MIGHT is contrafactive
because the sentence presupposes that you did not pass
(because you did not revise); but it does not presuppose
that the possibility did not exist - it asserts that the
possibility existed but was not 'used'. Incidentally, I
do not agree with Palmer's example (1986:191) to show that
"it is misleading to see all past time unreal conditions
as counterfactual"

  (482) If John had come, Mary WOULD have left
In my idiolect, the example he gives must be
contrafactive, because of the presence of the unreality
marker HAVE (had).

With <u>dynamic</u> modals, on the other hand, either the
event or the modality may be unreal[28]. In (479),
presumably the ability did not exist (because you did not
revise). But in

(483) You COULD have passed the exam, if
you'd wanted to

the ability was not unreal or conditional, it was the
passing of the exam that was unreal, whereas in (479) both
the ability and the event were unreal. But this is a
distinction dependent on the nature of the lexical verb in
the protasis, viz the difference between WANT and REVISE
and not on the modal auxiliary. The examples Palmer
discusses (1979:141) are based on a similar difference
between WANT and TRAIN. The point is that there is a
causal connection between training or revising and
ability, in that one can create or improve an ability/
capability by training or revising. But wanting something
has no effect on one's ability to do it - although,
significantly, not wanting to do something (over which one
has full control) means one does not do it, even though
one has the ability. Whereas not training or revising
means that the event does not take place because the
ability was not created. In other words, dynamic modals
(CAN and to a lesser extent volitional WILL) are
compatible with this distinction but they do not signal
it. Note that the distinction between the unreality of
the event and of the modality has no effect on the
contrafactivity/relative factivity of the sentence; both
(479) and (483) are contrafactive, even though the reasons
for this contrafactive status are different (in the former
case the ability was potential and not realised, in the
latter, it was actual but not used/realised).

Deontic modals, generally, do not occur in unreal
conditionals, although

(484) If you had said you wanted to go,
you MIGHT have gone

(ie if you had told me you wanted to go, I would have
given you permission) is marginally acceptable (and would
be contrafactive). Palmer (1979:144) explains this

restriction simply and clearly: "There is no need of any
unreal conditional form for the deontic modals. Since
they are essentially performative [they give permission,
lay an obligation, or make a promise], they need no
conditional forms".

(v) Pragmatic factors

At various points in this study (eg Chapter 3.2.4) I
have made clear my intentions not to stray from semantics
into pragmatics. It may therefore seem odd to devote a
separate section to 'pragmatic factors'. They are not
even contextual features in the sense I have been using
that term, ie to refer to features of the strictly
linguistic co-text. But they are features of the wider
context which certainly have a role to play in determining
the relative factivity of a particular modal token. As
such, they are sufficiently influential to deserve a
separate, if sketchy, acknowledgement.

I shall make no attempt to detail all the pragmatic
elements that can affect relative factivity, nor will I
offer any consistent or comprehensive analysis of such
factors in Chapter 4.3. But a few examples will make the
point that what the modals are used for may often be as
significant for their relative factivity as what they
mean, ie the nature and degree of modality (epistemic
possibility, deontic obligation etc) which they signal.
An example taken from Leech (1971:70) illustrates this
clearly. Leech is discussing the circumstances under
which permission (expressed by CAN or MAY) is strengthened
to 'strong recommendation'. He cites

(485) You CAN forget about your holiday
and explains that the impolite effect of this utterance
derives from the sarcastic giving of permission to do
something that cannot be avoided and that no-one would
want. This is in effect an order and the future
nonactualisation of the holiday is scarcely left in doubt.

The corpus from which many of the examples used in
this study are drawn offers another instance of the way in
which 'non-linguistic' knowledge influences a hearer's

interpretation of the relative factivity associated with a
modalised utterance. Two examples

> (486) This Manifesto ... really contains
> only one basic proposal and ... even
> that's subject to very considerable
> doubt - and that is, that all our
> problems CAN be resolved by the one
> simple measure of cutting taxes for
> the well-off
> PA 23 79 (810)
>
>
> (487) If we get enough Liberals in, we
> CAN have some influence ... We had influence
> in the last Parliament, we CAN have a great
> deal more in the next
> LI 8 79 (63-4)

In the first example, the linguistic context alone gives
sufficient clues that the speaker is not genuinely
asserting that it is (dynamically) possible for all our
problems to be resolved by cutting taxes: the "basic
proposal" expressed in the subordinate, modal clause is
explicitly and syntactically "subject to very considerable
doubt"; but the listener's awareness that the speaker is a
Labour MP and the Manifesto referred to is that of the
Conservative party, must assist him in interpreting the
speaker's considerable degree of negative commitment to
the truth of the proposition.

The speaker in (487), on the other hand, is clearly
committed to the truth of the propositions expressed, and
this despite the fact that both sentences have future time
reference and the former is cast in conditional form,
(which would serve to weaken their relative factivity);
the latter sentence, however, explicitly cites evidence in
support of the assertion (ie past proof). Nevertheless,
and regardless of the speaker's evident conviction, non
Liberal voters/listeners will tend to interpret these
propositions as unlikely to become true, because of 'extra
linguistic' or 'real world' knowledge about the electoral
fortunes of the Liberal party in recent decades.

'Real world' knowledge, or rather, reference to specific objects in the real world can also have the effect of strengthening the relative factivity associated with a modalised sentence. The syntactic and semantic correspondence between truth and specific reference was noted above (pp 127-128); and Palmer (1977:20) is drawing on the same principle when he says that "there is always an implication of actuality with dynamic modality whenever it relates to specific actions". The reference to specific amounts of money in the following extended examples serves to strengthen the relative factivity of the modal. (Incidentally, WILL in (488) seems to express epistemic prediction but with a volitional element - 'this is what we are going to do and want to do'.)

> (488) What we intend to do is this ...
> child benefit WILL go up to £4.50 ...
> a pensioner couple WILL get £35 a week
> and a single pensioner WILL get £22
> LA 1 79 (123-125)

There are some good examples with epistemic WOULD

> (489) In the Tory Manifesto they say
> they're going to devalue the Common
> Market's Green Pound ... let's see just
> what it WOULD do to the cost of our
> shopping ... Butter WOULD go up by 12p
> a pound ... Bread WOULD go up by 1½p a
> loaf ... Beef WOULD rise by 7p a pound
> ... Sugar WOULD go up by 3p a pound ...
> LA 4 79 (69-73)

> (490) The Tories say they WILL put up
> VAT ... A shirt costing £6.99 WOULD cost
> 63p more ...
> LA 4 79 (59)

These assertions are all made in an essentially future time and conditional framework, but the reference to precise amounts of money serves to lend weight to the speaker's epistemic judgement.

The use of the modals may also be pragmatically motivated. A modalised sentence need not always be used as a direct expression of the speaker's qualified judgement, his ignorance or doubt. As one interviewee on a Radio 4 "Analysis" programme tried to explain: "If I said, 'I think' it wasn't because of any lack of commitment on my part". (THINK is not, of course, a modal auxiliary, but it can be classed as a modal lexical verb and the generalisation applies to other expressions of modality.) There are a number of other reasons why the speaker may have said 'I think' - perhaps as a 'filler', to gain time while he actually thought about what he was going to say. But the most obvious motive is that the speaker wished to be polite.

Modality, as a semantic system which enables a speaker to qualify his commitment to the truth of a proposition or the actuality of an event, is well suited to avoiding interpersonal friction by, for example, making directives more indirect (see examples (491) to (493) below). Perkins (1980: Chapter 6), in a thorough examination of the relationship between modality and politeness, comes to the conclusion that the specific type of modality expressed (ie nature and degree) and the choice of form used to realise it (auxiliary, lexical verb, or adverb etc) will have an effect on the degree of politeness that may be conveyed. For example, MAY will generally be more polite than MUST on the grounds that possibility and permission are "less committal" than necessity and obligation. However, the position is reversed when the speaker is pressing his addressee to do something pleasant, eg 'You MUST try one of my biscuits'; Palmer (1979:169-179) takes up a similar example, quoted from R Lakoff (1972), 'You MUST have some of this cake' and gives a non-linguistic explanation of why this is more polite than an equivalent sentence with MAY, namely that it is a hostess' duty to persuade her guests to take as much food as possible. Perkins (1980:202) also discusses this example in his examination of modality and politeness. Similarly, the more explicitly subjective a

modalised expression is, the more it imposes the speaker's views or authority on the addressee, and the less polite it will be; whereas objectivity is associated with politeness (see also below, Chapter 4.4).

The point relevant here is that the nonfactive property of modal auxiliaries enables them to be used as markers of politeness and that, in certain cases, this may be their primary function rather than to signal the speaker's genuine doubt or ignorance. That is to say, the pragmatic motivation for using a modal which semantically expresses a weaker commitment to the truth of a proposition or the actuality of an event may be to increase the politeness of the utterance, as in

(491a) CAN you pass the salt?

(491b) COULD you pass the salt?

(492a) WILL you be able to help us out?

(492b) WOULD you be able to help us out?

(493a) CAN I ask the question again?

(493b) COULD I ask the question again?

PA 30 79 (340)

This association between modality and politeness, then, can be explained to a large degree in terms of the semantics of the set of modal auxiliaries (and other modal expressions) rather in the same way that there is a semantically based explanation (see above, p 171) for why the modals appear so frequently in indirect speech acts. This is no coincidence. The more indirect a command is, for example, the more polite it is:

(494a) Fix my car!

(494b) COULD you (possibly) fix my car?

b) could be taken as a direct enquiry about the addressee's ability to fix the car, although the inclusion of POSSIBLY - at the same time as it increases the politeness of the sentence - would make it obvious that this is in fact to be interpreted as an indirect request for action.

In certain cases the indirect force of a certain type
of sentence has, by convention, become so closely
associated with a particular function that the speech act
it performs is scarcely perceived as indirect - although
the scope for taking it 'directly' may still be there,
which is why it is polite. One such example was given in
(494b), ie asking about someone's ability to do X in order
to request that he do X, or, as in (495), to command that
she do X

    (495a) CAN you take dictation now, Miss Bates?

    (495b) COULD you take dictation now, Miss Bates?
Here, the speaker clearly has authority over his addressee
(and can therefore virtually guarantee the occurrence of
the event); his choice between a) and b) will depend on
how indirect he wants to make his directive or, putting it
another way, how polite he wishes to be.

    Giving permission can be another way of issuing a
command:

    (496) You MAY go now, Sergeant
This is a conventional usage - scarcely polite because
hardly perceived as being indirect - but in any case, the
essential semantic nonfactivity of deontic MAY is here
pragmatically 'over ruled'; there is a very little doubt
that the Sergeant will go immediately, an interpretation
reinforced by the authority the speaker clearly has over
his addressee.

    While I acknowledge the important contribution that
pragmatic factors make to modal meaning, the perspective
adopted in this study nevertheless focuses on the basic
semantic meaning of the modal auxiliaries. In view of the
complexity of the concept involved (modality), I consider
this a valid restriction.

4.3 RELATIVE FACTIVITY

    This section analyses various examples of modalised
sentences drawn from the corpus detailed on pp 15-17 above
in terms of the framework already established; in other
words, I look at the relative factivity associated with

the modal auxiliary in a given sentence as determined by
the nature of the modality it indicates, the degree of
modality it signals and the features of the linguistic
context with which it interacts.

One approach would be to deal with each modal in
turn, covering each use of the auxiliary in question
before passing on to the next modal. This approach would
facilitate generalisations such as the contrasting ones
offered (without further explanation) by Palmer

"_May_ is the most neutral modal ... used

simply where there is nonfactivity"

(1979:160)

and Perkins

"WILL is particularly nonfactive"

(1980:174)

But these generalisations overlook the contribution of
contextual features to the relative factivity associated
with a particular modal token, discussed in the previous
section; they also ignore the fact that the relationship
with factivity varies with the nature of the modal meaning
expressed (as examined in Chapter 4.1) as well as with the
modal auxiliary used. I therefore prefer to order the
analysis in terms of the three types of modality
established in Chapter 2 on the grounds that comparisons
within each scale are more valid than those across or
between the scales.

As already pointed out on p 164 above, I work on the
assumption that, with each use of each modal, the normal
or typical example will be nonfactive. These 'typical
cases' will be illustrated from the corpus, together with
an indication of their frequency of occurrence. (However,
this is not a statistically based study and tests of
statistical significance have not been applied[29].) I then
take examples of modal tokens occurring in contexts of
determinate factual status (factive or contrafactive) and
seek to explain these in terms of significant contextual
features.

4.3.1 Epistemic modality

- MAY, MIGHT
- COULD
- WILL, WOULD
- SHALL, SHOULD
- MUST

Epistemic MAY

Slightly less than half of the occurring tokens of MAY in the corpus are epistemic. All of these are nonfactive (with exceptions for 'concessive' MAY).

With a lexical verb expressive of wishes or desires and a third person subject, the nonfactivity of the modal is transparently related to the speaker's lack of first-hand knowledge:

> (497) Well perhaps Mr Brittain MAY wish
> to pursue that point
> PA 30 79 (123)

> (498) I think it's not unnatural that
> they MAY want to conserve the advantage
> they've gained
> PA 30 79 (112)

The more immediate the time reference, the stronger will be the bias towards a factive interpretation; compare the immediate present of

> (499) I want to draw Mr Gould's
> attention to the fact that in his
> enthusiasm for pursuing Mr Pym on this
> he MAY be overlooking other areas I
> know he wants to raise
> PA 23 79 (581)

(which is of course signalled by the marker of progressive aspect) with the reference to a future, possibly hypothetical, event in

> (500) I mean he MAY argue of course that
> it was inevitable
> PA 28 81 (81)

Negative epistemic MAY negates the main verb, not the modality and the auxiliary retains its nonfactive status:

(501) The answer MAY not be quite clear

PA 23 79 (373)

Nearly half of the examples of epistemic MAY could also bear a dynamic interpretation:

(502) That choice MAY also decide what sort
of country our children and grandchildren
grow up in
CO 12 79 (15)

(503) an MP ... also has a responsibility
to his constituency. He MAY have one, as
I do, to my trade union
PA 14 81 (111)

(504) I warn you there's not much light
relief in this broadcast but it MAY help
you to make up your mind
CO 7 79 (7)

(505) I'm a little worried about what MAY
happen when we get a new deputy leader
PA 14 81 (534)

Of course, if it is possible <u>for</u> X to do something then it may also be possible <u>that</u> X will do it.

I consider the various corpus instances of a 'concessive' use of MAY under epistemic meanings (as does Palmer, 1979:43). The following example illustrates how close the two uses can be

(506) So it looks as though one battle MAY
be over but the war between left and right
goes on
PA 28 81 (23)

The most likely paraphrase for this is 'it is possible that the battle is over'; but remove the qualifying phrase 'so it looks as though' and a concessive clause is left very much along the lines of the following examples

(507) While the opinion polls MAY disagree
with each other about everything else they
all show that there's been a steady increase
in Liberal support
LI 11 79 (1)

(508) But there's another Britain which
MAY not make the daily news but which
every one of us knows
CO 12 79 (102)

In both (507) and (508) the speaker is emphasising that,
despite the truth of the proposition contained in the
modal clause, some other condition applies; the modal
permits the speaker to concede that even though one thing
is the case, another is still true. The modal, in other
words, focuses attention not on the truth of the
proposition but on the unusual or unlikely fact of its
combination with a further proposition. Compare

(509) You MAY be older than me but
I'm taller

In its concessive use, then, MAY bears a factive
interpretation but adds an evaluative/emotive gloss, which
is essentially subjective. The usual temporal constraints
apply. (507) and (508) refer to past time continuing up
to the present; (510) on the other hand has future time
reference and so is nonfactive

(510) By providing for a year or two years
or whatever it MAY be, this particular
industry ... will make itself into a
viable position
PA 23 79 (437)

Epistemic MIGHT

Almost all of the tokens of MIGHT in the corpus
(22 out of 27) are epistemic, and all but two of these are
nonfactive.

The two examples of determinate factual status are
contrafactive and both occur in an unreal past conditional

context, although the condition in (511) is not explicit
and is so general as to be hardly recoverable

> (511) I think it MIGHT have been concen-
> trated more effectively perhaps in a
> few industries, the butter has been spread
> what I call pretty thin
> PA 23 79 (430)

Here the presupposition is that it was <u>not</u> concentrated
effectively. But note that this is explicitly the
<u>speaker's</u> presupposition, signalled by 'I think' and 'what
I call'.

> (512) MIGHT you NOT have done better without
> Tony Benn?
> PA 28 81 (174)

This example is complicated by the presence of the
contextual features of negation and interrogation;
nevertheless, the speaker's presupposition is clearly that
you did <u>not</u> do well with Tony Benn. If the addressee
disagrees, he has to challenge the presupposition
directly.

Most of the instances of epistemic MIGHT occur with a
third person subject, nonpast time reference (usually
future and semantically conditional), and leave the
factual status of the proposition quite open.

> (513) If we leave you with more of your
> own money in your own pocket you can
> choose how you spend it. A young couple
> for example MIGHT choose to pay off the
> mortgage more quickly ... A housewife
> MIGHT choose to spend it on more food ...
> An older person MIGHT spend it on a little
> bit more warmth in the home
> CO 9 79 (129-133)

> (514) One of Denis' nominees ... has left
> the party already. Now we're told another
> twenty MIGHT
> PA 14 81 (697)

(515) ... while some people MIGHT benefit
from tax cuts, people on high incomes ...
[others] would actually suffer very
heavily
PA 23 79 (346)

(516) If we leave you with more of your
own money ... then we MIGHT also get back
some of those brilliant managers ... they
MIGHT come back
CO 9 79 (146)

When the subject is 'we' (inclusive of the speaker),
the strength of the speaker's conviction appears to
increase the relative factivity associated with the modal:

(517) Maybe if the Liberal party didn't
actually get into power it could just
act as a balance between the two other
parties and then we MIGHT get ...
LI 8 79 (9)

Where, additionally, the lexical verb relates to thought
processes (of which the speaker must be assumed to have
direct knowledge) the bias towards a factive - or, where
negation is involved, contrafactive - interpretation is
much stronger:

(518) It isn't any good going on the
Socialist way, because however much we
MIGHT agree with their social objectives,
it doesn't actually work
PA 23 79 (853)

Were this above example to have a first person singular
subject, it would illustrate the so-called concessive use
of MAY/MIGHT (see final two examples of epistemic MIGHT)
and have virtually factive status because the speaker/
subject must be assumed to be the final arbiter on whether
or not he agrees with something; I say 'virtually' because
one could argue that there remains an implied condition in
such examples, something along the lines of, 'however much
I might agree if I were asked' in the case of (518).

> (519) ... what I am going to go on
> fighting for is a Labour party which
> is going to win the next election
> irrespective of individual items of
> policy which Neil or I MIGHT NOT agree
> with
> PA 28 81 (267)

The relative factivity of (519) is weaker than that of
(518); the first example has present time reference and an
inclusive first person plural subject, whereas (519)
refers to unspecified items of policy on which two people
(one of whom is the speaker) might hypothetically - and
separately - disagree.

(520) below is an instance of the objectification of
modality, with 'it' as subject. By disassociating the
speaker from the epistemic possibility it seems to weaken
the relative factivity of the modalised proposition - it
is not a potential Conservative government (and certainly
not Margaret Thatcher herself) that will be responsible
for raising VAT, but 'it', ie the cut in taxes on
earnings. Other sentence elements also serve to reduce
the relative factivity associated with this token of
MIGHT, such as the phrase 'a little something', as well as
the 'real world' knowledge of the political reason for
wishing to distance oneself from an increase in taxation.

> (520) I find that most people agree with
> us that we must cut tax on earnings ...
> and ... pensioners' income ... But they
> are worried that it MIGHT involve putting
> a little something extra on VAT. Not a
> lot but a little
> CO 9 79 (123)

Co-occurrence of MIGHT and the lexical verb THINK in
the second person weakens the relative factivity of the
modal and modalised proposition; the speaker cannot claim
to be as closely attuned to the thought processes of
another person as he is to his own

> (521) Labour never seem to have enough
> [money]. Strange you MIGHT think, when
> we're paying more tax.
> CO 5 79 (108)

This is, of course, a transparent indication of the speaker's own thoughts and a suggestion to the listener to think along the same lines.

> (522) And yet, at this election, to hear
> the speeches that have been made, you
> MIGHT think they were playing old
> gramophone records
> LI 2 79 (11)

(A similar pragmatic reading obtains for (522) as for (521).)

Two final examples of epistemic MIGHT illustrate the concessive use which is virtually factive

> (523) The Tories believe in a free for
> all. That MIGHT suit the rich but what
> about the rest of us?
> LA 10 79 (31)

> (524) Now that MIGHT be sad for me, but
> it wouldn't be sad for the Labour party
> PA 28 81 (261)

(524) refers to a future, possibly hypothetical, sad situation which withholds from it determinate factual status even though the speaker is talking of himself. The speaker of (523) explicitly excludes himself and his audience from 'the rich' about whom his epistemic judgement is made; the modal is used for rhetorical effect (compare 'that suits the rich') rather than to express doubt about the truth of the proposition. Nevertheless, as in (524), the reference is to a <u>future</u> free for all so the modal is not quite factive.

Epistemic COULD

There is not a great deal to be said about epistemic
COULD since less than 6% of the occurring tokens of this
modal bear this meaning, that is, only four examples:

> (525) This is the first time in our
> history that a woman COULD, after
> Thursday, be holding the highest
> political office in our national life
> CO 12 79 (87)

> (526) They hinted in their manifesto
> that the tax cuts they go on about are
> going to be paid for by *increasing VAT* ...
> A lot of things COULD cost a lot more
> under the Tories
> LA 4 79 (53)

> (527) The Tories want to reduce housing
> subsidies. Council rents COULD go up
> by £2 a week or more
> LA 4 79 (81)

> (528) Record inflation. This COULD be
> serious
> CO 3 79 (87)

All are nonfactive. Time reference is future; the
conditions under which the proposition is likely to be
true are explicit in the first three examples. There may
be an element of dynamic possibility/ability in (528) but
it is still nonfactive.

There are nine further examples in which either an
epistemic or a dynamic interpretation is acceptable:

> (529) - You've talked about the demand
> for democracy leading to the sort of
> people's democracy the Russians set up
> in Eastern Europe
> > - I think that's where it COULD lead
> PA 14 81 (106)

(530) Remember how effective your vote

COULD be

LI 11 79 (92)

Alternatively, both elements of meaning ('is able to/is possible for it to and possibly will') are present:

(531) The Liberal party COULD bring this

country together

LI 8 79 (77)

(532) This election is ... going to be

very close fought and your vote COULD

make the difference

CO 5 79 (127)

Sometimes an epistemic meaning can only just be squeezed out as in

(533) We COULD do the same to the right

wingers in the next parliament

LI 11 79 (65)

(534) He inspired me to belived that

there COULD be an alternative to narrow

class-based politics

LI 2 79 (77)

Again, these further, marginally epistemic examples all have future time reference and are all nonfactive.

Epistemic WILL

WILL (including '11) is the most commonly occurring modal in the corpus with nearly 350 tokens. Only about 5% are not epistemic. The few non-epistemic tokens express dynamic volition (see Chapter 4.3.3), mostly forced by a first person subject, although there is in fact often a volitional element in subjective epistemic uses since where the speaker=subject, an epistemic commitment is similar to an expression of personal volition.

There is one example of 'characteristic' WILL which, unlike characteristic CAN, is not factive, but clearly an expression of the speaker's subjective opinion; the third

person subject of this particular example also serves to
reduce the relative factivity associated with the modal

(535) Politicians are all the same.

They'LL give you a long list of promises

LI 2 79 (56)

The descriptive label 'characteristic' is of course mainly
derived from the context; if the first sentence were
deleted the modalised sentence on its own would express
the speaker's epistemic prediction about the third person
subject's likely future behaviour. Characteristic WILL is
therefore a context dependent variant of an epistemic
prediction.

I include 'simple' future as an epistemic meaning -
although this use without any shade of epistemic meaning
is quite rare. The closer and more specific the future
time referred to is, the more likely it is to be
interpreted as a simple future without volitional
overtones or an element of prediction:

(536) In a moment I'LL be talking to
the present deputy leader of the Labour
party, Denis Healey, and to his two
rivals, John Silkin and Tony Benn
PA 14 81 (10)

(537) Meanwhile Panorama next week WILL
come from Northern Ireland
PA 14 81 (878)

(539) The campaign is now coming to its
climax: the result WILL be announced at
Brighton at the start of the Labour party
conference in only 13 days' time
PA 14 81 (7)

These are not perceived as predictions. The speaker is
announcing a future event in as near a factual way as
possible. In (536) the specific reference, the speaker's
control over the event, the imminence of its actualisation
all make the relative factivity of WILL very strong. On
the other hand, the more distant the event is, the greater

the chance of something happening to prevent it and so the weaker the relative factivity of the modal is taken to be.

Usually, however, even 'simple' future uses of WILL contain an element of prediction as in

> (539) It was the turn of the Tories in
> last week's Panorama and tonight it's
> the Labour manifesto which WILL be
> under fire
> PA 30 79 (6)

Note that the prediction element is almost entirely a function of the lexical item 'under fire'; had Sir Robin Day said 'the Labour manifesto which WILL be discussed' it would have been perceived as expressing a more objective, neutral reference to future events. As it stands, he is making a prediction about the kind of event it will turn out to be.

Alternatively, simple future may be combined with an element of commitment:

> (540) Tonight instead of us telling you
> what the next Conservative government WILL
> do, we'd like you at home to imagine that
> you were part of the next government
> CO 9 79 (2)

Here the choice of WILL (rather than, say, 'plans to' or 'commits itself to') seems to be pragmatically motivated, just as the underlying condition - if the Conservatives win the next election - is deliberately suppressed. The likely motivation for this is that the speaker wants to express his confidence that the future will go as predicted. The strong relative factivity associated with this modal enables him to do that. But the basic fact remains that you cannot be factive about the future.

Future time is of course almost always (but not quite always, see (551) and (586) below) a feature of the meaning of WILL, hence its fundamentally nonfactive status. WILL is never strictly speaking factive. The closest it gets to determinate factual status is in contexts with a first person subject and a verb of

speaking which is immediately actualised. The corpus
offers about 14 such examples including

      (541) But I'LL finish just by saying

      I take it some activists support

      Denis Healey ...

      PA 14 81 (475)

      (542) Well I'LL answer that very simply.

      I support Michael Foot because he

      supports party policy

      PA 14 81 (501)

Of course, when the modal is used the act of speaking is
still future and so may not take place. The speaker may
be interrupted for example as in

      (543) I'LL give you a very good

      example ... Please listen

      PA 30 79 (672)

Or it may make explicit, in the form of a conditional
clause, the element of the addressee's volition on which
the actualisation of the event at least partly depends:

      (544) I said it in an interview with

      Robin Day but if you want me to I'LL

      say it again

      PA 14 81 (687)

There may be an element of speaker's volition involved,
particularly where the subject is in the first person
singular:

      (545) Well I'LL tell you what. If you

      don't cut tax and you don't restrain

      public expenditure there won't be jobs

      PA 23 79 (484)

      (546) I'LL tell you because it's your

      job we as a government are concerned

      about

      LA 6 79 (15)

Both of these last examples have a distinctly idiomatic
ring.

But the majority of the epistemic examples in the
corpus can be loosely classified in semantic terms as
expressing some kind of a prediction, deduction or
commitment. The distinction rests almost entirely on the
lexical context. Sometimes it is clear, often from a
specific lexeme in the immediate context:

> (547) An industrial peace WILL mean that
> we can concentrate on keeping prices down
> LA 4 79 (46)

This is a deduction rather than a prediction or a
commitment, although when a deduction is cast in the form
of a forecast or guess, as in

> (548) The index of leading indicators ...
> is the test ... most economists use for
> trying to guess what the growth rate
> WILL be next year
> PA 30 79 (519)

> (549) Many of these forecasting organisations
> ... think it WILL be higher next year
> PA 30 79 (517)

the resulting sentence is virtually indistinguishable from
a prediction:

> (550) The OECD ... take the view that our
> growth rate WILL be close to 3%
> PA 30 79 (512)

> (551) Meanwhile in Britain the average
> industrial worker has seen his real wages
> in terms of what they WILL buy only go up
> by 16%
> CO 5 79 (85)

(Compare this last example with (616) and (617) of
epistemic WOULD on p 237 below.) Note that in (551) WILL
does not have future time reference but is conditional/
hypothetical, ie 'if he spends all his wages they will
buy ...'.

Predictions and deductions usually differ more
markedly from commitments than from each other. But again

this is a classification principally of the contexts with
which the auxiliary is compatible rather than of distinct
meanings signalled by the modal:

(552) We've given a commitment that we
WILL protect pensioners
PA 23 79 (355)

(553) Our understanding is that we WILL
protect [the pensioners]
PA 23 79 (376)

Whether the commitment is in the nature of a threat or a
promise is, once again, entirely context dependent:

(554) ... another threat put out by
Labour candidates that we WILL impose
charges
PA 30 79 (704)

(555) We only make promises we can keep ...
a pensioner couple WILL get £35 a week
LA 1 79 (124)

In this last example the reference to a specific amount of
money strengthens the relative factivity associated with
the modal.

Similarly, WILL is compatible with both hopes and
fears:

(556) I hope you WILL get answers to
those questions in the next two weeks
LA 1 79 (134)

(557) As Denis Healey ate his celebration
dinner with his supporters last night he
feared that the whole ferocious battle
WILL be refought again next year
PA 28 81 (115)

That WILL is compatible with both - with, in effect,
either a bias towards a contrafactive interpretation
(subject hopes the proposition will become true, often
thereby implying it might not) or a factive one (subject

fears it will) - is particularly obvious in the following
example

> (558) I'll tell you what I <u>fear</u>, the danger.
> I'm obviously not going to say it's
> definitely going to happen - I <u>hope</u>
> it won't. But the <u>fear</u> is this, that
> we WILL have another campaign, election
> campaign next year
> PA 14 81 (633)

There are a great many examples in which the speaker
makes clear his personal commitment to the truth of the
proposition contained in the modalised clause (which is
not, of course, the same as saying that he presupposes its
truth). He may do so by making his hope (see (556) above)
or belief or conviction explicit:

> (559) I <u>believe</u> that it WILL actually
> accelerate it
> LI 11 79 (61)

> (560) I'm <u>convinced</u> that he WILL win it
> PA 28 81 (168)

There are also a number of more colloquial ways to
highlight epistemic commitment:

> (561) <u>I've no doubt whatever</u> that no
> matter what they may say during an
> election, the unions WILL accept the
> democratic will of the people
> CO 12 79 (74)

> (562) <u>I'm sure</u> he'LL be under very great
> pressure from his followers to do just
> that
> PA 28 81 (92)

'I think/believe (that) X WILL Y' is also a commonly used
frame for this sort of subjective epistemic meaning.

The subjective or personal element need not be
explicit in the immediate co-text. The following examples

are loaded with speaker commitment and a personal vision
of the future

>(563) The 80s WILL give us a chance to
>build one nation
>LA 1 79 (148)

>(564) Now it's achieving these aims that
>WILL be the true expression of Britain's
>greatness
>LA 13 79 (137)

Despite the absence of a single lexeme like BELIEVE, the
committed flavour in these sentences still derives from
the context - here, the nature of the general subject
matter being discussed - rather than the modal alone.
WILL itself, when used epistemically, is merely very
readily compatible with this sort of meaning, as (565)
also shows

>(565) We WILL strengthen the politics of
>the centre
>LI 2 79 (134)

If the speaker and the subject are not co-referential
the relative factivity of the modal is weakened. The
speaker does not have access to 'your' thoughts the way he
does to his own:

>(566) When you vote on Thursday ...
>you'LL be thinking of the future
>CO 12 79 (35)

When the speaker is of one political persuasion and the
subject of another, it is even less likely that the former
will represent accurately or fairly the views and
judgements of the latter:

>(567) The Tories WILL devalue the Common
>Market pound
>LA 4 79 (70)

Co-occurrence with modal adverbs illustrates that
WILL is compatible with different degrees of nonfactivity.
The only corpus example is

>(568) Perhaps it'LL start at 4 o'clock in
>the morning, not 3 o'clock, but it'll start
>PA 14 81 (635)

But modally nonharmonic adverbs such as MAYBE and POSSIBLY would also be acceptable in this context.

There are two, closely related examples of WILL in a complex (future perfect and passive) verb phrase. Although these still have future time reference, the perfect aspectual meaning strengthens the relative factivity of the modal:

> (569) By next Easter every boy or girl
> who leaves school this autumn WILL have
> been offered a job or a place in training
> PA 30 79 (54)

Progressive aspect similarly has the effect of increasing the bias towards a factive interpretation. Compare

> (570) And I'LL be cutting income tax
> again when we get back
> LA 1 79 (93)

with

> (571) And I'LL cut ...

A conditional context, as with other modals, weakens the degree of bias towards a factive reading by making the truth of the proposition explicitly dependent upon some condition:

> (571) You WILL only get that under a
> Labour government if the experienced
> team which has run the country
> successfully for the last five years can
> finish the job in the next five
> PA 30 79 (797)

> (573) If Labour wins on May 3, Mr Denis
> Healey WILL continue as Chancellor of
> the Exchequer
> PA 30 79 (79)

> (574) Well if they base their decision on
> the record it'LL be the Conservatives
> CO 3 79 (135)

(575) Unless something is done it WILL be
poorer and poorer Britain
CO 3 79 (60)

(576) If you give us enough Liberal MPs
... we WILL curb the extremists on your
behalf
LI 11 79 (67)

(577) It'LL start to rise again when we
have cut personal taxes
PA 23 79 (47)

This is a common context for WILL, accounting for nearly
13% of the epistemic examples.

The corpus provides almost as many instances of WILL
in an interrogative context, which similarly serves to
weaken the relative factivity of the modalised clause.
Given the wider political context, very few of these
questions are about objective epistemic assessments.
Knowing that the speaker of the following example is a
Conservative politician,

(578) Which party WILL the British people
choose to help solve the inflation problem?
CO 3 79 (133)

there can be no doubt that he thinks the Conservatives
will be the chosen party; but this political bias has
nothing intrinsically to do with the modal auxiliary.
More directly relevant to WILL, the stress and intonation
Lord Thorneycroft gives to

(579) WILL they manage to halt the rip-
roaring increases in prices?
CO 7 79 (2)

adds a strong measure of speaker disbelief that "they"
will.

Most examples of epistemic WILL in interrogative
structures serve the indirect function of raising a doubt
or sowing a suggestion in the addressee's mind:

(580) WILL another million people be
out of work under the Tories?
LA 6 79 (128)

(581) WILL you have to be rich to be
ill under the Tories?
LA 6 79 (131)

(582) Of course the Conservatives say they'll
make you better off too. But WILL they?
LA 4 79 (50)

The question may also be directed towards the subject's
epistemic judgement:

(583) On inflation do you think we'LL
get it down?
CO 9 79 (105)

Or it may ask the addressee for an epistemic prediction

(584) Do you think Mr Benn WILL run
again for deputy leader next year?
PA 28 81 (75)

Although the answer to epistemic questions is left
open, it is likely to be highly subjective as the next
example shows

(585) WILL the Conservatives bring
unemployment down? Well we think they will.
Obviously Labour think they won't
CO 7 79 (1)

Negative epistemic WILL signals the speaker's (or
subject's) commitment to the falsity of the proposition.
He is expressing a prediction or deduction that a state-
of-affairs will not come about, or a commitment to it not
doing so. But WILL, again because of its fundamental
future time reference, is never actually contrafactive,
although strongly biased towards contrafactivity. Only
one example has non-future time reference, but it is still
nonfactive

(586) I think people at home WILL NOT be
hearing you if you all speak at once
PA 14 81 (680)

Here the speaker is making an epistemic deduction/
judgement from certain conditions ('you all speaking at
once') but cannot have total certainty about the third
person subject's perception, he only thinks it likely that
people are not able to hear. Note that the present time
reference is signalled by progressive aspectual marking of
the lexical verb HEAR; WILL is compatible with this
temporal reference, despite the fact that 'future' is a
central element in this auxiliary's meaning. I take this
as an indication that nonfactivity - which is maintained
in (586) - is more basic to WILL even than futurity.

The conditional feature of (586) is very common in
sentences containing negative epistemic WILL. It serves
both to underline the logical deduction element in WILL's
meaning and to weaken the modal's relative factivity by
making it explicit under which circumstances the
proposition is likely to be false - or the negative
proposition to be true (depending on whether one treats
WILL NOT/WON'T as semantically negating the auxiliary or
the main verb (see note 19 to Chapter 4)).

> (587) And unless [the national cake] is
> larger, there WON'T be enough money
> PA 23 79 (42)

> (588) Could we have slightly shorter questions
> otherwise we WON'T cover enough ground
> PA 30 79 (295)

> (589) If you need a job the Tories WON'T
> help you
> LA 6 79 (36)

> (590) If you go to the doorsteps you WON'T
> find that it's a cosmetic thing
> PA 23 79 (636)

There is also one appeal to 'commonsense'

> (591) Commonsense shows it WON'T happen
> LA 13 79 (81)

Negative epistemic WILL is compatible with the same range
of meanings as its positive form, viz: 'simple' future

>(592) You WON'T know that for months
>PA 28 81 (125)

(although there is an element of speaker prediction here)

>: commitment

>(593) I'm going to raise the money by ...
>some reductions in public expenditure which
>WON'T damage jobs
>PA 30 79 (642)

>: deductions

>(594) In other words they WON'T negotiate
>lower food prices
>LA 10 79 (47)

Again, negative epistemic WILL often occurs in a highly
subjective context:

>(595) We think they will, obviously Labour
>thinks they WON'T
>CO 7 79 (5)

>(596) Now it has been abundantly clear to me
>after 30 years that you WON'T change the
>nature of the Conservative and Labour parties
>LI 2 79 (43)

Co-occurrence with NEVER rather than NOT often has the
effect of increasing the subjective element of meaning:

>(597) You'LL NEVER win the next election
>unless you have credibility
>PA 14 81 (37)

(597) seems to me not far from a self evident truth! But
in the final example the distinction between speaker and
the first subject ('Labour'), contrasted with the
speaker's evident identification with the second subject
('we') adds a further element of subjective judgement
thereby weakening the relative factivity of the modalised
clause

>(598) Labour WILL NEVER give you the
>incentive but we will
>CO 3 79 (117)

Epistemic WOULD

The great majority of examples of WOULD (including 'd)
in the corpus are epistemic and nonfactive. They refer to
future time, have an explicit open condition, and often
make use of specific reference (to objects, amounts of
money) to support their epistemic judgement or prediction,
as in the following example

> (599) If the Tories cut the rate of
>
> income tax by 2p in the £ they'D need to
>
> increase VAT by more than half to raise
>
> the money
>
> LA 10 79 (126)

The condition may be understood from the wider context, as
in

> (600) You said you were going to pass a
>
> law to stop secondary picketing. So the
>
> type of activity we saw in 1973 when the
>
> miners picketed the power stations WOULD
>
> be illegal
>
> PA 23 79 (595)

(time reference here is future - with rules for reported
speech and sequence of tense responsible for the past
tense form <u>were going to</u> - the illegality of the future/
hypothetical picketing is conditional on the future
passing of the promised law); or

> (601) ... increasing taxes on what we buy
>
> ... would mean a massive increase in VAT
>
> which WOULD push up the prices of cars,
>
> clothes, drycleaning, household appliances,
>
> records, furniture ...
>
> LA 10 79 (9)

(= 'if the Tories increase taxes on what we buy ...')

The relative factivity of the sentence may be
strengthened by the presence of other, modally harmonic
elements:

> (602) But a tight money policy you know
>
> WOULD <u>certainly</u> push up the interest rates
>
> PA 23 79 (286)

Or it may be weakened by a number of ways, for example by
using the ED morpheme in the conditional clause:

> (603) Oh well I'm not going to tell you
>
> because if I did people WOULD start
>
> buying things
>
> PA 30 79 (621)

Of course the negative bias is explicit in the first
clause, but it would still be possible to continue
'because if I do ...', in which case the relative
factivity associated with WOULD - the likelihood of people
buying things - would be strengthened because the
possibility of the condition (on which the modalised
clause is dependent) being fulfilled would be slightly
less remote.

Another way relative factivity may be weakened is if
the subjunctive BE form occurs in the if clause:

> (604) ... the basis of the Trade Union's
>
> power is in law ... So if they were going
>
> to be adjusted at all they WOULD require to
>
> be adjusted by law
>
> PA 23 79 (109)

> (605) The weakness of his position is that
>
> if he were to become deputy leader it WOULD
>
> be up to him to carry out party policy
>
> PA 14 81 (410)

> (606) If [their proposed tax cuts] were
>
> financed entirely by raising VAT, our
>
> calculations show that the current rates
>
> WOULD more than double to 17%
>
> LA 4 79 (56)

As in the case of (603), the relative factivity associated
with WOULD is weakened because the condition (on which the
proposition qualified by the modal depends) is indicated
as being unlikely to be fulfilled.

If attention is drawn to the subjectivity of the
epistemic judgement, this again has the effect of
weakening the relative factivity of the modal auxiliary by

relating it explicitly to the hearer's faith in the
subject's judgement:

> (607) ... if you took seriously what he
> sometimes says - *and I don't think one's
> under any obligation to do that - then I
> think there is a real risk that parliamentary
> democracy as we've understood it WOULD disappear
> PA 14 81 (123)

(*By this interpolation, the speaker/subject adds a
further, explicit assessment of the likelihood of the
condition on which the 'risk' depends being fulfilled.)

> (608) But he's made it very clear that
> he believes that Mr Benn WOULD be a disaster
> PA 14 81 (619)

> (609) If we do, the answers will reveal what
> I believe which is that ... the average
> citizen of this country WOULD be worse off
> LA 1 79 (137)

WOULD is still appropriate when the speaker's
epistemic commitment is highly qualified, as in the
following examples

> (610) You can do it in the process of
> uprating pensions in November, I think
> it will be ... that WOULD be a way of
> doing it
> PA 23 79 (359)

> (611) Yes yes well, there is some saving
> undoubtedly that we can make ... a hundred
> million or so, some modest change there, we
> don't know what that WOULD amount to
> PA 23 79 (540)

In both these examples the hypothetical element of the
meaning of WOULD - its weak relative factivity and
essential nonfactivity - is emphasised by other features
of the semantic context (lexemes like UNDOUBTEDLY, the use
of SOME and the indefinite article).

A number of examples are in interrogative form and
their function is to invite the listener to imagine a
hypothetical situation

> (612) WOULD another million people be out
> of work under the Tories? And WOULD you
> be one of them?
> LA 6 79 (2)

> (613) Already this Labour government has
> saved or safeguarded about a million jobs.
> What WOULD happen to those people if the
> Tories allowed their factories to go out
> of business?
> LA 10 79 (61)

In the above examples, WOULD refers to a hypothetical
possibility of something (unpleasant but largely
unspecified) happening; by questioning this, emphasis is
put on the fact that it can be avoided; the nonfactivity
of WOULD is entirely appropriate to such a context.

There is one interesting example of a switch from
WOULD to WILL to indicate an increase in the speaker's
epistemic judgement of the likelihood of the proposition
becoming true if the condition is fulfilled

> (614) Do you think that's what Mr Benn's
> moves WOULD lead to or <u>will</u> lead to if
> he's elected deputy leader?
> PA 14 81 (119)

(Compare the switch from WILL to WOULD in (610).)
The speaker is clearly signalling his own assessment of
the proposition about Mr Benn while asking for his
addressee's opinion.

In another example the speaker challenges his
addressee not to deny the modalised proposition

> (615) You don't deny that VAT WOULD have
> to go up very substantially?
> PA 23 79 (298)

; the addressee's response is not to deny the speaker's
epistemic assessment of the proposition 'VAT have to go
up' but to query the amount by which it would have to do

so ("What do you mean, very substantially?") thereby
effectively accepting the epistemic judgement expressed by
WOULD. Concurrence by speaker and addressee (particularly
given the 'real world' knowledge that acceptance of the
proposition is likely to be politically damaging to the
addressee) strengthens the relative factivity of WOULD -
the conclusion that any reasonable listener would draw
from this exchange is that VAT is very likely to go up.

A few examples illustrate a use of WOULD associated
with an even stronger relative factivity, almost amounting
to a factive interpretation

> (616) Between 1974 and 1978 the average
> French worker saw his wages in terms of
> what they WOULD buy go up by 60%
> CO 5 79 (81)

> (617) In Britain most people pay about 40 pence
> in tax and National Insurance out of every
> extra pound they earn ... In Germany as a
> married man with two children you'D have to
> be earning £300 a week to pay that rate of tax
> CO 9 79 (29)

(616) means, in effect, that the average French worker's
purchasing power <u>did</u> rise by 60%; but there is an implied
condition - something along the lines of 'if he were to
spend (all) his wages' - which prevents the proposition
qualified by WOULD from being strictly presupposed to be
true. So nonfactive WOULD is still appropriate. The
principal contextual feature which strengthens WOULD's
relative factivity is the past time reference, although
specific reference to percentages and years also performs
a similar function. The time reference of (617) is
present, and there are a number of conditions before 'you
pay that rate of tax' (viz be German, be a married man
with two children, be earning £300 a week) hence the
relative factivity of WOULD in this context is less
strong.

The time reference in the following example is also
present

(618) So we have less work which means a
dole queue that WOULD stretch from London
to Inverness and money that <u>buys</u> less than
French money, German money and Japanese money
CO 3 79 (58)

Here the contrast between the modalised VP <u>WOULD stretch</u>
and the simple present <u>buys</u> is revealing; the modal
auxiliary is used because, although the dole queue is long
enough <u>to</u>[30] stretch the distance from Inverness to London,
it is not probable that it would ever actually be made to
do so. One could either say that the standing in line is
hypothetical (and intended to be and remain so) or that
there is an implied condition in (618) - the dole queue
would stretch from London to Inverness if all the
unemployed were made to stand in one line. By contrast it
<u>is</u> actually the case that money is used to buy things -
not would buy but does buy - because that is its *primary*
function.

Turning to less commonly occurring uses of WOULD,
which are of determinate factual status, the corpus
illustrates a number of <u>contrafactive</u> examples, most of
which fall into the grammatical category of unreal past
conditionals (see above, pp 180 and 202 ff) with a
negative element or implication in the protasis

(619) If the government hadn't got involved
[in] the new Bus Stop jet ... people WOULD
have lost jobs; the industry WOULD have lost
vital skills, and the country WOULD have
lost the competitive edge in an important
world market
LA 6 79 (81)

(620) Without the Price Commission, gas and
electricity prices WOULD already have risen
by 9p in the £ this year
LA 10 79 (32)

(621) ... if we could solve the problem
simply by kicking one lot out and putting
the other lot in then we WOULD have
solved the problems many years ago
LI 8 79 (37)

(622) Any visiting Martian WOULD have
been forgiven for thinking that Mr Benn
had won the election
PA 28 81 (29)
(= 'if a Martian had visited [Earth]')

(623) ... if it had not been for a hell
of a lot of lobbying inside the trade
union movement and a tremendous press
campaign against him, I'm convinved that
Tony Benn WOULD have been the deputy leader
last night
PA 28 81 (181)

(624a) Now for five years output in Britain
has been stagnant, without North Sea oil it
WOULD have been in decline ...
PA 23 79 (47)

The speaker of (624a) continues by contradicting himself,
thereby incidentally showing that language need not always
be used to express logical ideas and that the concepts of
factivity and contrafactivity do not relate to absolute or
immutable truth

(624b) ... All I can say is, with all the
wonderful promises with which the Labour
party came in, for five years we've
remained exactly where we were. And if it
wasn't for North Sea oil we'D actually be
in decline and that's really where we are

The reading of this nonpast unreal conditional as
'contrary to assumption' (see p 181 and example (628)
below) is strengthened by the inclusion of the lexeme

ACTUALLY; the speaker only then seems to realise that he
is implying we are <u>not</u> in decline - and hastens to correct
himself.

There are three examples which, in context, bear a
contrafactive interpretation but which, without the
immediate denial ('It didn't'; 'It couldn't') could be
nonfactive; their past time reference also supports the
contrafactive reading

> (625a) They said the law WOULD prevent strikes.
> It didn't
> LA 4 79 (3)

> (626) They said the law WOULD settle strikes.
> It didn't
> LA 4 79 (4)

> (627) They said the law WOULD make unions and
> management get on together. It couldn't
> LA 4 79 (5)

But given the appropriate prosodic features and co-text,
all three sentences could also be compatible with a
factive interpretation, as follows

> (625b) They said the law would prevent
> strikes - see how successful they've
> been! It has

The corpus provides one example of an unreal nonpast
conditional with WOULD which is clearly 'contrary to
assumption' if not quite 'contrary to fact'

> (628) It WOULD be nice occasionally if
> you listened to what I said
> PA 30 79 (434)

Negation combined with a real nonpast conditional
simply serves to strengthen the bias towards a
contrafactive reading, as in

> (629a) Now it WOULDN'T surprise me at
> all if almost every person in Britain
> agreed with your decisions
> CO 9 79 (116)

The speaker obviously expects the condition to be
fulfilled and not to be surprised at that turn of affairs;
but (629a) is still significantly distinct from the
factive and unconditional:

> (629b) Now it <u>doesn't</u> surprise me <u>that</u>
> almost every person in Britain <u>agrees</u> with
> your decisions.

WOULD bears a factive interpretation when combined
with an unreal past conditional and a negative element in
both the <u>if</u> and main clauses:

> (630) If the government hadn't got involved,
> the new Bus Stop jet that we're now building
> WOULD NEVER have happened
> LA 6 79 (81)

(Note that WOULD remains factive even if the clause 'that
we're now building' is deleted.)

> (631a) We WOULD NOT have joined the Common
> Market if Labour MPs had not broken a
> three line whip
> PA 14 81 (74)

Real world knowledge is not required in order to deduce
from (631a) that we have joined the Common Market. But it
is interesting that a slight change in the sentence can
have the effect of changing the factivity of WOULD:

> (631b) We WOULD NOT have joined the Common
> Market <u>even</u> if Labour MPs had not broken a
> three line whip

MPs still broke the whip, but this time we did not join.
The conclusions I draw from this are firstly that (631a)
and b) neatly illustrate the primacy of contextual
elements in prompting a factual reading and in determining
whether it shall be positive (ie factive) or negative
(ie contrafactive); and secondly that although a modal
auxiliary may appear in a context of determinate factual
status, it so far retains its essential nonfactivity as to
be indifferent to the distinction between factivity and
contrafactivity, by being compatible with both but itself
signalling neither.

Nonpast time reference prompts an 'assumed to be true' interpretation:

> (632) If you were in Eastern Europe,
>
> Denis you WOULD NOT be contested
>
> PA 14 81 (179)

But without the unreal conditional context, negative WOULD, as in (633) below with future time reference, is merely biased towards a contrafactive interpretation - more so than MIGHTN'T but less so than WON'T as predicted from their relative positions on the epistemic scale

> (633) It didn't work last time, it
>
> WOULDN'T work again
>
> LA 13 79 (124)

Epistemic SHALL

Only one of the 24 occurring tokens of SHALL (over 80% of which are epistemic) does not have a first person (singular or plural) subject. All of the examples of epistemic SHALL have future time reference and all are nonfactive.

The element of logical deduction is clearly brought out in various examples, such as

> (634) Because we brought inflation down
>
> from 26% to under 10% we SHALL be able to
>
> take over a million people out of the
>
> taxman's net altogether
>
> LA 10 79 (103)

> (635) ... people who've started up business
>
> overseas, they might come back ... That way
>
> we SHALL get expanding industry and commerce
>
> CO 9 79 (149)

(635) of course depends on the accuracy of a previous prediction. Other instances depend on an explicit condition which serves to underline their relative factivity

(636) We SHALL commit mass suicide if we

go on like this

LI 2 79 (32)

(637) ... if the pound only loses 10p per

year we SHALL be in Heaven

LI 2 79 (14)

More than half of the tokens of epistemic SHALL have
the pragmatic function of a promise or a commitment; the
strong relative factivity associated with the degree of
epistemic modality expressed by SHALL makes it a
particularly appropriate modal for this purpose (see
Introduction, p 18).

(638) And we SHALL use more public money

to help those who need it

LA 10 79 (104)

(639) Secondly we SHALL keep the pound strong

PA 30 79 (34)

(640) Fourthly we SHALL go on subsidising

council rents

PA 30 79 (38)

(641) As you know, we've already cut the rate

of inflation nearly 30% to under 10% ... In

our next period of office we SHALL halve it

again to 5% or under by the beginning of 1982

PA 30 79 (29)

In the last three examples, past evidence (in (639) and
(640) incorporated in the lexical items KEEP and GO ON)
strengthens the likelihood of the proposition qualified by
SHALL becoming true. The specific reference to dates and
percentages in the last example, as in (634) above,
further strengthens the relative factivity associated with
this token of SHALL.

Two final instances seem to illustrate 'future' SHALL
with little or no element of epistemic meaning; (643),
however, occurs in a wider semantic context which could be

called volitional - it is certainly expressive of the
speaker's will - and the modal takes on this connotation
by association, although this is in fact the only example
of SHALL without a first person subject

> (642) Whether I personally would approve
> ... will be irrelevant ... The main thing
> is that we SHALL have those three wings
> together
> PA 14 81 (589)

> (643) I have in fact already arranged and
> announced - nobody seemed to notice that -
> that the Trustee Saving Bank SHALL finance
> 200 million pounds ...
> PA 30 79 (645)

Epistemic SHOULD

SHOULD has a fairly high frequency of occurrence in
the corpus. There are 78 tokens of this modal auxiliary
as against, say, 10 of OUGHT TO (see also Table 1(A) on
p 17 of the Introduction). Of these 78, 84% are deontic.
There are only six examples which express clearly
epistemic meaning, and six further instances of a
'putative' use (term derived from Quirk et al, 1972:740,
784) which seems to have elements of both epistemic and
deontic meaning.

The first example is of an epistemic judgement that
subsequent events have proved incorrect

> (644) Mr Healey, you said yourself that the
> unemployment target SHOULD be down to
> 700,000 by 1979. We are exactly 3 years
> on since you made that statement. Unem-
> ployment is more than double that figure
> PA 30 79 (528)

Obviously it was not the case that unemployment was down
to 700,000 in 1979, but this makes the epistemic
prediction made 3 years earlier wrong, not untrue - and
even this was not known at the time of speaking.

Where the modal forms part of a conditional clause
the <u>if</u> draws attention to SHOULD's nonfactivity and its
relative factivity is weakened:

(645) I hope that, if you are going to go
through with this Manifesto if you SHOULD
get elected, that there won't be further
large doses of nationalisation and Socialism
PA 30 79 (716)

The corpus provides an example of epistemic SHOULD
occurring in a context semantically equivalent to an
unreal past conditional:

(646) - Might you not have done better
without Tony Benn?
        - No I don't think we SHOULD
PA 28 81 (176)

This is roughly equivalent to 'I don't think we should
have done better if we had been without Tony Benn'. The
protasis is unreal (or contrafactive) - Tony Benn <u>was</u> with
us. The sentence therefore offers an epistemic assessment
of an unfulfilled and (because past) unfulfillable
proposition. The essentially subjective nature of
epistemic modality (see p 194 and Chapter 4.4) is
underlined by the speaker's explicit reference to his own
judgement - the sentence is not 'we should not have done
better' but the weaker 'I don't think we should have done
better without Tony Benn'.   One can,
however, assume that we did not do well, although this is
not a presupposition readily derived from the surface
text. So SHOULD is not, here, patently contrafactive in
the way that MIGHT is, for example, in (476). Examination
of corpus data will qualify slightly the
generalisation on p 203 above that all   past
(epistemic) conditionals must be contrafactive. In (482),
for example, the subjective element is focused on the
prediction that, had John come Mary would have left. The
accuracy of this subjective prediction cannot be assessed
because it is taken for granted that John did <u>not</u> come and
Mary did <u>not</u> leave. (646) on the other hand, leaves one
in no doubt about the presence of Mr Benn but focuses on

the subjective assessment of how well we would have done
without him, rather than on the objectively verifiable
fact that we did not, in the actual circumstances, do
well. The explicitly subjective nature of the modality
expressed, as well as the comparative element in the
lexical item do well, clearly plays a key role in
weakening the contrafactivity of the modal.

There are three interrogative examples of epistemic
SHOULD with WHY as the question word, similar to those
discussed under putative SHOULD. But here time reference
is definitely future and there is an emphasis on the
paucity of any logical basis to believe in the future
truth of the proposition. The strongly emotive element
derives from the lexical context and (perhaps) the
prosodic feature of stress on the modal auxiliary

> (647) Why SHOULD the voters have any
> more confidence in this under a
> Mrs Thatcher government when they've
> seen the failure in the past of a
> Heath government?
> PA 23 79 (773)

> (648) Every Labour government since
> the war has left office leaving more
> people out of work than when it came
> to power and why SHOULD that be
> different next time?
> PA 30 79 (729)

> (649) But why SHOULD ... millions of
> people ... believe for a moment that the
> Concordat will prove effective in view of
> the fact that in the first full month of
> its operation 910,000 working days were
> lost through industrial stoppages ...?
> PA 30 79 (153)

In all three cases the speaker, far from indicating that
the proposition contained in the modalised clause is true,
is expressing his judgement that there is no logical

ground for it to be true. He is in other words conveying
his epistemic belief (not untinged with an emotive
element) that the proposition <u>not</u> be true.

Putative SHOULD

    I discuss the six occurring tokens of 'putative'
SHOULD with epistemic modal meanings principally because,
insofar as this use refers to ideas or propositions rather
than events it is closer to epistemic than to root
modality. However, it can also carry strong overtones of
deontic obligation, and seems to do so particularly when
in interrogative form: 'why is X obliged to be so?' As
Quirk et al observe

>   Contrary to what might be thought, [putative]
>
>   SHOULD ... does <u>not necessarily</u> carry any sense
>
>   of obligation, although it <u>is possible</u> to
>
>   interpret it in the 'obligatory' sense of
>
>   'ought to '
>
>   (1972:784, my underlining)

Such putative-deontic examples are discussed after clearer
instances of putative meaning.

    Putative SHOULD may be factive and always expresses
an emotive judgement either that something is so or at the
idea that it might be so.

>   Quirk et al (1972:740) give the following example
>
>   (650) To rob one's parents is unforgiveable ⟵⟶
>
>   That one <u>should</u> rob one's parents is
>
>   unforgiveable

and describe the meaning of the infinitive clause (see
above, Note 30 to Chapter 4) as "'putative', rather than
factual". Later they discuss the common use of SHOULD in
<u>that</u> clauses "to express not a subordinate statement of
fact but a 'putative' idea" and contrast

>   (651) The <u>idea</u> is   ) that education for the
>
>   Someone is suggesting) over sixteens <u>should be</u>
>
>   improved

with

```
(652) The fact is )  that education for the over
      We know      )  sixteens will be improved
```

I would prefer 'is improving' in (652) since WILL, by
virtue of its future reference, is not factive. It
follows that I do not agree with Quirk et al that (652)
"asserts the improvement as a fact and assumes that the
plan will be carried out" (ibid, my underlining);
'assumes' in the sense of 'take for granted' is inaccurate
here - both underlined words should read 'asserts'.
However, Quirk et al are correct when they argue that
(651) "puts forward an idea or plan which may not be
fulfilled"; they overlook, though, that this (nonfactive)
meaning is as much a function of future time reference.

They offer the following further examples of putative
SHOULD

```
(653a) It's a pity        )
    b) I'm surprised      )
    c) It's disgraceful   ) that he SHOULD resign
    d) It's unthinkable   )
    e) It worries me      )
```

Of (653a) and b) Quirk et al say that

> ... despite the should the event is assumed
> to have taken place already. This is
> because the 'factual' bias of the main
> clause construction overrides the doubt
> otherwise implicit in the should con-
> struction. Nonetheless, there is still
> a difference of feeling between 'I'm
> surprised that he should resign' and
> 'I'm surprised that he has resigned':
> in the first it is the 'very idea' of
> resignation that surprises; in the second
> it is the resignation itself, as an
> assumed fact
> (ibid)

Both these examples (653a) and b), then, are assumed to
have past time reference in the that clause. I would
argue that, excluding (653d) for the moment, it is also
taken for granted in the other examples that he has

already resigned - otherwise one would say 'It's
disgraceful/It worries me that he SHOULD think of/
consider/contemplate resigning', all of which make it
clear that he has not yet done so. So once again,
temporal reference is seen to be crucial to the relative
factivity of a modalised sentence.

When Quirk et al refer to the 'factual bias' of the
main clause construction, they are noting the same
phenomenon as examined by Kiparsky and Kiparsky, ie that
factive predicates presuppose the truth of their
complement clause. All of Quirk et al's examples in (653)
feature factive predicates, apart from (653d). All
without exception also fall into the class of emotive
predicates. Putative SHOULD seems to be strongly
associated with emotive contexts but as some of the corpus
examples show, it can also signal an emotive judgement on
its own.

Quirk et al also point out that putative SHOULD
occurs in some idiomatic questions and exclamations, such
as

(654) How SHOULD I know?

(655) Why SHOULD he be resigning?

(656) That he SHOULD dare to attack me!

(657) Who SHOULD come in but the mayor himself!

My corpus offers the following instances of putative
SHOULD

(658) It seems funny doesn't it that the
Tories SHOULD complain about inflation
LA 4 79 (66)

(659) But what is not tolerable is that
people SHOULD get into Parliament and
then claim when they're there that they
have no responsibility whatever ...
PA 14 81 (94)

There are a further four examples which all fall into a
similar syntactic pattern and which I initially classified
as deontic (see also comparable examples of epistemic
SHOULD (647) to (649))

(660) Why SHOULD pension increases be
announced in March but not paid until
November?
LI 8 79 (92)

(661) Why SHOULD a one parent family where
the parent wants to work not get the child
minding fee allowed against tax?
LI 8 79 (95)

(662) Why SHOULD we pay for the butter and
beef mountains only to see them sold off
cheaply to Eastern Europe?
LA 10 79 (96)

(663) We don't see why the British housewife
SHOULD have to pay for inefficient
continental farming methods
LA 10 79 (95)

Taking these examples in turn (658) assumes that the
Tories have complained, ie the that clause has past time
reference; SHOULD is factive and what is 'funny' is the
very idea of the Tories doing so. (659) is unclear - the
context is highly emotive (note the charged negative
lexical items NOT TOLERABLE, NOT RESPONSIBLE) and the
speaker clearly believes that certain people have got into
Parliament and then disclaimed responsibility. But the
speaker's judgement does not amount to the presupposition
of truth. (659) could also be read as referring to the
intolerable idea that people might ever behave this way.
In this case, then, SHOULD retains its nonfactivity.

In these two examples SHOULD occurs in an emotionally
charged context; the judgment expressed is usually
pejorative. This seems to be a common feature of modals
which occur in contexts of determinate factual status;
their modal meaning focuses not on what is or what was -
or on what might have been - but on why or how it is/was
or what would have been preferable.

In all four examples (660) to (663) it is clearly taken for granted that the proposition is currently true (a true negative proposition in the case of (662)). In (660) the modal could be replaced by the appropriate form of the BE verb without altering this presupposition ('why are pension increases announced ...'); in (661) and (662) DO (does, do) would be acceptable. The presence of SHOULD intensifies the speaker's indignant querying of the status quo. He is questioning the deontic need or compulsion for things to be as they are. If SHOULD were deleted in (663) ('We don't see why the British housewife has to pay ...') - which is of course a reported rather than a direct question - the temporal reference of the sentence would be restricted to the present in which she does pay. As it stands, the speaker of (663) is looking to the future in which it would be desirable for the housewife not to pay, as well as to the factually determined present; SHOULD therefore keeps its nonfactive status in this last example.

Epistemic MUST

The section on deontic MUST in Chapter 4.3.2 explains that a significant number of corpus tokens of this modal share deontic and epistemic elements of meaning. An explicit conditional often weighs the argument in favour of an epistemic, or 'logical deduction' reading as in

> (664) ... if you want Liberal influence in
> the next government ... then you MUST vote
> Liberal
> LI 2 79 (49)

> (665) ... if the citizens of Britain prize
> their freedom then they MUST vote
> Conservative
> PA 30 79 (95)

(666) I would have thought if you care ...
about this party then you too would have
formed the view that we MUST rebuild
the party to go into the next election
PA 14 81 (525)

Such sentences are doubly modal in the sense explained
above, p 200.

Political or social/moral judgements are often
presented as if they were a matter of logic as in

(667) ... won't that put up prices? The
answer MUST be not to put tax on essentials ...
CO 8 79 (81)

(668) So what's the answer? It MUST be a
question of priorities
CO 9 79 (67)

In some examples other lexical elements in the
sentence contribute a distinctly pejorative meaning

(669) It MUST be the <u>fault</u> of the immigrants
or the Common Market or the Russians
LI 11 79 (33)

MUST, when it expresses this mixture of epistemic and
deontic meaning, is compatible with an interpretation
biased towards contrafactivity if the wider context
signals disbelief in the modalised proposition. For
example

(670) <u>You will be told</u> that the Tory/
Labour game MUST go on at all costs
LI 11 79 (88)

The speaker of (670) clearly does not share the belief
that bipartisan politics <u>must</u> continue; whether or not it
does, is of course a separate matter and one which the
auxiliary does not directly address when deontic.

There is a sense in which all of the above instances
of MUST are more subjective - and more overtly emotive -
than examples which are purely epistemic. Such epistemic
examples may also make it explicit that it is the
speaker's judgement being expressed

(671) Listening to Mr Healey, I think
may people MUST have wondered whether
we were all living in the same country
as he was
PA 30 79 (721)

(672) I believe quite bluntly the Tribune
group in Parliament ... in reality voted
for Healey. And I think they MUST expect
some discomfort from the rank and file in
their own constituencies in the coming months
PA 28 81 (100)

However even logical deduction when applied to the realm
of politics, is still highly subjective:

(673) The Tories are against all forms of
Government aid to industry which MUST mean
more unemployment
LA 6 79 (13)

Even where the evidence is presented on the basis of
which the epistemic judgement is made, the modalised
proposition is still far from being presupposed to be
true:

(674) Well I think anybody who's sitting
and watching television now and who watched
Mr Pym for example last week MUST admit that
I have given specific and detailed proposals
PA 30 79 (764)

(675) ... they are coming on again. Yes,
they MUST be going to take off some of the
weight. No, no, no they've got two more
weights to hold down the British team
CO 3 79 (37)

This last example shows clearly how an epistemic
expectation may not be fulfilled. The immediate denial
does not make the use of MUST wrong; it does not prove the
speaker a liar, only that he has bad judgement (or, here,
that he was too optimistic).

4.3.2 <u>Deontic modality</u>

- MAY, MIGHT
- CAN, COULD
- MUST, OUGHT TO, SHOULD

<u>Deontic MAY</u>

Deontic MAY accounts for over half of the tokens of this modal in the corpus. Most occur in the fixed phrase 'if I may say' or slight variants of it where the lexical verb refers to an act of speaking which is immediately actualised:

> (676) And if I MAY say to Michael we do
> not want puppets we want partners
> PA 28 81 (15)

> (677) And in any case, if I MAY make a
> macabre joke, in the long run we'll all
> be dead
> LA 13 79 (72)

> (678) I was going to come back on a point
> that Denis made which I think really shows,
> if I MAY say so, a fundamental misunder-
> standing of the position
> PA 14 81 (265)

> (679) Well if I MAY tell you public
> expenditure has risen less as a % of GDP
> under this government than it did under the
> last Tory government
> PA 30 79 (655)

That this is a polite fixed phrase rather than a direct request for permission is evident from the next example, in which it is tacked on at the end

> (680) We've done that already, if I MAY
> say so
> PA 30 79 (461)

If the subject (all are in the first person in my corpus) and verb are inverted, the request is more likely to be genuine:

> (681) - Now MAY I say something else?
> - Very briefly because we've got
> half a minute left
> PA 14 81 (858)

But it may be simply a rhetorical device:

> (682) MAY I now call on Mrs Lynda
> Chalker MP
> PA 30 79 (692)

> (683) MAY I now invite you Mr Healey to
> defend your policy
> PA 30 79 (146)

(683), for example, is not a request to be allowed to issue an invitation to speak, it <u>is</u> the invitation.

> (684) And MAY I remind them that their
> agreed function is critically to examine
> Labour policy
> PA 30 79 (148)

> (685) But MAY I say this: there's nothing
> wrong with elections
> PA 14 81 (702)

The probability of an act of saying being immediately actualised depends heavily on the speaker's authority and role. Invited speakers on a TV discussion programme are unlikely to interrupt the presenter, but Sir Robin Day not infrequently interrupts his guests (thereby denying them the permission to speak that they seek from him as the relevant deontic source).

Despite the frequency of occurrence of examples like this of deontic MAY, it remains true that the modal is merely compatible - when it has this particular combination of contextual features - with an immediately determined factual status. Logically speaking, permission is not always granted and even if it is, the event for which permission was sought might not take place. But it

is (dynamically) possible for it to do so and hence (epistemically) possible that it will so convention has come to rule that more often than not it will do so in the particular set of contextual circumstances which apply in (682) to (685).

The corpus offers only one example of MAY used to express simple permission in a declarative sentence

(686) I support every member of my
constituency having the right to vote
for the MP. I'm told that only the
activists MAY
PA 14 81 (444)

The activists are permitted to vote. Knowledge of the real world (plus certain semantic features of the lexeme ACTIVIST) indicates that they are highly likely to do so, but this is not directly asserted by the deontic modal auxiliary.

Deontic MIGHT

The corpus provided only one example of deontic MIGHT

(687) And if I MIGHT say so, Tony, if
you're thinking as deputy leader of going
back to the members each time you have
some problem, you'll have a permanent
sitting Conference
PA 14 81 (482)

This is an instance of a modal use pragmatically motivated, by reasons of politeness (or to give the appearance of politeness); the speaker is not really asking for his addressee's permission to speak. This, combined with the first person subject and nature of the lexical verb - referring to an action over which the speaker/subject has full control - means that the 'event' is immediately actualised.

Deontic CAN
=====

Deontic CAN is rare in the corpus - only nine tokens
out of a total of over 200; and even in those few there
are traces of a dynamic element of meaning. All nine
occur in an interrogative context and are nonfactive
although several ((688), (695) and (696) for example) have
a very strong relative factivity given that the event
qualified by the modal and questioned by the interrogative
form is immediately actualised. All nine have a first
person singular or plural subject. It is noteworthy that
all, more or less directly, refer to an act of speaking;
(692) for example really means 'can we get back to talking
about the manifesto?'. Thus it is permission to speak
that is at issue.

> (688) CAN I come back to this question of
> democracy? because ... I was an original member
> of the campaign for Labour party democracy
> PA 14 81 (434)

> (689) ... before we move on ... CAN I just
> try and clear this up?
> PA 30 79 (495)

These two examples are obviously requests for permission,
even if the speaker in (688) does not wait for it to be
granted. But one could argue that there is an element of
dynamic ability here, with the speaker asking to be
allowed to realise his ability.

Where the inverted subject is in the first person
plural the modalised question often functions as an
indirect request, or expression of the speaker's wish, for
action - always, in this corpus, for speech - rather than
for permission:

> (690) CAN we have a figure from you?
> PA 23 79 (306)

> (691) CAN we talk about jobs?
> PA 23 79 (421)

> (692) CAN we get back to the manifesto?
> PA 23 79 (719)

In none of these cases is there any guarantee that
the speaker's wish/request will be fulfilled and all are
unequivocably nonfactive; but this is largely a function
of the fact that the speaker in all cases does not have
the authority to impose his own preferences on the other
speakers because he is not the programme presenter. Had
the speaker been invested with this sort of authority, the
action/event would still not have been guaranteed, but the
bias towards an actualised outcome would have been
stronger.

With a second person subject a dynamic ability
interpretation becomes virtually inevitable. For such a
question to be seen as an expression of deontic meaning (a
request for permission) it would be necessary to
accommodate the assumption that - in the context of this
corpus at least - the speaker would be the deontic source.
Obviously it would be nonsense for the speaker to ask 'are
you permitted by me to do X?'. But a question about the
subject's ability to do X, on the other hand, is
pragmatically perfectly acceptable since this is not
something over which the speaker has control. In such
dynamic second person subject interrogatives, the indirect
force is unchanged from that in the deontic examples
(690), (691) and (692) above), ie a request for action,
again in the sense of speaking:

> (693) Mr Benn, CAN you answer the point
> about whether you will stand again?
> PA 14 81 (641)

> (694) CAN you turn this into a question?
> PA 14 81 (495)

A similar pragmatic argument explains why (695) and
(696) contain deontic CAN (and express a request to be
allowed to speak) whereas (697) has dynamic CAN:

> (695) But CAN I just say this to John?
> PA 14 81 (650)

> (696) CAN I say? it's a lot of footslogging
> to get it like that
> PA 14 81 (447)

> (697) All I CAN say is, with all the
> wonderful promises with which the Labour
> party came in, for five years we've
> remained exactly where we were
> PA 23 79 (500)

Essentially there is very little difference between (696) and (697). ((695) is less transparently a rhetorical question.) The rhetorical effect of, and motive for, both is virtually identical. But whereas (696) can still be read as a polite, formulaic request for permission to say something, even if the granting of permission is assumed, (697) has nothing of permission in its meaning (and not very much of dynamic ability). Dynamic CAN in (697) is factive - I can say this and I do, immediately. (695) and (696) are also immediately actualised (the subsequent text reveals this for (695)) but in terms of relative factivity they are still not quite of determinate factual status. Because of their interrogative structure, they invite interruption and consequently entertain the possibility of nonactualisation.

The reason why 'can I?' is rarely interpreted as an expression of dynamic modality is that it is hardly ever the case that people want to question their own ability to do something; usually they <u>know</u> whether or not they can do it. It is far more likely that they will need to ask for permission to do something. But CAN with a first person singular subject in an interrogative context cannot always be assumed to be deontic:

> (698) CAN I pass this exam, do you think?

Here the nature of the lexical verb is the decisive factor in determining which modal meaning is carried by the auxiliary; one does not need <u>permission</u> to pass an exam, one needs the <u>ability</u>. Dynamic CAN in such a context is nonfactive.

Deontic COULD

The corpus offers twelve examples of deontic COULD
from a total of 69 tokens of this modal auxiliary. All
relate to an act of speaking, have a first person singular
subject and are either in an interrogative or conditional
context. Frequently the act of speaking is immediately
actualised:

(699) COULD I just put it to you? Why is it
that facing the same economic recession as other
countries, their average growth over the last
five years is 2.4% and yours is 0.9%?
PA 30 79 (489)

(700) COULD I just ask, because you seem to
be contradicting one of your colleagues
Mr Healey, if the hard choice came between
public expenditure increases or cutting
income tax which would you be doing?
PA 30 79 (649)

Often the act of requesting permission relates to asking
the addressee and deontic source a question which forms
part of the request, as in

(701) COULD I ask you if you are going
to stand next year?
PA 28 81 (68)

(702) COULD I ask you what would you do
if it happened again?
PA 23 79 (595)

(703) COULD I remind them that their agreed
main function here is to examine Tory policy
PA 23 79 (153)

(703) is most clearly a rhetorical question; (701) and
(702) are rather more directly requests for permission, as
illustrated by the following examples where the permission
is effectively denied by interruption from another
speaker

> (704) COULD I, COULD I come in on Trade
> union law?
> PA 23 79 (584)

> (705) With respect, if I COULD just answer
> that point
> PA 14 81 (276)

> (706) COULD I ask the question again?
> PA 30 79 (340)

Deontic COULD again illustrates that immediate actualisation is not quite equivalent to determinate factual status.

Deontic MUST

Over 70% of the examples of MUST in the corpus are deontic; the rest are epistemic but many of those have a deontic element in their meaning. When the environment is conditional, this tends to force an epistemic reading, as in

> (707) ... if you want to increase the power
> of the party institutions then you MUST
> make them more democratic. You MUST give
> every member of the party a vote on every
> decision
> PA 14 81 (241)

If you want the condition to be fulfilled the logical course of action is to give every member of the party a vote. There is of course a strongly subjective element in this, an unspoken 'I think' on the part of the speaker (see below) which adds a deontic overtone, because it is not strictly speaking logically necessary that the more democratic an institution is the more powerful it is. Nevertheless, such a belief is enshrined in British political and social values.

Where the speaker's involvement is explicit then the deontic reading is primary, despite the conditional context:

> (708) <u>But I'm absolutely clear about this</u>,
> that if you are a front bench spokesman
> for the Labour party you MUST put forward
> the policy of the party
> PA 14 81 (426)

This is obviously a moral/political commitment rather than
a logical one. Naturally politicians seek to present
their chosen beliefs and prescriptions as the only logical
alternative, so the use of a modal like MUST which can
express both deontic and epistemic meanings is
functionally (and pragmatically) motivated:

> (709) David Owen has already pointed out
> that all the initiative in the world
> can't help a steel worker if the demand
> for steel falls, and that's when a
> government MUST get involved
> LA 6 79 (101)

In all of these examples MUST is nonfactive, with its
relative factivity determined by the degree of modality it
expresses vis-a-vis the other auxiliaries on the deontic
and epistemic scales, and also influenced by the
conditional context and the element of speaker-commitment.

In fact, all of the examples of deontic MUST in the
corpus are nonfactive with the exception of two negative
examples and those which have a first person subject and
qualify the lexical verb SAY (or related verbs); these are
discussed at the end of this section on deontic MUST.

Most of these examples have future time reference and
are evidently nonfactive with a strong commitment to
actualisation on the part of the speaker. (710) below
explicitly highlights the currently nonactual status of
the state-of-affairs referred to in the postponed subject
clause of the modalised verb phrase

> (710) ... and that is why the Labour
> party wants ... that its parliamentary
> candidates it should choose, that its
> leadership it should choose and <u>although</u>
> <u>not yet finally agreed</u> this MUST come

that it has the right to put its policy

before the electorate

PA 14 81 (99)

There are a number of examples where the speaker
wants to express what he feels to be a general deontic
obligation or requirement. In these cases deontic MUST
only very indirectly assesses the likelihood of the event
or state-of-affairs coming about; what it does express is
the strength of the speaker's conviction that this <u>should</u>
be so almost regardless - at least where the example has
present time reference or has a general 'timeless'
reference - of whether or not it <u>is</u> so:

(711) ... a Prime Minister MUST regard

himself ... as a trustee for the whole

of the nation

LA 13 79 (21)

(This I think is another example where the speaker wants
the listener to recall the epistemic use of MUST or the
even rarer alethic use, as in 'Bachelors MUST be
unmarried', ie for his remarks to be raised to the level
of 'general' truths'.)

(712) ... the leader of a great party MUST

accept responsibility for the actions of his

supporters unless he disavows those actions

PA 14 81 (180)

(713) ... that is the policy which every

Labour candidate MUST present to his

electorate when he's elected

PA 14 81 (303)

With future time reference this 'general truth'
interpretation is far less appropriate and the deontic
meaning is evident:

(714) The 80s present a great challenge

... Britain MUST belong to the people

LA 1 79 (147)

(715) But there's one area where there's
a strong feeling that I share that we
MUST do better, and that's in industrial
relations
LA 13 79 (97)

Pragmatic factors such as the political affiliations of
the listener of course bear heavily on his assessment of
the likelihood of these states-of-affairs being translated
into reality.

MUST is often used to express strong commitment to a
future policy - in effect, a promise of future action,
necessarily currently nonactual:

(716) ... there MUST be, of course, social
security for ... the families of strikers
PA 23 79 (627)

(717) We MUST cut tax on earnings to give
initiative and we MUST cut tax on
pensioners' income because that's a
matter of elementary justice
CO 9 79 (121)

Note that in (717) the speaker does not rely on her own
sense of conviction to persuade the listener of the
deontic need for these policies, but in each case cites a
specific reason why the policy should be implemented; this
strengthens the 'indirect' relative factivity associated
with MUST.

(718) North Sea oil's given us a
wonderful chance. We MUST use its
resources, the revenues, to modernise
our own industry, to create more wealth
LA 13 79 (130)

Here, the rather general nature of the promised action -
the lack of specific reference - tends to weaken the
relative factivity of MUST.

Where the subject is in the second person singular
there often seems to be an unspoken 'I think' (compare
similar examples with deontic OUGHT TO, eg (748) and

(749), and deontic SHOULD, eg (763) and (764)) in the
sentence, ie it is inherently subjective:

> (719) You MUST have a Labour government
> that's rooted in party policy, <u>that's</u>
> <u>absolutely essential.</u> You MUST have it
> working with the Trade Unions, you MUST
> have it working with the constituency
> Labour parties
> PA 14 81 (814-816)

The underlined clause reiterates the speaker's strong
conviction. The subjective element is also clear in

> (720) ... people like Arthur Scargill
> ... MUST take some responsibility for
> propelling Tony Benn in this direction
> PA 28 81 (238)

where the subject is in the third person.

An impersonal construction, as noted above, p 196, is
often felt to be more authoritative:

> (721) There MUST be incentive for
> people, there MUST be encouragement
> for people and business. <u>Otherwise</u>
> <u>people will think it is not worthwhile</u>
> <u>to work hard and many do feel that today</u>
> PA 23 79 (32)

Compare (717); the speaker again gives the grounds for his
deontic conviction.

Other means of strengthening the (indirect) relative
factivity associated with MUST include using specific
reference (compare (718)):

> (722) We MUST find a way of getting our
> policy agreed at Conference into the
> Manifesto and the Clause 5 debate this week
> PA 28 81 (12)

The nature of the lexical verb is also, as always,
significant

> (723) The Labour party MUST <u>remain</u>
> [tolerant] so that we can win the election
> PA 14 81 (872)

Part of the meaning of REMAIN includes the presupposition that the state-of-affairs referred to in the object clause (here represented by an adjectival, TOLERANT) currently pertains; MUST, of course, refers to a future, continued state of tolerance and is therefore nonfactive but strongly biased towards a factive interpretation, which is not to say that a listener may not disagree with the original presupposition that the Labour party is currently tolerant.

A wider negative context will prompt a reading biased towards contrafactivity:

(724) I don't know anybody who has ever
said that Labour MPs MUST be committed
and Labour government MUST be committed
holus bolus to party conference
decisions and to the Manifesto
PA 14 81 (742)

Turning to negated MUST, NEVER is associated with stronger speaker negative commitment and thus indirectly produces a stronger bias towards contrafactivity than NOT, whether used in general exhortation:

(725) But governing this country ...
needs patience. You MUST NEVER be extreme
LA 1 79 (36)

(compare (711) above); or, with future time reference, and in relation to a specific event in the past:

(726) Last winter I say to you MUST NEVER
be repeated again
LA 13 79 (110)

(727) Last winter ... the dead were left
unburied ... children could not go to
school ... there were pickets outside
hospitals ... Now this MUST NEVER be
repeated again
LA 13 79 (226)

Obviously, one's interpretation of the relative factivity of deontic MUST depends very heavily on whether or not one shares the speaker's conviction.

The example below very much follows the pattern of
(725) except that NOT appears to be less binding than
NEVER

> (728) But governing this country ... needs
> patience ... You MUSTN'T push your views
> too far
> LA 1 79 (36)

Real world knowledge of politicians would induce one to be
sceptical about the fulfilment of this state-of-affairs,
however much one might agree with its deontic
desirability.

Two negative examples with present time reference
express the speaker's presupposition that the state-of-
affairs referred to currently does obtain:

> (729) Tony is not telling the truth
> and he knows it. He MUSTN'T tell lies
> PA 14 81 (556)

> (730) [I] never said anything like that at
> all. You really MUSTN'T make up stories
> PA 14 81 (753)

In (729) the speaker clearly believes Tony is telling lies
- should not be, but he is; in (730) there is the same
presupposition that 'you' are making up stories. MUST
here occurs in an overtly evaluative context (see below,
Chapter 4.4) and itself adds an emotive evaluation.

Finally there are the examples with SAY and related
verbs of speaking. With a first person subject and
present time reference, the act of speaking takes place
immediately, sometimes even immediately preceding this
sort of fixed phase:

> (731) I MUST say it is interesting
> PA 23 79 (194)

> (732) Britain is looking pretty sick
> now I MUST say
> CO 3 79 (44)

(See Palmer (1979:62), "I must admit = I do admit".)
As an indication of the frequency of occurrence of this

phrase, it represents 10% of all the examples of MUST in the corpus, with another 10% in related phrases. In such cases MUST is therefore compatible with a context of determinate factual status but the focus is always upon the deontic obligation to say whatever it is, as much as upon whatever it is the speaker has to say. In other words deontic MUST provides an evaluative gloss on the proposition. Similar examples include

(733) I MUST put this question to you.

Is it deputy leadership or leadership?

PA 14 81 (496)

Nor are such examples too strictly limited to verbs relating directly to the act of saying, eg

(734) I'm sorry I MUST stop you gentlemen

because we're coming to the end

PA 14 81 (863)

STOP here of course means 'stop you talking'. Compare

(735) I MUST go now

which leaves it open whether or not you do go/are going now; whereas the aspectual marking in

(736) I MUST be going now

increases the likelihood that I am actually going, though still does not presuppose that I am.

When the subject is in the first person plural, it is not always quite so clear that the action counts as being immediately fulfilled since, by definition, 'I' alone cannot perform an action which 'we' have committed ourselves to; often it seems to refer to a future, collective actualisation:

(737) We MUST admit this honestly

LI 11 79 (35)

But what about

(738) We MUST ask ourselves very soberly,

what sort of society we want in Britain then

LI 11 79 (97)

; or

(739) If there are things in it we

disagree with which are important we

MUST tell our electors and we do

PA 14 81 (325)

In (739) the 'we do' forces a factive reading on this particular token of deontic MUST but it could equally easily be left undetermined.

Two examples with second person subjects show MUST remaining nonfactive: the speaker has no automatic control over the subject, upon whom actualisation of the event depends - all the speaker can do is express his own strong conviction about its deontic desirability or his sense of deontic obligation:

(740) You MUST ask Mr Benn about that
PA 28 81 (57)

(741) You are always asking questions. You
MUST allow me to answer them occasionally
PA 30 79 (484)

Deontic OUGHT TO

All ten occurring tokens of OUGHT TO in the corpus are deontic. Possibly (742) could be interpreted epistemically, with the relevant set of principles being logical rather than social/moral, but it is pretty clear that Jim Callaghan is making a joke about social mores:

(742) ... and one thing I would say is
that a Prime Minister must regard himself
- I suppose I OUGHT TO say or herself - as
a trustee for the whole of the nation
LA 13 79 (22)

Note, yet again, the combination of a first person subject and the lexical verb SAY (not only 'I OUGHT TO say' but also 'I WOULD say' in (742) above) that causes the event to be immediately actualised; he ought to say it, and immediately does so. The auxiliary, in such cases, provides an evaluative gloss on the reason why the event is actualised, eg because the speaker/subject feels obliged (or, in the case of WOULD, because he wants) to do - that is, say - it.

OUGHT TO with nonpast time reference often has the implication that the event is not actual, ie is biased

towards a contrafactive interpretation as in the two
examples below, both of which have a first person subject

 (743) ... the idea that we should have

 elections every year ... is to be irrespon-

 sible in the extreme and to betray the very

 people we OUGHT TO be fighting for

 PA 14 81 (776)

 (744) There's enough basis for real argument

 that we OUGHT TO get rid of red herrings ...

 that have been put up in order to knock

 them down

 PA 14 81 (739)

My reading of (743) is that 'we' are currently not
fighting for the people we should be, although the general
context is in fact conditional - the speaker is thinking
through the consequences of an 'idea'. Equally in (744),
despite the mixed metaphors (red herrings and Aunt
Sallies), the implication is that we ought to do this but
have not as yet, although it is open whether or not we
will in the future.

 The remaining examples can all be analysed in terms
of the frame X THINKS (SAYS/FEELS) Y OUGHT TO be done/do Z.
Often X is the speaker

 (745) I think we OUGHT TO stick to that

 PA 30 79 (312)

 (746) Mrs Chalker I think OUGHT TO come

 in now if you don't mind

 PA 30 79 (219)

 (747) I think you OUGHT TO tell the

 viewers ...

 PA 30 79 (604)

The relative factivity of the auxiliary in these examples
depends on such pragmatic factors as the authority of the
speaker, who is the higher subject, and his control over
the direct subject of the modalised VP. In (746) for
example, Robin Day's virtually unchallenged authority

ensures that Mrs Chalker <u>does</u> come in now, whereas in
(745) Mr Brittan is unable to command Mr Healey (whom he
seeks to include in the 'we') to stick to 'that'. OUGHT
TO, then, is compatible with all these shades of relative
factivity.

The higher subject may also be in the second person
in which case the deontic source is again clearly
identified, but the speaker has no authority to bring
about the event (in both (748) and (749) below, 'taxes
going up') so that its actualisation is left undetermined
because affected by so many extraneous factors, such as
which party wins the election, whether or not the subject
is given Ministerial power etc

(748) ... viewers are entitled to know ...
what <u>you</u> think taxes OUGHT TO go up on
PA 30 79 (602)

(749) ... you ought to tell the viewers
roughly the areas where <u>you</u> think taxes
OUGHT TO go up
PA 30 79 (605)

Similar to the frame set out above are the following
two examples, where X = 'people', THINK is replaced by SAY
or FEEL, and Y is in the third (but non human) person

(750) ... they do bear directly on what
many people <u>feel</u> are excesses that OUGHT
NOT TO be tolerated
PA 23 79 (116)

(751) ... people <u>say</u> to me, something OUGHT
TO be done about this
LA 1 79 (33)

The negative in (750) prompts a factive reading - these
excesses currently do exist; (751) on the other hand is
biased towards a contrafactive interpretation - nothing is
being done at the moment, but the time reference is future
which leaves scope for 'this' to be actualised. A present
extending into the future time reference is also possible
for (750) which would preserve its nonfactive status.

Deontic SHOULD

Deontic SHOULD generally expressed the moral or
social desirability of some future state-of-affairs:

(752) We've been recommending for 18 months
now that we SHOULD start pay negotiations
PA 23 79 (214)

(753) Deputies and assistants SHOULD
complement leaders and be part of a team
PA 14 81 (488)

(754) But we believe that those who are
strong and healthy and active SHOULD be
encouraged to get on and make a success
of things for themselves
CO 12 79 (46)

(755) Now there is a proposal by the
Conservatives that they SHOULD alter
the law
LA 13 79 (122)

This meaning is consistent with 'is/was and should go on
being', as in

(756) I think we SHOULD do it now as
we are doing
PA 14 81 (536)

(757) Of course we SHOULD have elections
PA 14 81 (764)

The time reference of both these examples continues
into the future and so blocks a factive reading.

More frequently this general meaning of deontic
desirability implies 'should be but is/was not':

(758) That's the real question that we
SHOULD be considering
LI 11 79 (12)

(In (758) the presence of progressive aspect considerably
strengthens the implication that currently we are <u>not</u>

considering this question - compare the effect of
'... that we SHOULD consider' where the focus is more on
future actualisation than on present nonactualisation.)

      (759) ... [the] Labour party conference
      SHOULD take the position you wanted
      PA 14 81 (59)

      (760) There are many of us who thought
      there SHOULD be a period of time ... to
      allow the party to work itself into the
      system
      PA 14 81 (491)

The absence of a marker of (perfective) aspect is
significant in (760). Had it been '... who think there
SHOULD have been ...' then the modal would clearly have
been contrafactive. As it is, SHOULD is merely used to
report a past expression of deontic obligation or
desirability without drawing attention to the presumed
(but not presupposed) lack of fulfilment of the state-of-
affairs, so the modal remains nonfactive.

    In this particular corpus the future state-of-affairs
is usually attractive and the modalised clause amounts to
a promise:

      (761) ... pensions SHOULD go up in line
      with average earnings
      PA 23 79 (389)

But if the state-of-affairs/event referred to is
unpleasant, the modalised clause may be (explicitly in
this example) a threat

      (762) ... you're one of those who refused to
      vote for Tony Benn and we've heard threats
      that you SHOULD be made to pay for it
      PA 28 81 (189)

In either case it has future time reference and is
nonfactive.

    Many examples are explicitly subjective, with a
second person subject but with an implicit or explicit 'I
think', thus falling into the category of speaker's advice
to his addressee to do something:

(763) I think you SHOULD ask them three
questions before the election
LA 1 79 (128)

(764) ... you SHOULD vote Labour on Thursday
LA 10 79 (138)

The source of the advice (which is actually, in the
political context, often more of a request dressed up as
advice!) may be the speaker as in (763), (764) and

(765) ... I think we SHOULD have an
election, George
PA 14 81 (535)

but it need not be:

(766) Now the Tories say the law SHOULD
be brought in again
LA 4 79 (8)

(This last is not, of course, advice specifically directed
at the listener to take action upon.)

Other lexical items in the co-text may emphasise the
subjective nature of the modal's deontic meaning:

(767) You're also quite free to say that
in your own opinion it SHOULD be changed
PA 14 81 (427)

Subjective deontic SHOULD is quite readily compatible
with an explicitly evaluative context:

(768) It is right that we SHOULD have all
three wings of the party together
PA 14 81 (151)

I had to look up the wider context of this example to
decide whether the modal had future or present time
reference and was, accordingly, nonfactive or factive. It
is obvious from the given context that this is a
proposition for the future. Nevertheless, a 'should and
does' interpretation would be possible in another context.

As with all modals in all uses, the relative
factivity of deontic SHOULD is weakened when it occurs in
a conditional context:

(769) ... if the conference changes
the policy halfway through the period
then the party in Parliament SHOULD
change its policy
PA 14 81 (718)

(770) If you speak for the party in
the House of Commons you SHOULD project
the policy of the party
PA 14 81 (390)

But SHOULD may be of determinate factual status when it
occurs in an unreal past conditional context:

(771) You on the left ... disagree
about the way that the left voted and
whether there SHOULD have been a
deputy leadership election at all
PA 28 81 (289)

(See discussion of (758) above.) There clearly has been a
deputy leadership election; but SHOULD (after WHETHER)
still questions the deontic desirability of an event which
has occurred.

There are various interrogative examples with future
time reference which serve to reinforce SHOULD's
nonfactive status:

(772) What do you think SHOULD be
done to get production moving?
CO 9 79 (10)

(773) What do you think SHOULD happen now?
PA 28 81 (190)

(774) The question is, how SHOULD you
raise it?
CO 9 79 (75)

(775) What do you think SHOULD be
done to tackle inflation?
CO 9 79 (37)

Deontic SHOULD is also used in the frequently noted frame of a modal auxiliary with first person subject and a verb of saying which is immediately actualised:

> (776) To that I SHOULD perhaps add ...
> that this is the first time in our history
> that a woman could ... be holding the
> highest political office in our national
> life
> CO 12 79 (86)

> (777) First of all what I SHOULD say is
> that 15 years is hardly a newcomer to
> the party
> PA 28 81 (273)

> (778) The point that SHOULD be made here
> is the one that Michael Foot has made
> very clear ... he believes that Mr Benn
> would be a disaster
> PA 14 81 (615)

There is also a similar example with THINK where 'I SHOULD think' must be equivalent to 'I (do) think' given the nature of the lexical verb and the speaker/subject's access to his own thought processes (see reference to Palmer (1979) on p 267 above). The use of SHOULD here may be motivated by politeness, though there is also an element of social obligation evident in the context

> (779) I SHOULD think rather than a
> dialogue between the two of you, I
> should bring in, out of courtesy,
> Mr Silkin
> PA 14 81 (573)

(Compare examples (756) and (757) above.)

Negative deontic SHOULD, when it relates to a future state-of-affairs (Sx), is nonfactive with the additional meaning that Sx is deontically undesirable:

(780) Now although we've got good
opportunities, we've also got difficult
weather ahead and we SHOULDN'T add to
the difficulties by these untried theories
LA 13 79 (83)

(781) ... that sort of misery SHOULD
NOT return
PA 30 79 (154)

When the context is interrogative - 'why SHOULDN'T X
happen?' - Sx is again nonactual but this time deontically
desirable; the negation applies semantically to the modal:

(782) Why SHOULD NOT all pensioners
get a reduced TV licence instead of
just some?
LI 8 79 (97)

(783) Why SHOULDN'T they have a chance
equally to play some part ... in the
election of the leader?
PA 14 81 (272)

(784) is a slightly puzzling example

(784) There certainly isn't any reason
why he SHOULDN'T tell us about cuts in
public spending
PA 30 79 (746)

Although the speaker uses the lexeme REASON which
initially inclined me to classify this as an example of
epistemic SHOULD, his meaning is that although there is no
obligation, legal or parliamentary (ie social and
therefore deontic rather than logical), preventing
Mr Healey from telling us about public spending cuts,
nevertheless the speaker's belief is that he will not.

The final example of negative deontic SHOULD refers
to an unreal (nonactualised) past state-of-affairs Sx; its
meaning is therefore that although Sx did not come about,
the speaker thinks it ought to have done

(785) If the IMF could make a Labour

cabinet stand on its head and make

big cuts in public expenditure why

SHOULDN'T the conference have been

consulted?

PA 14 81 (722)

4.3.3 Dynamic modality

- MAY, MIGHT

- WILL, SHALL, WOULD

- CAN, COULD

Dynamic MAY

There is no example in the corpus where 'possible for' is the only reading for MAY (but see discussion of epistemic MAY on p 213 above). The corpus does, however, provide three instances of what Quirk et al (1972:785) would describe as MAY used as 'a subjunctive substitute in formal style in a purpose clause'

(786) It calls for ... a land where

all MAY grow but none MAY grow

oppressive ... And it says above

all MAY this land of ours which we

love so much find dignity and

greatness and peace again

CO 12 79 (111-115)

I treat these tokens under dynamic MAY because the closest paraphrase I can find is 'let it be possible for'. This, presumably, is boulomaic modality (see Note 51 to Chapter 2). Time reference is always future for this meaning so this use of MAY is therefore always nonfactive.

Dynamic MIGHT

Less than 15% of the occurring tokens of MIGHT in the corpus - that is, only 4 out of 27 - could bear a dynamic interpretation, using the test of paraphrase with

'possible for'. In each case, 'possible that', ie
epistemic possibility, provides an alternative, usually
even more acceptable paraphrase. These four examples were
therefore also discussed in Chapter 4.3.1. but are worth
looking at quickly in the dynamic context

> (787) They might come back, they MIGHT
>
> do it in Britain
>
> CO 9 79 (147)

('If they were to come back, it would be possible for them
to do it in Britain')

> (788) There are many things the Labour
>
> party MIGHT do
>
> PA 28 81 (260)

('There are many things it would be/is possible for the
Labour party to do')

> (789a) ... before we move on to what one
>
> MIGHT call social issues
>
> PA 23 79 (505)

('Before we move on to what it would be/is possible for
one to call social issues')

> (790) One MIGHT well take the view that
>
> you on the left ... are united
>
> PA 28 81 (287)

('It would be/is possible for one to take the view ...')
Note that in each case 'would be possible for' sounds more
idiomatic than 'is possible for' whether time reference is
present or future; this reflects the fact that MIGHT is
one of the secondary modals (see above, p 23). (787) and
(788) have future time reference; the modalised clause in
(787) is further dependent on the fulfilment of the higher
clause. The modal, in both examples, qualifies an event
which is currently nonactual.

(789a) and (790) have present time reference. In
both cases the speaker avoids identifying himself too
closely with what 'one' might do. The indefinite pronoun
subject prevents a factive reading. Compare

> (789b) ... before we move on to what
>
> MIGHT be called social issues

In (789b) the speaker does, I think, call them social
issues and the modal merely acknowledges that other people
might not.

Both (789a) and (790), then, refer to a general
dynamic disposition towards the occurrence of an event
that might or might not actually come about, and the sense
of a general rather than a particular disposition is
reinforced by the indefinite pronoun subject.

Dynamic WILL

The examples of dynamic (ie volitional) WILL clearly
show how this meaning can differ in degree. At the one
end of this particular scale there is

(791) They believe [this] removes ...

their right to do with their money

what they WILL

PA 30 79 (375)

where WILL almost has the force of a lexical verb. At the
other, auxiliary WILL seems to express only a shade of
volitional meaning, contributed mainly by the first person
singular subject

(792) I'LL resign if the policy is

put in the manifesto

PA 14 81 (358)

Prosodic features may tip the balance from subjective
epistemic commitment over to speaker's volition:

(793) It WÌLL be worthwhile to work harder

CO 9 79 (142)

Where WILL expresses volition, the person of the
subject and the time reference have a strong effect on the
relative factivity associated with the modal. If the
subject=speaker and reference is to present time, then the
modal is factive when the lexical verb refers to an act
over which the speaker has complete control and can
perform immediately, as in

(794) I'LL take you on that point

PA 23 79 (680)

If the time reference were future the relative factivity
of the modalised clause would be a little less strong.
Where, as in the next example, the subject is in the third
person, the speaker's judgement is less secure and the
relative factivity of the modal correspondingly weaker (an
effect strengthened by the conditional clause and PERHAPS)

> (795) If they don't want to, and perhaps
> the majority of them WON'T ...
> PA 23 79 (61)

The presence of the lexeme WANT, as well as negation,
brings out the volitional element of WILL's meaning here.

Volitional WILL in an interrogative context often
functions as an indirect expression of the speaker's will,
rather than a direct question about the addressee's:

> (796) Mr Gould, WILL you move on?
> PA 23 79 (656)

Corpus examples of negative dynamic WILL include two
very similar to the factive (794)

> (797) I WON'T take it from anyone that
> when I make a decision about what is
> best in my view ... for the party and
> pursue that course that I'm being
> dishonest
> PA 23 81 (196)

If you are not willing to take something - given that this
sort of 'taking' is up to the taker himself - then you
don't:

> (798) I WON'T take claims of dishonest
> from you or anybody else
> PA 28 81 (202)

The other corpus example of negative volitional WILL
is like the many instances of different modal auxiliaries
occurring with a verb of saying

> (799) I WON'T go over them in detail now
> LA 13 79 (58)

Where the speaker and the subject are not co-
referential negative volitional WILL is no more
objectively contrafactive than the positive form is
factive:

(800) What Tony WILL NOT accept is that
the problems governments face are
sometimes very difficult to deal with
PA 14 81 (786)

The corpus also provides two examples of negative
dynamic WILL as part of the fixed phrase 'that really
WON'T do'. This is an idiomatic usage; it is nevertheless
nonfactive because although it has present time reference
it clearly refers to the speaker's will and opinion only,
and he may well not have the power or authority to prevent
'that' happening.

Dynamic SHALL

Of the 24 occurring tokens of SHALL in the corpus,
only 4 (under 17%) are non-epistemic. Three examples fall
into the pattern of an interrogative with a first person
subject and second person indirect object, where the
speaker/subject questions his addressee's volition - 'Do
you want me to do X?' In each case the reference is to an
act of speaking, which in (801) and (802) is immediately
actualised

(801) ... SHALL I tell you something
else? The Labour party has made no
contribution whatsoever to where cuts
are going to be made ...
PA 23 79 (566)

(802) SHALL I tell you the reason?
Because by common consent, and this is
stated by the IMF and OECD, we inherited
from your government an economy which
was appallingly distorted
PA 30 79 (492)

(803) is a wh-question and requires an answer before the
speaker can 'answer'

(803) Well which question SHALL I answer?
PA 14 81 (572)

The volitional element in the remaining dynamic example derives from the combination of prosodic features (stress on the modal) and a first person subject

> (804) But this is exactly the point,
>
> that we SHÀLL be able to have some
>
> increases in public expenditure
>
> PA 30 79 (660)

It has future time reference and is clearly nonfactive. (804) is comparable with a number of examples in Chapter 4.3.1 where SHALL appears in exactly the same frame ('we SHALL be able to'); it is treated there as an expression of epistemic modality principally because of the absence of stress on the modal.

Dynamic WOULD

Examples of WOULD in the corpus frequently have a volitional element of meaning; I classify these examples as expressing dynamic modality (for earlier discussion, see Note 51 to Chapter 2 and p 98), acknowledging that, within root meanings, there is considerable semantic indeterminacy. Hence Palmer's assertion that

> Deontic [modality] ... include[s]
>
> those types of modality that ... contain
>
> an element of will
>
> (1986:96, my underlining)

while, in the same book, referring to

> ... dynamic modality with its notions
>
> of willingness and ability
>
> (ibid, p 193, my underlining)

WOULD with a first person (singular or plural) subject often contains a volitional element:

> (805) There are many things the Labour
>
> party might do which I WOULD say well,
>
> you have to do it without me in the
>
> cabinet
>
> PA 28 81 (260)

(806) We absolutely oppose [that] sort

of confrontation and WOULD do it again

PA 30 79 (44)

Both examples indicate a future, possibly hypothetical, essentially subjective disposition towards a particular event and are fundamentally nonfactive.

The example below is rather more complicated and expresses the speaker's opinion of a (named) third person subject's volition; the speaker's opinion is explicitly supported by past evidence but is nevertheless clearly nonfactive

(807) ... there's no question of a front-

bench spokesman going there in the House

of Commons and presenting his private

view as Denis evidently WOULD do, and

indeed in fairness to him, has done

PA 14 81 (430)

A number of examples use WOULD in a future/ hypothetical and interrogative context where the modal auxiliary's nonfactive status is reinforced by these contextual features

(808) So how WOULD Labour share the

cake out differently?

LA 10 79 (83)

(809) WOULD a Labour government abolish

the right to pay for education?

PA 30 79 (456)

(810) If the next Labour conference votes

by two thirds majority for unilateral

disarmament ... what WOULD your position

be if you were elected deputy leader?

PA 14 81 (287)

This last example is based on two explicit conditions; the first two examples depend on the unspoken assumption that the Labour party forms the next government.

Even without the interrogative element, a second person subject is clearly associated with (as yet) unrealised volition, plus an element of epistemic prediction deriving from the speaker:

> (811) And when we actually look at your
> manifesto we find ... that you WOULD
> switch taxation to indirect taxation
> PA 23 79 (247)

When WOULD expresses dynamic modality, the combination of negation, second person subject, past time reference and unreal conditional form is not quite so determinate of the factual status of the auxiliary if it occurs in an interrogative structure:

> (812) Are you saying that *if* you'd been
> in power in the last four years you
> WOULDN'T have paid out public money to
> prop up British Leyland?
> PA 23 79 (423)

Even though it was clearly <u>not</u> the case that the addressee was in power, and clear that he did <u>not</u> pay out public money, the interrogative still raises doubt whether or not the addressee would have <u>wished</u> to if he had been in that position; the questioner challenges his addressee to say 'yes', no doubt confusing him with the complexity of the sentence structure.

Where the same sentence elements occur but with a nonpast time reference, the relative factivity is left even more open:

> (813) So which industries ...WOULD you
> NOT continue giving money to?
> PA 23 79 (433)

Negative WOULD in an unconditional past context lends itself to a contrafactive interpretation under virtually all readings. (814) below for example would normally be assumed to mean that Neil Kinnock did not want to and did not vote for Tony Benn

> (814) Neil Kinnock ... made no secret all
> along that though on the left he WOULD
> NOT vote for Tony Benn
> PA 28 81 (139)

But WOULD NOT could be as easily compatible with a
following condition (eg 'if called upon to do so') that
might or might not be fulfilled. The emphasis, in other
words - whether the context forces a factive or nonfactive
reading - is on the volition-not to do something, not on
whether or not it is done.

Where WOULD clearly expresses speaker=subject's
volition, subjective commitment to the actuality/
actualisation of the event is stronger, but this bears
only indirectly if at all on the objective assessment of
the likelihood of the event occurring. There is often a
submerged condition, as in

> (815) I'D fight the election but I'D
> make my views clear
> PA 14 81 (325-6)

> (816) Well I personally myself think
> we'D emigrate
> LA 10 79 (81)

> (817) Whether I personally WOULD approve
> of whatever the propositions may be will
> be irrelevant
> PA 14 81 (584)

When the volition is that of a second person subject,
interrogative form is often appropriate since the speaker
does not have direct access to the subject's preferences,
which serves to reinforce the nonfactive status of the
modalised sentence:

> (818) What WOULD you do?
> CO 9 79 (9)

> (819) Mr Benn ... would you answer the
> question ... whether you WOULD stand
> again if you were defeated?
> PA 14 81 (685)

The speaker may of course weigh the answer in favour of
his own argument - and thus indirectly and retrospectively

strengthen the relative factivity of the modally qualified
event - either by drawing an attractive comparison:

> (820) If inflation went down last time
>
> because we cut government spending, WOULD
>
> you cut government spending or increase it?
>
> CO 9 79 (51)

; or by drawing on general knowledge of human preferences:

> (821) On income tax, WOULD you bring income
>
> tax down?
>
> CO 9 79 (103)

The speaker's knowledge of a third person subject's
volition is always open to doubt and may be explicitly
asserted, explained or otherwise backed up by evidence:

> (822) The Tories say they WOULD cut
>
> income tax
>
> LA 10 79 (4)

(which simultaneously shows the reason for the speaker's
understanding of the Tories' intention and reveals
disbelief it will be carried out; this latter connotation
is conveyed largely by prosodic features). The speaker is
not always unsympathetic to the subject's preferences:

> (823) On education we want to concentrate
>
> on raising standards ... which many
>
> parents WOULD I know welcome
>
> PA 23 79 (65)

> (824) I can well imagine you saying to
>
> yourselves, if only the politicians
>
> WOULD be quiet
>
> CO 12 79 (4)

Where no account is given of the speaker's insight into
the subject's will, the speaker relies on his own
authority:

> (825) The Tories? They'd scrap these schemes
>
> LA 6 79 (113)

There is one example of volitional WOULD used with a
third person subject where the past time reference and the
fulfilment of the condition specified combine to prompt a
factive reading; this is close to the habitual use of WOULD

(826) When he was at school, he WOULD
borrow money from his friends to buy
sweets

(827) It got better mainly because
countries from whom Labour were trying
to borrow money WOULD only lend it on
one condition - that Labour didn't
waste it on unnecessary government
spending
CO 9 79 (45)

This example, (827), only makes sense if countries were
willing to and actually <u>did</u> lend the Labour government
money; but the countries are unspecified and the
circumstances restricted so that the event, although
actual, is still qualified.

Volitional WOULD is frequently used with nonpast time
reference, interrogative form and a second person subject
to function indirectly as an invitation (see above, p 171
on the use of modals in indirect speech acts). Pragmatic
factors such as the authority of the television host
vis-a-vis his guests, and more general conventions of
behaviour, make a contrafactive outcome highly unlikely in
the following examples, but the possibility of an
unexpected refusal is left open

(828) WOULD you like to come on to prices?
PA 23 79 (218)

(829) You answer that Mr Healey WOULD
you please
PA 14 81 (225)

(830) WOULD you mind if you don't all
talk at once?
PA 14 81 (415)

(831) Now Bryan Gould WOULD you make
your concluding comments?
PA 23 79 (806)

Given the conventions of the situation, these invitations
to speak are usually immediately taken up by the subject
(although the injunction (in (830)) to keep quiet was not,
if I recall correctly, obeyed).

There are also numerous examples of immediately
actualised volitional WOULD, where the subject is in the
first person singular and the lexical verb is one of
saying

(832) I WOULD answer that by saying
that Tony and John and I all fought
the last election ...
PA 14 81 (255)

(833) Secondly I WOULD say that when I
talk about dishonesty I'm talking about ...
PA 28 81 (275)

(834) So Mr Benn I'D like just to start
by asking your views on Party democracy
PA 14 81 (56)

(835) Well I'D like to ask Francis Pym
about pay
PA 23 79 (157)

(836) ... and one thing I WOULD say is
that a Prime Minister must regard
himself ... as a trustee for the whole
of the nation
LA 13 79 (21)

All of the above are motivated by a wish to be (or to
appear) polite (see above p 208 ff) and seem to imply a
condition with a distinctly deontic element, along the
lines of 'if you will allow me'.

There are a number of similar examples with a first
person subject and THINK as the head verb

(837) I WOULD like to think that the
people of Liverpool have shown the way
LI 2 79 (74)

Here the speaker shows a certain tentativeness or lack of
confidence in his own interpretation of events which
prevents him from directly asserting 'I think'.
Exaggerated politeness may be a more accurate pragmatic
explanation for the use of WOULD in the following example

      (838) - I should bring in, out of courtesy,
    Mr Silkin
         - No, I WOULD have thought rather
    more than out of courtesy
    PA 14 81 (576)

A negative instance with HOPE as the lexical verb
illustrates a use of WOULD to express a personal
preference that the event not happen together with an
implied acknowlededement of the possibility that it might

      (839) - Do you think there's going to be
    another battle like this next year?
        - I WOULD hope NOT
    PA 28 81 (58)

    Examples with LIKE (as in (837)) are numerous. Some
follow the pattern 'I WOULD like to see X'

    (840) I WOULD like to see Labour MPs
    have far more power to elect a cabinet
    instead of Prime Ministerial patronage
    PA 14 81 (647)

    (841) I do support the changes but ...
    I WOULD like to see them go further
    PA 14 81 (645)

Others fall into the simpler frame 'I WOULD like X'

    (842) I WOULD like every Trade Union to
    have a very broadly based consultation
    as ... the miners are having
    PA 14 81 (471)

    (843) I WOULD like to reorganise [the
    Health Service] again
    PA 30 79 (260)

In each of the above examples with LIKE, X is not
currently the case; WOULD, as usual when volitional,
signals a nonactual but desired state-of-affairs.

Dynamic CAN

CAN is the third most frequently occurring modal in the corpus (after WILL and WOULD). But it is probably the most difficult auxiliary to classify in terms of meaning. The vast majority of examples express some kind of dynamic possibility ('possible for') or ability, though a simple paraphrase is often not appropriate, as in the case of the following example

> (844) Well we CAN expect the worst from
>
> them if they get in, can't we?
>
> LA 10 79 (67)

This is not epistemic or deontic so it must be dynamic - a form of reasoning not infrequently used to establish membership of this least homogeneous category of modal meaning. In fact Ehrman's 'nihil obstat' definition fits best here - and since there is nothing preventing the subject from expecting the worst, 'we' do so. The only hindrance to a clearly factive reading is that the time reference associated with this token of CAN seems to span the future as well as the present.

> (845) What we're getting now [is] an
>
> attack of intolerance, of authoritarianism
>
> which CAN destroy that working together
>
> which the party needs
>
> PA 14 81 (819)

This could be an instance of 'sporadic' CAN (eg 'Lions CAN be dangerous') - 'authoritarianism sometimes destroys'; but alternative paraphrases such as the dynamic 'it is possible for authoritarianism to destroy'; or even the epistemic 'it is possible that (this attack of) authoritarianism will destroy'. But on balance a dynamic possibility/inanimate ability interpretation is the most likely; and since the destruction is obviously still in the future, this CAN is nonfactive. The modal has a similar meaning in

> (846) If you make an MP's responsibility
>
> exclusively to the party conference then
>
> that kind of party democracy CAN mean the
>
> end of parliamentary democracy
>
> PA 14 81 (117)

The epistemic interpretation of (845) or (846) would be most unusual. Positive CAN does not, in general, express epistemic modality (eg 'it MAY/*CAN be raining when you leave'; see also p 108 above). Negative CAN certainly may, but interestingly never does so in this corpus.

Without going into the arguments over whether epistemic or root modality is basic (discussed extensively in the literature[31]), from the perspective on modal meaning adopted in this study the epistemic assessment of relative probability is obviously central to the notions of nonfactivity and relative factivity. Epistemic meaning, as explained above (in Chapter 4.1) relates more directly to relative factivity. Thus the fact that positive CAN never expresses epistemic modality, and that negative CAN - as evidenced from this corpus at least - does so only infrequently, compounds doubts that this auxiliary is quite as modal as, morphologically, it appears to be. Boyd and Thorne (1969:71) for example talk of "at least three nonmodal cans" (see also above, p 117 and Note 90 to Chapter 2):

- the dynamic ability meaning "where the sentence is a statement and can is a verb taking a sentential complement", eg 'He can swim over a mile'

- "can with achievement verbs ... acting as the marker of progressive aspect", eg 'I can understand what he is saying'. (Palmer (1979:75) disagrees, and describes CAN with 'private' verbs as an idiomatic use. For other terminology and treatment, see above p 177.)

- can as a marker "of sporadic aspect", eg 'Cocktail parties can be boring'

In fact, what all these uses have in common is that they tend to be factive and that is why they are felt to be nonmodal - a feeling which supports my hypothesis that nonfactivity is central to modal meaning.

Ability is more readily actualised than possibility is realised - indeed evidence that the act (eg of swimming) has been performed is often necessary before one can be said to possess the ability to do it. It would not therefore be surprising if CAN, which has dynamic ability/ possibility as its most common meaning, is more often factive than other modal auxiliaries.

But when we actually look at the examples offered by the corpus, the pattern turns out to be remarkably similar to that evidenced by the other modals. Dynamic CAN is most likely to be factive when it has a first person (usually singular) subject (ie where the speaker=subject) and present time reference. The corpus provides six such examples, three with verbs of inert perception or cognition (see above, p 177)

(847) I've heard him describe his
remarkable conciliatory policies and
I CAN believe them too
PA 14 81 (651)

(848) I CAN well imagine you saying to
yourselves, if only the politicians
would be quiet
CO 12 79 (3)

If you assert that you are able to believe or imagine something then it is a fair assumption that you actually do.

The example below with HEAR contains a seminegative (see above, pp 192-3) but illustrates the general point that CAN plus a verb like HEAR in a positive context would be factive

(849) But I CAN almost hear you saying
it, won't that put up prices?
CO 9 79 (80)

CAN may be of determinate factual status in such contexts (in (849) it is contrafactive - I am not (quite) hearing you) but it is still the case that the presence of the modal means that the semantic focus is not on the fact

that such and such is true/actual but on the enabling
circumstances.

The other three examples fall into the familiar
pattern of first person subject plus modal auxiliary plus
verb of speaking which is immediately actualised, as in

> (850) But we CAN say that in the short
> term when our policies began to be put
> into practice ... they proved very
> successful
> LI 2 79 (35)

> (851) What I CAN say is that the Labour
> government has a team of Ministers who
> have helped to guide Britain successfully
> through these difficult years
> LA 1 79 (42)

The possibility of interruption still exists with dynamic
CAN:

> (852) What CAN I tell you, and I was
> trying to do that when I was so rudely
> interrupted by Mr Brittan ...
> PA 30 79 (630)

What verbs of saying and those of inert perception and
cognition have in common is that, with a first person
subject, they can be instantaneously actualised. Where
the lexical verb has no such special property, the modal
will have future time reference and be nonfactive:

> (853) I'm not the spokesman on Northern
> Ireland so I CAN break collective
> responsibility
> PA 14 81 (406)

The speaker might be justifying past occasions on which he
has broken collective responsibility but he need not have
done so; he might be discussing a hypothetical situation -
as is indeed deduced from the wider context.

So person and time reference are the key factors in
determining the relative factivity of CAN as of other
modal auxiliaries.

Most of the instances with a first person plural
subject are either conditional:

(854) Let's all work together and we
CAN do it
PA 14 81 (595)

or have future time reference:

(855) We had influence in the last
parliament we CAN have a great deal
more in the next
LI 8 79 (64)

(856) Yes yes well there is some saving
undoubtedly that we CAN make from aid
to industry
PA 23 79 (539)

(857) We only make promises we CAN keep
LA 1 79 (120)

(858) On the bulk of things we CAN have
a united party
PA 14 81 (602)

Either way, the modal is nonfactive. The speaker of (858)
for example believes that a united party is possible but
there is no objective indication of whether or not it will
come about.

A subjective element often prevents even an example
with present time reference from having completely
determinate factual status:

(859) ... the spending by government of
your money, more than we CAN afford at
the moment
PA 23 79 (29)

(860) There's no problem with our
constitution. We CAN arrive at our
decisions
PA 28 81 (345)

In these last two examples, the nature of the lexical verb
and the action qualified by the modal does not readily
permit a clearcut decision about its factual status. It
is, by the very nature of the action involved, harder to
decide whether we can afford something than whether or not
we can swim or hear music, for example.

A second person subject in this corpus with dynamic
CAN often means 'one' rather than being directed at a
specific addressee. In the following two examples,
insofar as the time reference is past, the modal is of
determinate factual status

> (861) Liverpool has also demonstrated
>
> conclusively that you CAN break with
>
> the past
>
> LI 2 79 (70)

> (862) Liverpool proved recently that by
>
> voting Liberal you CAN actually elect
>
> Liberals
>
> LI 2 79 (68)

These examples are rather like assertions that X can swim
- he has done so in the past and can do so again but is
not actually swimming at the moment of speaking - except
that the speaker has to point to the past evidence. He
does this by referring to an occasion on which the dynamic
possibility was realised. But the nature of the action
involved - unlike swimming - means that proof that it has
been done once is not sufficient proof that it can, or
rather will, be done again.

But most of the utterances with a second person
subject have future time reference and are incontestably
nonfactive

> (863) There are three ways in which
>
> you CAN do it in the course of 1979
>
> PA 23 79 (356)

With a third person subject, too, most of the
examples turn out to be future

(864) We all want to know that our
children CAN find a job, CAN go to a
worthwhile job when they leave school
LA 6 79 (17)

(865) There are all sorts of areas
where savings CAN be made
PA 23 79 (566)

(866) You'll be thinking of the future
and how it CAN be better
CO 12 79 (36)

Sometimes the assertion is that the ability is current but
its realisation future (and therefore only potential)

(867) I know this country CAN do better
LA 13 79 (94)

(868) They have the experience ... they
CAN turn the salvage operation we've
accomplished into great gains for our
country in the 80s
LA 1 79 (45)

There is of course a strongly subjective element in (867)
and (868) as in the following example where this is the
only factor inhibiting a factive reading

(869) We do intend to remove the tax
advantages which mean that some private
fee paying schools CAN cream off children
PA 30 79 (437)

About 10% of the total number of tokens of CAN occur
in sentences with an explicit condition, eg

(870) An industrial peace will mean
that we CAN concentrate on keeping
prices down
LA 4 79 (46)

(ie if we have an industrial peace ...)
There is one example of CAN as part of a mock sports
commentary where the modal means 'are able to and are
actually starting to'

        (871) Without the dead weight of Labour
        government interference, they CAN start
        to throw off unemployment
        CO 3 79 (122)

But one only knows that this is currently being realised
from additional, visual information. It is a meaning
dynamic CAN is readily compatible with but does not, on
its own, signal.

        However, most examples contain open conditions and
are nonfactive as a consequence

        (872) If you're going to vote for them
        because you think you CAN do that you
        are indeed going to waste your vote
        LI 2 79 (45)

        (873) If we leave you with more of your
        own money in your own pocket you CAN
        choose how you spend it
        CO 9 79 (128)

        (874) When production is growing ... we
        CAN afford to pay ourselves more
        CO 7 79 (95)

        (875) But there are other savings ...
        which we CAN list if you want
        PA 23 79 (316)

        (876) Today if you listen you CAN hear
        that voice again
        CO 12 79 (109)

        The majority of the interrogative examples with
dynamic CAN question the ability to do something

        (877) But is it not a fact that a man
        has to be on strike two weeks before
        his family CAN claim?
        PA 23 79 (631)

(878) How CAN you possibly hope to

persuade people?

PA 30 79 (468)

(879) What help or hope CAN you give from

your manifesto that this is going to change?

PA 30 79 (531)

(880) CAN the Conservatives do any better?

CO 7 79 (5)

Occasionally either 'possible for' or 'able to' seems an
equally appropriate paraphrase:

(881) Would you wait for a moment so

that I CAN answer your ...

PA 30 79 (610)

(this request is clearly not complied with!)

One instance is more readily paraphrased with 'possible
to' although there is clearly an element of ability in the
modal

(882) How CAN that assurance be believed?

PA 30 79 (393)

('how is it possible to believe that assurance' or 'how is
it possible for that assurance to be believed').

I expected to find a number of contrafactive examples
with negative dynamic CAN. There are some, but they are
in a minority:

(883) On that rhetorical question which

I'm afraid you CAN'T answer because we've

come to the end of our time, thank you

gentlemen very much indeed

PA 28 81 (348)

The contrafactivity of (883) depends largely on the
immediate present time reference and on the authority of
the speaker over his addressees.

Most cases of negative dynamic CAN in the corpus with
determinate factual status depend on a first person
singular subject and a lexical verb belonging to the inert
perception and cognition group, or to one of saying:

(884) And I CAN'T understand people who
laugh at elections in Moscow with one
name on the ballot paper
PA 14 81 (760)

(885) I CAN'T believe anyone really
wants that
LI 2 79 (19)

(886) I CAN'T see why
PA 14 81 (275)

(887) I CAN'T remember when our people
have approached an election quite as
thoughtfully as this one
CO 12 79 (10)

(888) I CAN'T describe what I'm proposing
PA 30 79 (613)

Although all of these examples are contrafactive - I can't
and I don't - nevertheless the presence of the modal has
the effect of focusing attention on the fact that there
are factors obstructing the actualisation of the event;
compare 'I don't believe you' and 'I can't believe you'.

Where the lexical verb does not belong to one of
these groups but the speaker and subject are still co-
referential, it is a fair assumption that the event is not
currently actualised (ie the modal is contrafactive):

(889) I CAN'T help you with your
constituency because it varies
PA 14 81 (454)

The speaker=subject is assumed to have full knowledge of
his own ability to help.

If the subject is not in the first person, the
absolute status of negative dynamic CAN is less assured:

(890) Oh no Brown CAN'T take any more,
he's falling he's down
CO 3 79 (81)

This particular example, however, is part of the mock
sports commentary already mentioned (see above,
example (871)), and as such is a comment on a currently
occurring event which is objectively verifiable as true or
actual by physical observation. Where the nature of the
event is less accessible to measurement or physical
evidence and the time reference is less immediately
present then the relative status of the modal re-emerges:

> (871) Five years of Labour has ... doubled
> the number of people unemployed and left
> them feeling cheated and frustrated
> because they CAN'T find work at all
> CO 5 79 (15)

Where the speaker and the subject are not co-referential
the speaker's subjective attitude (often explicitly
signalled by other sentence elements) serves to weaken the
relative factivity of the auxiliary:

> (892) But you CAN'T do that, I think,
> as a deputy leader
> PA 14 81 (397)

> (893) Well it CAN'T be worse
> PA 23 79 (289)

> (894) You know and I know that a change
> of government CANNOT solve our industrial
> relations problem
> LI 2 79 (104)

These examples also have future time reference which
further weakens their bias towards contrafactivity. In
the following example, even the actor-commentator gets it
wrong when he seeks to predict the athlete's future
success (or rather, the future realisation of the
athlete's present ability as assessed by the speaker)

> (895) And what a runner this boy is,
> he's getting into his stride, he
> CAN'T fail
> CO 3 79 (21)

But he does fail.

Examples with present time reference also have only relative factual status (ie a strong bias towards a contrafactive interpretation - but no more than that) when there is a strong subjective element

(896) Now these are facts nobody
CAN dispute
LA 1 79 (107)

I said at the beginning of this section on dynamic CAN that the corpus provided no examples of negative epistemic CAN. However, there are two instances which permit a 'not possible <u>to</u>' (not the clearly epistemic 'not possible <u>that</u>') paraphrase even though there is still clearly an element of (the absence of) ability:

(897) Now you CANNOT eat a five pound note ...
(898) ... and you CAN'T go to work on an egg
PA 23 79 (802)

Neither of these strike me as instances of 'absolute' contrafactivity. Physically speaking one could, I suppose, eat a fiver (even if nobody in his right mind would want to); and although one cannot physically go to work on an egg there was a very successful advertising campaign devoted to persuading the British public to do just that.

The idiomatic phrase 'can't have it both/all ways' which occurs three times in the corpus is another example of an asserted but non-absolute contrafactivity. In all three contexts the speaker is asserting that it is not possible for the subject to 'have it both ways'; usually the impeding factor is logical inconsistency rather than physical impossibility, eg

(899) - I'm talking about the money, I'm
not talking about the waiting list
        - But you mentioned the waiting
list, you CAN'T have it all ways
PA 23 79 (752)

In a number of other cases the impeding factor seems to be some sort of social/moral imperative and the indirect effect is closer to 'not able to/not possible for'.

Certainly the modal meaning is highly subjective and the
future non-actualisation of the event is left in doubt:

> (900) We CAN'T break up experienced
> design teams
> LA 6 79 (102)

> (901) 82% of constituency Labour parties
> voted for him. That CANNOT be ignored
> PA 28 81 (179)

Clearly it is not physical laws that are at issue here.

Where the context is also interrogative the effect is
to reverse the polarity and indirectly express the
speaker's feeling that the subject should take the action
referred to (but probably won't):

> (902) CAN'T they leave our boys alone?
> CO 3 79 (23)

> (903) As I go round the country people
> say to me, something ought to be done
> about this, or why CAN'T you do
> something about that?
> LA 1 79 (33)

Dynamic COULD

The majority of the tokens of COULD in the corpus
express dynamic meaning. It is amongst these that we find
the clearest factive uses of a modal auxiliary not
accounted for by collocation with a first person singular
subject and a lexical verb of saying.

First the nonfactive uses: in an interrogative
context COULD with a first person plural or a second (or
third, though there are no corpus examples of this) person
subject will usually be interpreted as a request for
action rather than, say, a deontic request for permission
or a query about the subject's ability:

> (904) COULD we have slightly shorter
> questions please?
> PA 30 79 (294)

(905) Mrs Chalker, COULD you ask a
final question?
PA 30 79 (647)

(906) COULD you tell us roughly how much
you're going to reduce income tax?
PA 30 79 (625)

In the case of (904) and (905) it is fairly clear that the
speaker must be the TV presenter who therefore has the
power/authority to ensure that his request is complied
with; Sir Robin Day is also, as it happens, the speaker in
(906) although this is not apparent from the limited
context provided here. Had it been one of the invited
guests, no doubt the audience would have rated the
likelihood of the request being fulfilled as considerably
lower. These are of course pragmatic considerations. The
modal in these examples still has nonfactive status, as
is always the case where there is future time reference:

(907) But there are other savings we
COULD make in socialist programmes
PA 23 79 (315)

(908) It's so stupid that in Parliament
with something over 400 members who COULD
agree on a common manifesto and yet for
the sake of the party system we have to
go off in different directions
LI 8 79 (68)

A conditional similarly ensures that the modal does not
have determinate factual status:

(909) It really would help if they
COULD just come in and see the work
that we do
LI 8 79 (1)

(910) If only we COULD sit peacefully
for a few moments and think about our
country
CO 12 79 (5)

COULD is contrafactive, like other modals, in unreal past conditionals:

> (911) Today some of those left wing
> MPs ... answered ... saying it was
> Tony Benn's decision to stand in the
> first place that had lost the left the
> deputy leadership which they COULD
> have won with John Silkin
> PA 28 81 (134)

'could have won' but did not.

> (912) We all know in the last five
> years the living standards of people
> in this country just have not grown
> the way they COULD
> CO 5 79 (75)

If this COULD is interpreted as 'COULD have (done)' with past time reference, then it is contrafactive; another reading is also possible - 'have not in the past but could do in the future' - in which case the modal is nonfactive. COULD may also be contrafactive in a context of present unreality, as in

> (913) In some ways I wish I COULD
> say that but I don't believe it
> PA 28 81 (226)

But in the case of dynamic COULD even more than other modals the most significant factor influencing the determinate or relative nature of the factual status of the auxiliary is time reference. When past, COULD is factive:

> (914) If the IMF COULD make a Labour
> cabinet stand on its head ... why
> shouldn't the conference have been
> consulted?
> PA 14 81 (720)

The IMF was able to and did; a similar example is

> (915) Tory ideas had inflation at
> 13 pence in the pound and rising so
> fast it was 26 pence in the pound
> before Labour COULD reverse it
> LA 1 79 (10)

Where time reference is present and the subject is in the first person, COULD may have determinate factual status; (916) is not quite contrafactive ('even if' has a negative effect) because of the third person subject - it is the speaker's subjective impression that <u>they</u> can't go any faster

> (916) There doesn't seem to be any
>
> incentive to go any faster even if
>
> they COULD
>
> CO 3 79 (79)

(Note the distinction between ability and realisation of that ability - here the speaker is saying that 'they' wouldn't go any faster even if they did have the ability, which he believes they don't.) With future reference, the modal is, as always, nonfactive

> (917) I didn't say we COULD cure it.
>
> No I said we COULD begin to
>
> PA 23 79 (591)

When COULD is negative or in a wider negative context, then it may be of determinate factual status if reference is to present time

> (918) Now no-one in my position,
>
> asking for your support your under-
>
> standing, COULD be unaware of the
>
> responsibility that I am asking you
>
> to give me
>
> CO 12 79 (84)

The speaker herself obviously <u>is</u> aware - though there is perhaps a slight question mark over whether or not anyone else in her position would necessarily feel the same.

> (919) Labour's way of doing things
>
> COULDN'T be more different
>
> LA 1 79 (119)

Labour's way <u>is</u> different - though here one could argue that this is a subjective assessment.

The subjective element in (918) and (919) perhaps blocks absolute factivity. But when time reference is past the position is quite clear:

(920) My opening remarks, limited as
they were to five minutes, COULDN'T
conceivably be comprehensive
PA 23 79 (123)

(921) Mr Healey himself at the
beginning of April said he would
have to put up indirect taxes but
he COULDN'T say how much he would
have to put them up by in his Budget
PA 23 79 (311)

((921) could also be interpreted deontically - he wasn't
able to because he wasn't permitted to by law.)

(922) I think many viewers will share
with me the extreme anger of last
winter when the dead were left
unburied, when children COULD NOT
go to school   .
PA 30 79 (224)

Though if the time referred to is future, even
negative dynamic COULD remains nonfactive:

(923) But are you saying Mr Healey
COULDN'T stand in a general election ...?
PA 14 81 (310)

(924) Now all those are things which
you and Denis Healey [have said you]
COULDN'T serve in a government,
COULDN'T defend in an election
PA 28 81 (251)

4.4 SUMMARY OF RESULTS

The basic conclusion I draw from this corpus analysis
is that modal auxiliaries are indeed almost always
nonfactive. Genuinely factive examples are really very
rare. There are essentially only two contexts in which a
modal can take on determinate factual status: in unreal
past conditionals[32] (corpus examples - epistemic MIGHT,

WOULD, SHOULD; deontic COULD) and with a first person subject and either a verb of speaking or one belonging to the group of inert perception and cognition verbs. Almost all deontic and dynamic modals may appear in this latter context, but, in an epistemic use, only WILL; this is another argument (see p 292 above) in support of my view that epistemic modality relates more directly to nonfactivity. It is also, of course, another instance of the difference in behaviour between epistemic and root uses of the modals. Even so, with this sort of 'immediate actualisation' of an act of speaking, the modal does not quite have factual status, as pointed out on a number of occasions above (eg pp 257, 261, 268). There are many fewer corpus examples with verbs of inert perception or cognition (only with deontic SHOULD, dynamic WOULD and CAN) but here the determinate factual status of the modal is less questionable.

Apart from these two contexts, the search for (contra)factive instances produced only: concessive MAY and MIGHT (pp 213-214 and 218) and putative SHOULD (pp 247-251), which I do not consider quite factual either in all cases; one factual ('habitual') use of dynamic WOULD; and dynamic CAN and COULD - with the latter providing more examples of determinate status than the former, or indeed any other modal auxiliary. Analysis of a corpus of modal tokens from this particular perspective does confirm the theoretical premise that the dynamic uses of modal auxiliaries are dissimilar to epistemic and deontic meanings.

The analysis also showed that certain of the contextual features discussed in Chapter 4.2 are considerably more influential than others in determining the relative factivity associated with a modalised sentence. The person of the subject, time (and to a lesser extent, aspect) and the nature of the lexical verb (ie the sort of action to which it refers) are the most important factors, probably in that order of priority[33]. Other features either had a predictable effect, as in the case of conditional and interrogative structure, or had

only a marginal effect in strengthening or weakening the
relative factivity of a particular modal token; most
pragmatic factors, eg speaker's authority, were a case in
point here.

(These results are in line with those reached by
Coates (1983: 235-237) who concludes that the
'hypothetical' modals are 'contra-factive' when the
utterance has past time reference; that SHOULD and OUGHT
are usually contrafactive with past time reference whether
root or epistemic; and that habitual WOULD and 'aspectual'
CAN (eg 'I CAN see the sea') are factive, with 'Ability'
CAN rather more problematical (see above, p 168). She
does not consider concessive MAY nor putative SHOULD nor,
in any detail, dynamic COULD. In general she limits her
examination of the effects of contextual features on the
factivity of the modals to time reference and, to a lesser
extent, aspect. Coates' study does not deal with the
common use of the modals (other than CAN) with a lexical
verb of speaking or inert perception/cognition.)

Putting the factive examples that I have identified
in my corpus (listed on the previous two pages) together
with the various instances of modal auxiliaries with
determinate factual status isolated in the earlier,
theoretical sections of this study, the exceptions to the
semantic 'rule' of modal nonfactivity can be summarised as
follows:

(i) concessive MAY and MIGHT (pp 11, 138 and 218):
more similar to epistemic than root meanings; factive with
an added emotive gloss. A slightly different example of
'almost factive' MAY can be found on p 118, example (274):
the ashtray is in the armrest and therefore it is possible
for the passenger to find it, or possible that he will if
(ie on condition that) he looks/wishes to use it. This
MAY is probably more dynamic than epistemic (see also
reference to examples like 'there's beer in the fridge if
you're thirsty' on pp 198-199 above).

(ii) putative SHOULD (pp 247ff): again, more similar
to epistemic than to deontic meaning; usually factive and
emotive. There are a number of other factive SHOULDs:
    - the subjunctive marker in emotive sentences
      (pp 129-130) where example (310) has past time

reference and is factive; (312) and (313) refer to
the future and so are nonfactive.

- example (440) on p 190 contains a negative SHOULD
  which is also factive and emotive; an epistemic
  reading is most likely - the emphasis is on the
  unlikelihood of his having done it - though a
  deontic interpretation can just about be
  constructed ('he ought not to have done it'). But
  in either case, the butler did do it.

(iii)(a) unconditional past secondary modals (pp 42,
77, 185 and Chapter 4.3): these are of determinate factual
status under a root interpretation only.

(iii)(b) unreal past conditional secondary modals
(pp 35, 77, 110, 179, 181, 200 and Chapter 4.3): these are
of determinate factual status whether root or epistemic.

A secondary modal in a HAVE + EN grammatical context
may be conditional, as in 'You COULD have killed her if
she had slipped' or unconditional as in example (32) on
p 42, of which this is a variant. Both express root
meanings, are emotive and contrafactive. Their
determinate factual status is a product of the combination
of the modal plus two past marker morphemes - HAVE + EN.
One signals unreality, the other a past time context. In
such circumstances, speakers operate with the assumption
either that the event did or did not occur. The event and
the modal which qualifies it must therefore be of
determinate factual status (factive or contrafactive).
There is, then, a combined grammatical and pragmatic
explanation for factive secondary modals in these
conditional and unconditional contexts.
    But in the case of unconditional (past) sentences
this only applies to root secondary modals. An epistemic
variant of example (33) on p 42 would be nonfactive.
    A nonfactive root interpretation for a sentence like
(33) is just about possible. Similarly, it would be
possible to construct a context in which, without the
bracketed material, (32) or (156a) could be speakers'
nonfactive, dispassionate assessments of the subject's
ability or the obligation imposed on him. But for the
reasons explained on pp 59-60 above, it is unlikely.
Nevertheless, it is interesting that even in contexts
which naturally prompt a reading of determinate factual
status, a nonfactive interpretation of the modal may still
be obtained. Contrafactivity is not always quite
absolute.
    It is even more tortuous to construct a nonfactive
root interpretation of a comparable conditional sentence.
In the case of (405) on p 181, for example, I simply
cannot see it. To my mind, secondary modals in unreal

past conditionals are always of determinate factual
status, whether root or epistemic. Consider example (22)
on p 35: a root (possible for) or epistemic (possible
that) interpretation is equally appropriate but both would
be contrafactive.
    These, then, are the 'certain circumstances' referred
to on p 179 above when the grammatical category of past
tense converts a nonfactive into a contrafactive
utterance. Note that a positive secondary modal under
these circumstances will be contrafactive (for example,
(22) on p 35); a negative secondary modal will be factive
(for example, (462b) on p 200 or (434b) on p 189).

    (iv) habitual WOULD (pp 177-8 and 288): where the
modal has past time reference with aspectual elements of
meaning; it is dynamic and factive. Similar examples of
WOULD, (413a), and of COULD, (412a), are given on p 182.
Aspectual meaning is also relevant for factive CAN, see
(v) below.

    (v) factive dynamic CAN and COULD (pp 117, 168,
176-7, 181-3, 197, 292 etc): the facts of usage have been
clearly set out and partially explained by Palmer (see
account on pp 181-3 above). Additionally, I suggest
(pp 182-3) that certain examples of factive WOULD and
COULD are related to aspectual meanings, which are, of
course, also relevant for one or possibly two of the
nonmodal CANs (pp 117, 176-7 and 292), ie where it is a
marker of progressive or 'sporadic' aspect. I point out
on p 168 that CAN is not always actual in the same way.
That there are different kinds of factivity is also
apparent from the difference between actual CAN and, say,
factive SHOULD in (ii) above. One of the central factors
influencing whether CAN is 'actual at the moment of
speaking' is the nature of the activity qualified by the
modal, viz whether or not it is a learnt activity.
Examples (458a) and (458b) on p 197 contrast the
difference in meaning between 'I CAN read' and 'I CAN see'
in terms of the difference in meaning between a learnt and
a natural ability.
    Many instances of factive CAN are accounted for by
(vi) below.

    (vi) modals in collocation with a first person
subject and a lexical verb of speaking or one of inert
perception/cognition (pp 93-5 and Chapter 4.3): this
'almost factive' usage is far more common with root modals
(see p 308 above).

    (vii) seminegative and negated modals (pp 191-3): the
effects of negation are summarised on p 191 above.
Seminegatives have an even more complex effect on the
relative factivity of the dynamic modals. They can make a

dynamic modal almost (or nearly or virtually) factive -
and therefore, strictly speaking, contrafactive since if
you nearly did something in actual fact you did not do it;
or they can make a modal just factive - factive but with
enormous difficulty. The emphasis in either case is not
on the factually determinate status of the event/state-of-
affairs, but on the difficulty of the surrounding
circumstances. There is always a strongly emotive element
in the meaning of such sentences. Only dynamic modality
is compatible with this sort of factive context; epistemic
and deontic modals remain nonfactive with seminegatives
(see p 193).

Generally, then, even where modals may be said to
possess determinate factual status, it almost always is the
case that the event/state-of-affairs (or, more rarely, the
proposition) took place or was true in a qualified sort of
way, in the past or under difficult - or even unreal -
circumstances. And when a modal does occur in a factive
context, the focus is usually elsewhere - the modal
provides an emotive or an aspectual gloss of meaning.
These exceptions therefore are not sufficient to invalidate
my general assumption (see for example pp 164 and 211) that
the modals are fundamentally nonfactive.

More general observations about the advantages of
adopting this particular perspective on the meanings of the
modals will be made in the next chapter. But I should like
to mention here two future lines of study suggested by this
analysis which I do not have the space to follow up in any
depth. One is the association of subjectivity with
nonfactivity; the other is the connection between emotivity
and factivity. These concepts are deliberately paired in
this way because the presence of an overt (but not
necessarily formally explicit) subjective element in the
meaning of a modal token serves to reinforce its
essentially relative and nonfactive nature. The semantic/
pragmatic concept of emotivity, on the other hand, is more
likely to be associated with a modal token used in a
factive (or contrafactive) context.

A great deal has been written about subjective and
objective modality, usually in relation to root meanings
because, as Lyons points out (1977:793), most linguists
assume epistemic modality is always subjective (see above,
p 49). Subjective modality relates to the speaker - his
attitude, opinion or ability; it is the speaker who makes

the epistemic assessment of probability or is the deontic
source of permission or has the dynamic ability to do
something. Objective modality relates to evidence or
circumstances independent of the speaker. The distinction
crops up, in a variety of terminological guises, in the
following works inter alia: Twaddell (1963) - inherent
versus contingent possibility; Halliday (1970a) - active
versus passive modulation; Anderson (1971) - external
versus non-external; Hermeren (1978) - internal versus
external modalities (epistemic meaning is grouped under
'neutral' modality); Dirven (1981) - inherent versus
speaker-dependent potentiality. Palmer (1979:35-6)
revises his earlier threefold distinction between
epistemic, subject oriented and discourse oriented
(ie relating to the action of the speaker rather than the
subject) modals, arguing that some non-epistemic uses are
neither subject nor discourse oriented but simply neutral
and that some of the modal verbs do not fit wholly into
one or other of the three kinds; he decides on a division
into epistemic, deontic (which is discourse oriented) and
dynamic (which can be subdivided into neutral and subject
oriented) modality. In his most recent work Palmer
(1986:16-18 and 102-104) considers modality in language to
be essentially subjective and that although it may not
always be possible to make a clear decision whether a
modal is used subjectively or not (eg deontic MUST)
nevertheless subjectivity is "clearly basic" and epistemic
modality, at least, is always subjective.

Lyons (1977:792-809) argues persuasively as always
that both epistemic and deontic modality can be
interpreted either subjectively or objectively. The
reason why few linguists have even considered the
possibility that epistemic modality could be anything
other than a matter of the speaker's attitude towards the
propositional content of his utterance is that the
distinction between this and objective epistemic
modality[34] is not one that can be drawn sharply in the
everyday use of language. Lyons also considers subjective
epistemic modality to be more basic than objective (just

as Palmer (1986:103) believes subject oriented to be more basic than neutral dynamic modality) and the more natural use. The objectification of epistemic modality is a 'secondary development' (see p 1 and Note 1 to Chapter 1) but one that is 'a precondition of our being able to talk about past or future possibility and to put one epistemic modality within the scope of another' (Lyons, ibid).

Subjectivity, then, is closely bound up with modality but modal meanings can be objective and the auxiliaries may bear these objective meanings. Perkins (1980:168) argues that, in terms of his 'scale of formal explicitness' (see above, p 114), the modal auxiliaries are unmarked with respect to the subjective/objective distinction, by contrast with, say, modal adverbs which are explicitly objective and modal lexical verbs which may be explicitly subjective. I agree with this characterisation, with the reservation that epistemic modality is usually subjective and so the modals used to express this meaning are interpreted subjectively. This is certainly the case in my corpus, which I speculate is largely because of its political nature (although this is a hypothesis which remains to be tested by comparing the present analysis with studies of other genres). This particularly close relationship between subjectivity and epistemic meaning — even if only in terms of frequency of co-occurrence — is another argument in favour of the view that epistemic modality is more central to the concept of modality than are root meanings. Again, this fits in with my view of modality as essentially nonfactive. When a modal token is perceived as being used to express a subjective meaning, its relative nature — its relative factivity — is automatically underlined. So I disagree with Coates (1983:62) that "there is no necessary connection between objectivity and contra-factivity"; there is a connection, although I would phrase it rather differently: objective uses of the modals have a stronger relative factivity (though not determinate factual status, except in the appropriate contexts) than an equivalent modal used subjectively. But this is an area in which the

present study has only touched the surface and further
work is needed to explore fully the significance and
implications of the relationship between modality,
nonfactivity and subjectivity.

Subjectivity has to do with 'speaker's attitude' and
modality is 'one form of participation by the speaker in
the speech event'. But, to continue in Halliday's words
(see above, p 39), there are many other ways in which the
speaker may take up a position. I see this distinction in
terms of the difference between modal evaluation and
emotive evaluation. Modal evaluation almost always
relates to currently nonactual events or nonfactive
propositions; emotive evaluation usually relates to actual
events and true propositions - as Rosenberg's Principle of
Emotional Reaction (see p 139 above) predicts. But I
would qualify Rosenberg's Principle and am sympathetic to
Kiparsky and Kiparsky's view that the semantic distinction
of emotivity cuts "orthogonally" across that of factivity
(see above, p 128 ff and Note 27 to Chapter 2). As I said
earlier (p 130), people can and do react emotionally to
imagined states-of-affairs. So, although emotivity is not
a property of modal meaning, nonfactive modal auxiliaries
may be compatible with emotive contexts, as in the example
(669); the emotive nature of the context may, of course,
be determined by pragmatic as well as by lexical factors.

Palmer (1986) has some interesting if slightly
contradictory comments on 'evaluatives'. His initial
position seems to be that "evaluatives ... relate to
factual propositions and are possibly not modal at all"
(ibid, p 99); later (ibid p 119) he qualifies this by
saying that if evaluatives are defined as attitudes
towards known facts (cf Rosenberg's Principle) then they
are not strictly modal. However, by page 121 he is
suggesting that evaluatives are modal and on page 154 says
that "evaluatives are essentially modal", giving SHOULD in
a factive complement ('It is odd that she SHOULD have
gone') as "a fairly clear example of the use of a modal
form as an evaluative".

This last remark is in line with my own findings.
When a modal does occur in a context of determinate
factual status, the corpus analysis in Chapter 4.3
suggests that the auxiliary may then contribute an element
of emotive evaluation to the meaning of the sentence.
This is consistent with Perkins' view (mentioned on p 5
above) that because evaluative predicates are very often
factive they should be excluded from the category of modal
expressions. Putative SHOULD and concessive MAY
(discussed on pp 247-251 and 213-214 above, respectively)
are cases in point. Modals in unreal past conditionals
similarly contribute an emotive/evaluative gloss on the
non-occurrence of a particular event; in (619) for example
it is clear that the speaker thinks it was a good thing
that the government did get involved in the new Bus Stop
jet and that people didn't lose jobs; a similar
observation is made about (32) and (33) on p 42. This is
entirely consistent with the nature of modal meaning
analysed in terms of a 'possible worlds' framework, since
to relate a currently existing state-of-affairs to some
other possible state-of-affairs will almost inevitably
prompt a value judgement - that the alternative is
desirable, or preferable, or feared, or a danger narrowly
escaped or whatever, simply because the speaker is
thinking of things being otherwise. If he doesn't make
his reason for doing so explicit, the hearer will try to
construct one. It may be that we react emotionally to
things that are, but we do so by comparing them with
others for which there exists some kind (epistemic,
deontic or dynamic) of potentiality. We are of course in
the realm of pragmatics again.

There is one exception to the generalisation that
emotivity is not an inherent semantic property of modal
meaning, and that is with deontic meaning. Deontic
judgements are more overtly evaluative in the emotive
sense than either epistemic or dynamic assessments. This
is partly because deontic meaning relates to social and
moral laws, in which emotive judgements are more likely to
be involved than with, say, physical laws. Deontic modals

also frequently occur in mands[35], the function of which is
to command or direct a particular course of action to
which the speaker (sometimes the subject) is committed;
deontic modality, then, is often emotive, and not only
when it occurs in a context of determinate factual status.

This hypothesis that there is a closer connection -
possibly semantic, more probably pragmatic - between
deontic modality and evaluative meaning than is the case
for either epistemic or dynamic modality is borne out by
the corpus analysis in Chapter 4.3, insofar as it deals
with this subject. I detected a distinctly emotive/
evaluative element in a number of sentences with deontic
modals, such as the examples on pp 267 and 274. There may
of course be some circularity here since I took this as
one of my initial hypotheses (see pp 40-42) to be tested
against the corpus data. As far as these results go,
however, they do appear to substantiate that hypothesis.
But how modality and factivity interact with the whole
domain of affective meaning is a question which has
scarcely, to my knowledge, been looked at even in
pragmatically oriented approaches to modality. It is
another area which would repay further study.

CHAPTER FIVE   <u>CONCLUSION</u>

The purpose of this study has been to show that the
semantic property of nonfactivity is the one element of
meaning shared by the whole set of modal auxiliaries[1].
When the meanings, or uses, of each auxiliary are analysed
in terms of the relative factivity with which they are
associated it becomes apparent that this varies with the
nature of the modal meaning indicated and the degree of
modality signalled. Certain features of the linguistic
context are seen to have a strong influence in determining
the factual status of the modal auxiliary. Nevertheless,
despite these various influences, the core meaning of
every modal auxiliary in each of its purely modal uses is
still nonfactive.

Given the relative nature of nonfactivity - a modal
token may express very strong relative factivity and
remain nonfactive - it is no coincidence that modality is
itself a gradable concept. This is why the scalar
analysis proposed in Chapter 2.5 is particularly
appropriate. In the light of Chapter 4.3, this
characteristic is seen to be even more widely applicable;
I argue that epistemic meaning is more modal than either
deontic or dynamic meaning because it relates more
directly to the assessment of truth. Modals used
epistemically assert their own relative factivity. When
used to express root meaning they only imply a relative
factual status. A related point is that certain members
of the set of modal auxiliaries are less modal than
others; CAN and COULD are the prime examples here. Not
only do they rarely express the most central modal meaning
(CAN, for example, is only epistemic when negative) but
they also bear a factive interpretation more frequently
than any other auxiliary. This last point, of course, is
closely connected to the fact that CAN and COULD are most
commonly used to express a dynamic meaning which is in
turn the least modal of the three types of meaning
distinguished in this study.

Where a modal auxiliary is associated with determinate factual status because of the particular combination of contextual features with which it co-occurs, then it may be said to be compatible with that factive or contrafactive interpretation. Most of the auxiliaries are, in this limited sense, compatible with factual contexts although, on the basis of the corpus analysis offered in Chapter 4, such examples are relatively rare. By contrast, certain uses of CAN and COULD are not simply compatible with a restricted number of factive contexts (such as unreal past conditionals); indeed factive CAN/COULD do not even always demand past time reference, which is in almost all other cases the basic prerequisite. With these uses of CAN and COULD, factivity is an integral part of their consequently non-modal meaning.

The perspective on the meaning of the modal auxiliaries that I have adopted takes the core meaning approach used in many previous semantic studies of the modals to its logical conclusion. Instead of seeking a 'basic meaning' for each auxiliary or establishing a number of features in terms of which all the members of the set can be characterised, I have isolated at a higher level of abstraction the one meaning common to all modals in almost all of their uses. In the course of doing so, I have inevitably concentrated on the central similarity between the various uses and have failed to acknowledge many of the differences between modals in a comparable use. But my aim was not to distinguish between the members of this modal set of auxiliaries; it was to identify what unites them and makes them a semantic as well as a syntactic set. In my view this offers a valid and insightful perspective on the meaning of the English modal auxiliaries although I recognise that it is only one perspective. I would list the following principal advantages of this particular approach:

- It proposes the semantic property of nonfactivity as a unifying central meaning from which one can approach the apparently amorphous collection of meanings usually

classed as modal. In doing this, if offers a counter-argument to the view that the English modal system tends towards "semantic anarchy" (quoted in Perkins, 1980:51).

- It provides additional semantic support for the threeway epistemic/deontic/dynamic division, since the relative factivity of a given modal auxiliary is seen to vary according to which of the three types of meaning is expressed.

- It serves as a useful and straightforward measure of what is modal and what is not. Nonfactivity, in effect, becomes the determining semantic characteristic for modality. If it isn't nonfactive, it isn't modal.

- It therefore provides an economic explanation why certain uses of certain modal auxiliaries are felt to be less modal or not modal. When Leech (1971:70) talks about CAN in combination with specific verbs losing its modal value, or Leech and Coates (1980:84) account for all uses of CAN "except possibly for the use of can with verbs of perception", then in both cases the exception turns out to be factive. It is this property that distinguishes the non-modal use in question from other meanings that are expressed by the modal auxiliaries (including CAN); and its factive nature is the reason why uses like this cannot be accommodated within otherwise ordered and comprehensive accounts of the meanings of the modal auxiliaries. It is not, in other words, simply for the sake of neatness or on the grounds of an intuitive feeling that 'ability' is somehow unlike other modal meanings, that these factive uses have to be excluded.

So some of the modal auxiliaries express non-modal meanings[2] some of the time, but not to such an extent as to undermine the semantic coherence of this set of verbs as a whole. The lack of 'fit' between form and meaning in this particular semantic domain is already apparent from the fact that there are many non-auxiliary means of expressing modality - the modals do not have exclusive claim on this important area of meaning. But they are central to it. I leave the question of whether there are other modal meanings in addition to those expressed by

this set of auxiliaries for typological studies like Palmer's latest work, though I would suggest that the answer is almost certainly yes, in that different modal distinctions are likely to be grammaticalised (or lexicalised) in different languages. But on the evidence of this study nonfactivity should remain the defining characteristic of modality, if the latter semantic concept is not to be stretched unhelpfully to include all kinds of attitudinal meaning.

Finally, this study has also sought to isolate and explain the few but interesting exceptions to the generally proven thesis that the determining semantic characteristic of the modal auxiliaries is nonfactivity. These exceptions are summarised on pp 309a-d. Some have been widely discussed in the literature (eg dynamic COULD with past time reference); others have not been *previously* acknowledged (eg negative factive SHOULD). This study therefore offers a more comprehensive treatment than available to date of those uses of the modal auxiliaries which have determinate factual status, and seeks to categorise and explain these exceptions. My conclusion is that, despite these factive exceptions, it remains true that modality and factivity are fundamentally incompatible.

NOTES TO CHAPTER ONE

1. Lyons (1977:849) cites as examples objective epistemic and deontic modality. The classification of modality into different types or kinds will be discussed in Chapter 2; see also Chapter 4.4 on subjectivity.

2. See also Lakoff (1972:229) and the fact that many otherwise insightful treatments of the meanings of the modals do not offer any definition of the concept of modality - eg Ehrman (1966), Anderson (1971).

3. The term 'presupposition' is used by Rosenberg (1975) to mean the 'presupposition of truth' only. See Chapter 3, p 122 for reference to wider definitions of presuppositions.

4. Leech and Coates further point out that this is "a familiar observation".

5. See brief discussion of emotive evaluation in Chapter 4.4.

6. *This is perhaps, in turn, an oversimplified represent-ation of Perkins' position, since he does acknowledge* the factual status of WAS ABLE TO (1980:113), ascribing it to the presence of WAS. This solution will be considered below, in the course of discussion of actuality - see Chapter 3, p 147 ff.

7. Note that the selective nature of Palmer's treatment (ie of dynamic modality) partially complements Lyons's concern with epistemic (and, to a lesser extent, deontic) modality.

8. The correspondence between factivity and actuality will be examined in greater detail below, Chapter 3.2. In his later work (1986) Palmer uses 'factuality' rather than 'actuality'.

9. In other words, subject to the provision that the descriptive framework itself be an accurate and adequate reflection of the meanings actually expressed by the modals; it would be possible to analyse each facet of Joos' semiological cube (see Chapter 2.3) in terms of relative factivity, but - given the counter-intuitive nature of his framework - it would not be illuminating.

10. Because this presents no difficulty, ie such examples readily come to mind - 'He MIGHT have missed the bus'; 'You OUGHT TO go to the dentist'; 'Little boys SHOULD

NB4AAE

be seen and not heard'; 'The parcel WILL arrive tomorrow'.

11. See discussion of concessive MAY in Chapter 4.3.1, p 213 ff.

12. Such as - 'He MAY go' (a) He is permitted to go (root interpretation)
(b) It is possible that he will go (epistemic interpretation).

13. Mentioned in Chapter 4.1 and 4.2 but not discussed in any great detail, since this is first and foremost a linguistic study.

14. Palmer's term; the meaning of 'implication' will be examined in Chapter 3.2.1.

15. Leech and Coates (1980:81) make a similar point, where the 'picture' is of "indeterminacy as a serious factor in modal semantics".

16. Coates (1980b:339) criticises Palmer's use of "unquantified statistics" and his "cavalier attitude" to the Survey.

17. This example derives from Hofman (1976:100) and is discussed by Perkins (1980:40); for further consideration of the combination of aspectual and modal meaning, see below, Chapters 2.4 and 4.2.

18. A view shared by Tregidgo (1982:91) and held in a qualified form by Palmer (1979:55,155), and by Horn (1972:129) who comments that "unnegated epistemic can has a strange ring in modern English".

19. Note that the context provided would suggest that the (epistemic) possibility was related to or even derived from a (dynamic) ability inherent in the subject of the sentence viz, the characteristic of unpunctuality.

20. However it may be measured.

21. For example, Coates and Leech (1979).

22. Structured to facilitate comparison with the Brown University Corpus of American English.

23. There is increasing interest in child acquisition of the modal system; but research is still at a tentative stage, and results so far appear to be contradictory, with Perkins warning that "it is often extremely difficult to give a precise interpretation of the

sense in which a given modal is being used even with older children" (1980:220) but Wells (forthcoming), as reported in Leech and Coates (1980:89), claiming to have found "no significant problems of indeterminacy" in his corpus of children's speech. And where Perkins, seemingly in line with an earlier observation of Wells that "it is just those forms that figure most frequently in the adults' speech that are acquired first and used most frequently by the children" (Wells, quoted in Perkins (1980:238)) tentatively suggests that "the range and frequency of modal expressions used may well differ little for children and adults" (ibid), he is contradicted by Leech and Coates (1980:89). For their conclusion is that "it is evident from a comparison of our findings with those of Wells forthcoming that the frequencies of semantic types [ie different uses of the modals] in an adult written corpus are vastly different from those in a developmental corpus". Conflicting results would, of course, tend to be produced when comparing analyses of corpora conducted within different descriptive frameworks, and few valid conclusions could be drawn from comparative frequency figures for modal auxiliary types not subclassified according to semantic usage, as in Table 1 (see above, p 17). It is interesting to note, however, that in both of the corpora (A) and (C), CAN and WILL are among the most frequently occurring modals, MAY and OUGHT TO among the least, and that the greater relative frequency of WOULD and SHOULD in corpus (A) appears to bear out Perkins's observation (1980:262) that the secondary modal auxiliaries are acquired later than their primary counterparts.

24. The following lively and informal exchange, with only a thin veneer of polite formality, illustrates this point:

ROBIN DAY: A former Labour Cabinet Minister ... has today said ... that ... the citizens of Britain ... must vote Conservative ... what is your comment?

DENIS HEALEY: Well I think that some people move very much to the right as they grow older, I notice you have yourself Mr Day ...

ROBIN DAY: No, you have no evidence of that at all Mr Healey - nor is it relevant ...

DENIS HEALEY: Well, quite

> ROBIN DAY: And if I may say so, so will you, having
> been a member of the Communist party at
> the age of 18.
>
> DENIS HEALEY: Well you are nasty, aren't you?
>
> ROBIN DAY: No no, I'm just preserving my corner ...
> PA 30 79 (92-104)

25. Specifically, deontic modality, or the modes of
    obligation.

26. There seems to be a tendency for the modal auxiliaries
    to be discussed in pairs – an observation made by
    Lakoff (1972:230) and Coates (1980a:209) among others.

27. An extremely long running argument. For recent and
    well argued expositions of both sides of the case, see
    Wekker (1976) and Palmer (1979).

28. Contrast Lebrun (1965) and Coates (1980a); this is a
    dispute more terminological than substantive, since
    even those, like Coates, who argue that CAN and MAY
    are not synonymous recognise that there are areas of
    semantic overlap between the two modals, and those who
    like Lebrun, argue that they are in free variation
    recognise the contexts in which they are not freely
    substitutable, or in which MAY has connotations of
    greater formality.

29. See Riviere (1981).

NB4AAE

NOTES TO CHAPTER TWO

1. See for example Joos (1964:123) "the remote tense
    forms serve both for real past and unreal contemporary
    meaning ... the remote modals would, should, could,
    might ... more often have unreal contemporary than
    real past meaning."

2. This is not to say that the modal auxiliaries never
    bear factive interpretations. Compare, for example,
    'How CAN/COULD you go off and leave me like that!'.
    For further discussion, see Chapter 4, particularly
    4.3.3.

3. It has in fact been argued that there are two verbs
    DARE, an auxiliary and a main verb (see for example
    Joos (1964:192) and Twaddell (1963:13).

4. Palmer's articles on (dynamic) modality and actuality
    (1977 and 1980) contrast the relative factivity of the
    modal auxiliaries CAN and WILL with that of their
    associated non-auxiliary modal forms, BE ABLE TO and
    BE WILLING TO. This study will not be centrally
    concerned with such contrasts. However, it is not
    assumed that the relationship between non-auxiliary
    modal expressions and factivity is necessarily less
    complex than that characteristic of the modals; for
    example BE ABLE TO (with past time reference) usually
    bears an 'actual' interpretation whereas the
    semantically similar BE CAPABLE OF does not.

5. Or recognition may be inherent in the choice of
    terminology, as in the case of Horn (1972) where
    'modals' is used to refer, variously, to CAN,
    POSSIBILITY, LIKELY etc, and where the pre-modified
    phrase 'syntactic modals' is used when reference is to
    the closed set of English modal auxiliaries only.

6. cf Wekker's deliberate understatement: "If it may be
    assumed that the formal category of modals ... is in
    some sense related with modality ... (1976:11).

7. Note that factivity, like modality, is expressed both
    gramatically and lexically (viz the distinction
    between factive and nonfactive predicates and the
    types of sentential complementation they take - see
    p 3 and Chapter 3).

8. The aim of Hermeren's study of modality in English,
    for example, is to "set up a classification of the
    meanings of the modals, irrespective of what kinds of

meaning these would turn out to be" (1978:130), ie any and every meaning expressed by a modal auxiliary is, by definition, a modal meaning.

9. cf the definition offered by Fowler et al: "The grammar of modality ... covers linguistic constructions which may be called 'pragmatic' and 'interpersonal'. They express speakers' and writers' attitudes towards themselves, towards their interlocutors, and towards their subject-matter; their social and economic relationships with the people they address; and the actions which are performed via language (ordering, accusing, promising, pleading)" (1979:200). According to such a characterisation, in addition to the modal auxiliaries and non-auxiliary modal forms, naming conventions, personal pronouns, hesitations and markers of spatial distance would all be regarded as expressive of 'modal meaning'.

10. Huddleston (1971:295). He is referring to Palmer's 1965 work on the modals.

11. Notably Ehrman (1966:9) who is positively averse to "the idea of symmetrical or exceptionless semantic arrangements" being applied to the modal auxiliaries.

12. Joos holds two similarly apparently contradictory, convictions, believing that "the meanings of these eight modals ... are buried deep in the subconscious where they are inaccessible to rational scrutiny" and yet – on the following page – referring to "the complete solidarity and symmetry of the English system of modal markers" (1964:147-148).

13. Jespersen (1931:284) makes the same mistaken distinction; for a more thorough criticism of Joos' account of the differences between WILL and SHALL, see Hermeren (1978:18).

14. By Palmer (1979:10), for example.

15. Palmer (1979:10) notes that 'circumstance' corresponds roughly to non-epistemic (root – or, more specifically, dynamic) modality, and 'occurrence' to epistemic modality.

16. For an excellent account of the contextually dependent nature of so-called 'characteristic CAN' see Perkins (1982:250).

17. Leech and Coates (1980:82) acknowledges Lyons' use of this term (1977:828-829).

NB4AAE

18. Halliday (in Kress ed (1976:201)) had earlier
    discussed the notion of inherency with reference to
    "modulations ... intrinsic to the actor".

19. Contrast Ehrman's analysis of MAY in terms of a
    continuum.

20. Terms to be discussed below, Chapter 2.4.3.

21. Leech and Coates acknowledge this difficulty
    (1980:82), and decide that the appropriacy of
    paraphrase formulae is the most reliable criterion for
    making the distinction between 'merger' ('both-and')
    and 'gradience'/'ambiguity' ('either-or').

22. Also quoted in Hermeren (1978:14) who mistakenly
    implies that the pronoun 'it' refers anaphorically to
    'the modal phrase', whereas in fact it refers to "the
    lack of agreement by native speakers" - which makes
    the warning marginally less defeatist in tone.

23. Examples adapted from Lyons (1977:828).

24. Contrast Perkins who excludes them from his treatment
    of modal adverbs (1980).

25. The example comes from Alan Bleasdale's series of TV
    plays, 'The Boys from the Blackstuff', and formed a
    part of the dialogue spoken by an unemployed man to
    one employed in driving a forklift truck. The appeal
    was despairing and unlikely to be met.

26. The view that modality is a gradable concept will be
    developed in the course of Chapter 2.5.

27. Kiparsky and Kiparsky (1970:169) assert that "across
    the distinction of factivity there cuts orthogonally
    another semantic distinction which we term EMOTIVITY.
    Emotive complements are those to which the speaker
    expresses a subjective, emotional or evaluative
    reaction". Note that the Kiparskys use 'emotivity'
    and 'evaluation' as synonyms, a usage adopted in this
    study, where 'evaluation' = emotive evaluation; the
    terms 'judgement' or 'assessment' are used when
    reference is to evaluation the emotive effect of which
    is unspecified. See also Chapter 4.4.

28. Note that this definition presupposes that there is a
    conceptual affinity between modality and nonfactivity.

29. Lyons is referring only to epistemic modality, but in
    the course of this Chapter I hope to demonstrate the
    similarly relative nature of non-epistemic modality.

30. See Perkins (1980:161-168) for the proposal that auxiliary and non-auxiliary modal expressions can be ranged on a "scale of formal explicitness", with the modal auxiliaries as the most 'vague' or 'least formally explicit' of all modal expressions.

31. 'Specific' in the sense that the degree of commitment expressed by MAY contrasts with that expressed by MUST or MIGHT, with the former expressing a higher degree of commitment, and the latter a lower degree. For consideration of the validity of the attempt to quantify the degree of commitment associated with each modal (MAY being associated with approximately 50% commitment), see discussion in Chapter 2.5 of the scalar properties of the modals.

32. Terms derive from Quirk et al (1972:443-453).

33. Including Lyons (1977), Palmer (1979), and Perkins (1980). Palmer works principally from the distinctions drawn by Von Wright (1951), Perkins from those distinguished by Rescher (1968).

34. Rescher (1914:ix) calls Leibniz "the father of the theory of possible worlds." McCawley (1981:274) refers to "Leibniz's characterisation of necessity: a proposition is necessary if it is true in all possible worlds."

35. See Karttunen's interesting article on 'Possible and Must' (1972).

36. Examples taken from Lyons (1977:788-789). A similar example is discussed by Palmer (1979:3).

37. Tregidgo (1981:76) notes that the root-epistemic 'ambiguity' can also be observed in other verbs, eg SUGGEST, EXPECT and SUPPOSE. Perkins (1980) lists all three as modal lexical verbs.

38. See McCawley's introduction to Hofmann (1976).

39. Example offered by Coates (1980b:340). The corpus of political discourse compiled for this study provided 10 tokens of OUGHT TO, none of which could be interpreted in an epistemic sense.

40. Further systematic features of the semantics of the modals will be discussed in Chapter 2.5.

41. It has been said that OUGHT TO and CAN (can) (see pp 13, 81 and 108) are rarely used in an epistemic sense; they do occur, however.

42. Lyons qualifies this statement - he is referring only to objective epistemic modality. See Chapter 4.4 for discussion of objectivity and subjectivity.

43. For examples and analysis, see Perkins (1980:41 ff).

44. Though whether he will actually go immediately is a matter for Chapters 3 and 4.

45. As do Leech (1971:93), Hermeren (1978:93), Anderson (1971:72). It would be odd if students of modality were not aware of the need for qualification. (Coates and Leech (1979:28) calculate that there is a 99% probability of epistemic MUST occurring in the presence of perfective aspect.)

46. Palmer's subcategorisation of root modality into deontic and dynamic meanings will be discussed briefly below, pp 72 ff.

47. I recognise that tense cannot be equated with time but am here referring to the function of tense to express time reference.

48. One advantage, however, of such a rephrasing is that it does avoid asserting that expressions of root modality canot co-occur with perfective aspect - Palmer does not state, but his wording permits the inference that root uses of the modals can occur with the auxiliary HAVE as long as time reference is nonpast.

49. See for example Antinucci and Parisi (1971:32) from whom examples (137) and (139) are taken.

50. But the epistemic meanings of the modals can be ranged on a scale of likelihood - see Chapter 2.5.1.

51. Perkins (1980:22) disagrees with Lyons (1977:826) that the uses of language to express wants and desires and to get things done by imposing one's will on other agents are both closely related to the category of deontic modality. Perkins prefers to classify boulomaic meanings as dynamic. My own sympathies lie with Lyons and for this reason I have problems with the standard treatment of volitional WILL as dynamic (rather than deontic).

52. Perkins's apparent assumption that likelihood modalities are empirically rather than subjectively determined, and so dynamic rather than epistemic, seems strange to me. I treat expressions of likelihood (assessments of probability) as epistemic even though the assessment may be ultimately empirically based.

NB4AAE

53. This is not to suggest that speakers are usually conscious of making these choices. However, they may be – perhaps particularly in the case of selection between alternative modal expressions as in the following extract from the _Guardian_ newspaper (12 October 1982)

> The Swedes, who were definitely sure that they probably had a possible submarine intruder in their coastal waters, have given up the search... The possible submarine turned into a probable submarine, and into two submarines, one definite and one possible, and then back into one definite submarine which had probably escaped but which could still possibly be there.

54. cf Joos' distinction between relative and factual assertion, discussed above, p 43.

55. See above, Chapter 2.4.

56. But need not; the modal auxiliaries do not constitute the only means of expressing modality at the speaker's disposal. He may use a non-auxiliary modal expression (see p 28), or indicate his reservations non linguistically by raising his eyebrows or shrugging his shoulders, for example.

57. ie none of the modals are "noncommittal" with regard to the truth of (p)/occurrence of (e) (see Chapter 3. pp 136 ff). I therefore disagree with Halliday's (1970:347) classification of 'probable' as 'uncommitted'; Hermeren (1979:33) makes a similar criticism of Halliday's terminology.

58. These examples are all derived from the corpus described on pp 15 ff. The actual example is:

> "Don't you think that your tax and your proposals on tax on jobs MAY explain why unemployment is still so high?"
> (PA 30 79 571)

Without the change in the possessive pronoun, (160) – (161) would have had a slightly odd ring, because the speaker's (Lynda Chalker) intention is to blame the tax policies of her addressee's (Denis Healey) party for high unemployment; a negated verb would therefore be inappropriate in this context (or, indeed, most that could be imagined) without the amendment. Mr Healey might well have riposted with (162). (In fact what he did was to challenge Mrs Chalker's premise that unemployment was still high.)

59. For some discussion of whether or not negation is part of (p), see Chapter 3.3, p 187 ff and Note 35 to Chapter 3. Since this study does not aim to describe the deep structure of modalised sentences, the issue is not an essential one, although it does have implications for use of terminology, eg 'contrafactive'.

60. For example, Joos (1964:187) "... may is a more noncommittal word than can; the next step in this direction is might." Anderson (1971) refers to Diver's scale of likelihood, discusses the combination of the auxiliaries with possible/probable/certain, and there is a scalar element implicit in his opposition Potential/Non-Potential - Assurance. Diver's (1964) idiosyncratic and convoluted analysis incorporates both binary oppositions and a scale of likelihood.

61. This has also been done with questions (which, it can be argued, are modal 'devices' - see above p 28), viz Churchill's 'Certainty Series' which "is the set of ways to ask for the same piece of information, ordered by degree of certainty in the proposal" (1978:52):

DEGREE OF CERTAINTY	PARADIGM	EXAMPLE
1	What is X?	What is his name?
2	Is X Y?	Is his name Harry?
3	Isn't X Y?	Isn't his name Harry?
4	X is Y, isn't it?	His name is Harry, isn't it?

62. Taken from Diver (1964:330). I have ignored his inclusion of the auxiliary DO at the top of the scale.

63. Taken from Close (1975:273). I disagree with his labelling of the end points of the scale, and would prefer 'less certain' and 'more certain'.

64. Example taken from Diver, ibid. Note that CAN in such a frame, with the implied epistemic reading 'it is possible that he will arrive today', would sound rather odd unless uttered, for example, in contradiction to the assertion 'he can't arrive today'; even in such a context, a dynamic reading (ie approximately equivalent to 'it is possible for him to arrive today') would seem more appropriate.

65. See above, Chapter 2.4.1 p 39.

66. Note the function of progressive aspect in forcing or encouraging an epistemic reading. 'He CAN'T arrive in time' would be more likely to be given a dynamic

interpretation, ie it is not possible for him to, or he isn't able to arrive in time. For some discussion of aspect and modality, see above, Chapter 2.4.3 p 59; for a fuller account, see Macaulay (1971).

67. Example derives from Hermeren (1978:111), who says it expresses the extreme unlikelihood, in the speaker's opinion, of the event having taken place, by contrast with 'Sonia could not cut the lawn yesterday' which implies that she did not cut the lawn. This and similar examples will be discussed in more detail in Chapter 4, but it is relevant to note here that, again, Hermeren is comparing an epistemic use of CAN'T (in this case also prompted by co-occurrence with aspect, this time perfective) with a dynamic use of COULD. Had he compared (166) with 'Sonia COULD NOT have cut the lawn yesterday', an epistemic reading for COULD also would be possible, and the implication that the grass was not cut would be less strong.

68. It was difficult to find an illustrative example from the corpus (not helped by the fact that there are only two tokens of negated MAY), ie an attested example in which negated MAY and negated CAN would be equally appropriate. This supports Coates' (1980a:209) view that "in everyday use, MAY and CAN have very little overlap in meaning".

69. There will be some discussion of the relationship between modality and futurity - more generally, temporal reference - in the course of Chapter 4 (pp 178 - 183). Leech (1971:52) sums up the intuitive connection between the two concepts well when he argues that we "cannot be as certain of future happenings as we are of events past and present, and for this reason even the most confident prognostic-ations must indicate something of the speaker's attitude and so be tinged with modality". I discuss examples of 'future' WILL with epistemic examples.

70. Of the remaining three of the ten modal auxiliaries, CAN, SHALL and WOULD are all clearly unacceptable because they cannot express epistemic modality in this context.

71. Contrast Coates (1980a:213) who says that "the collocation 'may or may not' ... reflects the speaker's estimate of the possibility as 50/50".

72. He concludes that it is not; because the "use of MUST depends on the time of the event described in the inferred proposition ... [whereas] the use of SHOULD

... is determined by the nature of the inferred proposition (ie cause or consequence)" p 185, ibid.

73. Horn also argues that JUST "is parallel to absolutely in its restriction to the end points of scales [and] ... co-occurs with end-point syntactic modals" (ibid pp 149 ff) eg MUST/CAN'T. However, he overlooks such counter examples as: 'He MIGHT just do it'.

74. Compare Halliday's (1970a:332) distinction between "the intermediate value (probable) in the speaker's assessment of probability and the outer, or polar, values which are 'possible' and 'certain'. See also Note 57 above.

75. Examples (182) and (183) are taken from Anderson (1971:118).

76. For example, Lyons (1977:807) who also refers to Halliday (1970a:331) and from whom example (184) is taken.

77. After Aristotle, recent references include Anderson (1971:100), Coates and Leech (1980:80), Hermeren (1978:164); Lyons (1977:787), Palmer (1979:7-8), Perkins (1980:134), Tregidgo (1982:84).

78. See above, p 26 for NEED functioning as a suppletive of MUST (in negative environments); I cannot imagine a context for "That NEEDN'T NOT be true" and (197) therefore relies on the logical equivalence of False = Not True.

79. Some studies also point out equivalent relationships between the quantifiers SOME and ALL, eg Leech (1969:205), Horn (1972:131 ff), and Palmer (1979:7).

80. See Note 74 above. It is this difference in behaviour in conjunction with negation which makes "the basic distinction between 'probable' and the rest".

81. An observation made by, among others, Perkins (1980:137), Tregidgo (1982:84) and Lyons (1977:832).

82. I had difficulty finding a pair of sentences to illustrate 'OBLIG = not-PERM-not'. A less clear but more idiomatic example would be 'Every one MUST do National Service = No-one CAN avoid National Service.'

83. ie Go = Not Stay; see Note 78 above.

84. Example taken from Leech (1971:89) who argues that the version with MUSTN'T sounds perhaps more forceful; see

also Palmer (1979:65). Although there is a logical equivalence between 'not-PERM' and 'OBLIG-not', linguistic expressions of the two terms are not felt to have quite the same force - see below, pp 92-3 for further discussion of this lack of fit between language and logic.

85. Well expressed by Lyons "Whether we are, as human beings or as members of a particular society, implicitly permitted to do whatever we are not expressly prohibited from doing is hardly a question for the semanticist" (1977:837).

86. I do not entirely agree with Palmer's analysis of SHALL (1979:62-3); by using SHALL, the speaker commits himself very strongly to the actualisation of the action but he cannot "actually guarantee" it take place - see also Chapter 4.3.3. Nor does Palmer pay much attention to the degree of deontic modality expressed by COULD, MIGHT, OUGHT TO or SHOULD.

87. See Perkins (1980: Chapter 6) for a fuller discussion of modality and politeness. It is noticeable that the most tentative forms (MIGHT, COULD, MAY, CAN) frequently occur in syntactic environments such as if clauses or questions which are also devices for expressing modality.

88. Horn (1972:125) makes the same point but goes into rather more detail of logical relationships like entailment and implication.

89. This example comes from my corpus. The actual quotation is: "... a Member of Parliament is responsible in the first place to the people who actually voted him to Parliament ... He also has a responsibility to his constituency party. He MAY have one, as I do, to my trade union" PA 14 81 (111) where the modal is in fact being used in its epistemic sense, 'it is POSSIBLE that he has' rather than the deontic 'he is PERMITTED to have'; MUST in this environment would therefore be equivalent to 'it is CERTAIN that he has' rather than 'he is OBLIGED to have'. In both cases, MUST would be stronger than MAY - see below, Chapter 2.5.5.

90. It is not a coincidence that 'the CAN of ability' is regarded by some authors (eg Boyd and Thorne (1971:71)) as non-modal; see Chapters 2.5.6 and 4.3.3 below.

91. The distinction between POSS/NEC FOR and POSS/NEC THAT
has already been raised (see above, p 77) and will be
dealt with more fully in Chapter 2.5.5 below, pp 107 ff.

92. I am not entirely convinced by Palmer's examples of
dynamic MUST (1979:91-2), some of which seem to me to
be deontic, eg "I have no doubt that I MUST do what I
can to protect the wife." His argument appears to be
that "generally speaking we do not lay obligations
upon ourselves", but he overlooks that general,
socially imposed sense of duty or obligation that one
feels for one's spouse. Some of his examples,
however, may be cases of gradience (see below,
Chapter 2.5.5). And MUST in my example (235) could
almost be alethic. I did not find any clear examples
of dynamic MUST in my corpus.

93. See also the discussion of voice in Chapter 2.4.3,
p 62 ff above.

94. See for example Coates (1980a:212) "... 'I can go' is
equivalent to 'there's nothing to prevent me going'.
Pragmatically, this is usually taken to mean 'I will
go', as there is little point in everyday discourse in
specifying that one is free to do something if one
does not intend to do it. That is, one of the
felicity conditions for uttering sentences of the kind
'X can Y' (where X is animate, Y is an agentive verb)
is the subject's willingness to perform Y. This
association of enabling circumstance and intention is
often spelt out ..."

95. Strictly speaking, of course, it is the proposition
'he catch the bus' that is improbable, because
epistemic modality relates to third and not second
order entities.

96. These two kinds of possibility have different
implications for factivity, see Chapter 4.

97. ie relating to desire. Perkins takes Rescher's
category of boulomaic modality as a subcategory of
dynamic modality (see Note 51 to Chapter 2).

98. 'typical uses', ie to express deontic, dynamic, or
epistemic modality. Chapter 4 will show that dynamic
concepts are less centrally modal than those
classified as epistemic or deontic.

NB4AAE

NOTES TO CHAPTER THREE

1. And makes some assertion about that proposition (see Kiparsky and Kiparsky, 1970:147).

2. Factive sentences and clauses being those which contain a predicate of this sort; factive complements being the kinds of complement which are restricted to occurrence with factive heads - verbal or adjectival; for the definition of 'predicate' as used in this study and terms associated with factivity, see Chapter 3.2.

3. Compare earlier references to SOME/ALL on p 87 and Note 79 to Chapter 2, also discussed by Palmer (1979:26 and 152).

4. Kiparsky and Kiparsky (1970:151) point out that if you want to deny a proposition, you must do it explicitly, ie 'Abe didn't regret that he had forgotten; he had remembered'.

5. See above, p 67 for references to discussion of modality and negation elsewhere in this thesis. NB The equivalences between sentences containing a modal auxiliary and those with nonfactive predicates here taken for granted will be made explicit in Chapter 3.3.

6. And, where it is, the auxiliary is behaving semantically least like a modal - see Note 90 to Chapter 2.

7. (280a) could be appropriately uttered by someone who had just suffered a sharp blow to the head (as opposed to, say, an amateur astronomer who, looking at the night sky, would be more likely to say, "I CAN see the/some stars'). The slight oddity of (280b) is explicable in terms of the unlikelihood of ever needing to deny that one was seeing the first kind of stars.

8. See below, p 139, on Rosenberg's 'Principle of Emotional Reaction'.

9. For discussion of various types of presupposition, see Lyons (1977:596 ff).

10. Note, once again, the role of person (in subject position): 'Are you sure that ...?' is perfectly acceptable, whereas 'You are sure that ...' sounds a little odd (as does (283a)); 'I am sure ...', on the

NB4AAF

other hand, is fine, whereas 'Am I sure that ...?' is distinctly odd (unless I am an actress wondering aloud about the character I am playing, so that 'I' is not really 'me'). The speaker's role is also likely to be significant - compare (139) on p 69 above. The importance of this speaker/subject distinction has already been mentioned (for example, p 90, 99, 102 (Note 94) and 107); it will be further discussed in this section in relation to Rosenberg (1975) and the importance of "pragmatic" factors in analysing the factivity of sentences; and will also be examined in Chapter 4.

11. I am ignoring Kiparsky and Kiparsky's observations on the deep structures associated with factive and nonfactive predicates, concentrating only on their remarks on the surface structures characteristic of each of these types of predicate.

12. <u>Only</u> nonfactive predicates, but not <u>all</u> of them, eg not CHARGE, see Kiparsky and Kiparsky (1970:147).

13. See definitions of the concept of modality in Chapter 2.4.1, particularly the quote from Halliday given on p 39.

14. The logical structure of (326) may be represented by 'For some senators X, X regrets that X voted for the PAN', which contains a variable bound by a quantifier that is located outside the complement structure. Without the quantifier, the phrase 'X voted for the PAN' is not a proposition (Karttunen (1971:56)).

15. Which, of course, Perkins (1980) considers to be 'modal devices'. See above, p 28.

16. More specifically, in discussing the correct way to describe the semantic properties of REGRET and other factives, he offers as "the best proposal" pairs of axioms or meaning postulates - for details (which I have not gone into because I do not make use of these axioms in my study) see Karttunen (1971:58 ff).

17. Note that 'I am anxious it WILL happen' would usually be taken as expressing concern at the possibility of 'it' happening, or even as a wish for it <u>not</u> to happen.

18. Compare quotations from Lyons (1977) and Palmer (1979) on p 43-44 above.

19. Rosenberg considers only presuppositions of truth; see Note 9 to Chapter 3, above.

20. Also quoted in Perkins (1980:18).

21. 'I was angry that [the mail hadn't arrived] but I didn't know then that the maid had picked it up', on the other hand, would be acceptable because my (past) emotional reaction would have been to a state of affairs I believed (erroneously) to be the case.

22. "... factive predicates are those which take factive clauses, where factive clauses are all and only those noun phrases which are not indirect questions but which permit substitution of a corresponding indirect question ('wh-' nominalisation) preserving grammaticality. This syntactic test ... predicts those predicates to be factive which pass the semantic test ..." (Peterson, 1979:326). He acknowledges, however, that even this test fails to include emotive factives taking factive clauses in the object rather than the subject.

23. And therefore relate to different types of modality - see above, p 39 and Chapter 4.

24. I will use the phrase 'immediate actualisation' - see Chapter 3.2.3 for definition, and Chapter 4.

25. The relative nature of the assertion may be prompted by a genuine lack of knowledge, as in 'I suppose that COULD be Cousin Gertrude; I've never met her', or be pragmatically motivated. The speaker may wish for a variety of reasons - politeness, reluctance to commit oneself - "to conceal his interpretation of the potential realisation of the event" (Bouma (1975:325), quoted in Perkins (1980:113)), as in 'Of course I'll come round tonight if I CAN; but I MIGHT have to work late'.

26. Chapter 3.3 will explain these comparisons or parallels.

27. Values derived from Palmer but not provided by him in this format.

28. I take issue with this usage in Chapter 3.2.1, p 154.

29. Strictly speaking, 'implications of occurrence/non-occurrence, truth or falsity' as used in the previous sentence, since you cannot really imply a presupposition of truth; but the 'shorthand' is useful and reasonably transparent in meaning.

30. Only 'generally' because a sentence like 'It WILL happen' is clearly an assertion - admittedly of the speaker's wish/conviction - that 'it FUTURE happen'.

31. Strictly, of course, the predicate is 'REGRET or BE SIGNIFICANT THAT X'.

32. "... things which have been observed to be factive ...", Rosenberg (1975:484).

33. On pp 6, 119 and 127.

34. For once, I quote a predicate in full.

35. After Lyons (1977:809), I do not consider modality or tense (or aspect) to be part of the propositional content of the utterance - where 'propositional content' may be defined as "the proposition expressed by a sentence when it is uttered to make a statement" (Lyons, 1977:736).

NOTES TO CHAPTER FOUR

1. I say 'speaker' because subjective modality (expressing the speaker's commitment and judgement) is far more common in everyday language than objective modality (see Chapter 4.4). It is also possible, of course, for the modality, especially when dynamic, to relate to the subject rather than the speaker. But in each case it is still a particular degree and type of commitment to the truth of (p) or occurrence of (e) that is being expressed.

2. For explanation of this usage, see p 77.

3. The problem of classifying, for example, 'concessive MAY' and 'putative SHOULD' will wait for Chapter 4.3.1.

4. The imperative form 'Do not feed the animals' has absolute status.

5. More clearly expressed, in this instance, by nouns, although this study generally ignores nonauxiliary means of expressing modality.

6. An interesting ambiguity here between the 'concessive' use of MAY - 'may and does remain' - and an expression of epistemic possibility! The 'actual circumstances' do in fact remain obscure, which makes the concessive interpretation more appropriate.

7. But will not examine all in equal detail. For example, I have little to say about pragmatic factors, or about indirect speech acts.

8. Just as it would if it were added to a verb phrase not marked for aspect.

9. This supports my argument that when modals are compatible with a factive interpretation ((397b) takes it for granted that Sarah did arrive late on a number of occasions), they are available to signal other meanings and are often emotive (see Chapter 4.4).

10. In my idiolect, for example, (398d) would be one acceptable answer to 'But why didn't you get on with him?' 'Well he would always be asking silly questions'. It emphasises the repeated nature of the activity - and somehow has an Irish ring to it.

NB4AAF

11. Nor do I agree with Lyons' definition (ibid) of contrafactivity as the product of remoteness and nonfactivity; to my mind, negation (see p 187 ff) and past time reference play a more decisive role in determining contrafactivity.

12. Leech argues that (407) is more optimistic than the real condition 'If it snows tomorrow, the match will have to be cancelled'.

13. I shall not deal with Palmer's comparison with the behaviour of BE ABLE TO.

14. See above, p 154, for criticism of Palmer's use of the term 'imply'.

15. This is not to say that they cannot be of determinate factual status in other contexts as well, viz the dynamic interpretation of 'You could have killed her (thank heavens you didn't)'.

16. 'When I was younger I was always catching flu' is of course perfectly acceptable, but this meaning of CATCH involves personal susceptibility rather than ability.

17. For earlier discussions of negation, see p 67 for references.

18. The same applies to a dynamic modal with past time reference, i.e. with the addition of an interrogative element the utterance loses its factivity
    - When I was younger, I COULD run a mile in 10 minutes
    - COULD you run a mile in 10 minutes (when you were younger)?

    - When we lived in London, we WOULD go out night
    - When you lived in London, WOULD you go out every night?
    The interrogative version of this second example sounds a little odd. More acceptable would be '... did you (used to) go out every night?' which makes it clear that the interrogative is questioning the factual status of the habitual activity.

19. On the problem of whether or not dynamic WON'T/WILL NOT negates the auxiliary or the main verb, see p 100-101

20. For discussion of ONLY, JUST etc, see below pp 192-193.

NB4AAF

21. This use seems to be similar to 'concessive' MAY, ie
'I MAY NOT be older than you, but I'm taller'. Note
that there seems to be an emotive element in both
examples (see below, p 193 and Chapter 4).

22. Seminegatives are not semantically negative but
function syntactically in certain contexts (eg with
SOME/ANY) as negatives.

23. 'Only Johnny MIGHT leave the table before the adults
when we were both children' (with past time reference)
might be considered factive, but is an unusual use.

24. Note how close this is to a 'volitional' use of MUST.
It has often struck me that the modal meaning
'volition', usually classified as dynamic, is in fact
very similar to certain deontic meanings. See also
Note 51 to Chapter 2.

25. See discussion of truth and specific reference, pp 128
and 207.

26. Palmer's most recent work on mood and modality was
published while the present study was being written.
The main aim of Palmer's latest book is to offer a
comparative description and analysis of the
grammatical category of modality as expressed in a
wide range of languages - a typological study; as he
points out (ibid, p 3), the ultimate definition of any
typological category is in terms of meaning. He
concludes (ibid, p 224) that a clear typological
grammatical category of modality is not demonstrable.
I would agree that only "a somewhat fragmented picture
emerges"; this is perhaps due to the extensive range
of grammatical features he includes as "semantically
modal", eg purpose clauses (ibid p 174). But this is
a fascinating comparison of the expression of modality
in an impressive number of different languages.
Palmer also makes many thought-provoking observations
relevant to the present study, as various references I
have made to this work show. Of more direct interest
is his short discussion of 'nonfactuality' and
alternative terminology, examined above on pp 5-6.

27. This sounds close to Palmer's remark (1986:189) that
"Modality seems, then, to be doubly marked in
conditionals: not only are they nonfactual, but in
addition there is the distinction between real and
unreal, indicating the speaker's degree of
commitment." But I consider the nonfactual/unreal
distinction to be part of the same parameter, since
both relate to (the speaker's) degree of commitment.

28. See also discussion in Palmer (1977), (1979:141) and (1986:196-8).

29. Although I note Coates' (1980b:339) criticisms of the lack of statistical accuracy in Palmer (1979).

30. See Perkins (1980:111) "... the nonfactivity of infinitival complements [is] attributable to a more fundamental meaning of TO which could be described as signalling a state or event which is unattainable or unrealised at a point in time which would normally be specified by the tense of the preceding main verb".

31. I said (on p 76 above) that it is not necessary to decide whether root or epistemic modality is basic. But many authors have either tried to do so or have done so by implication. To Halliday (1970a), for example, only epistemic meanings come within the scope of the term 'modality'; root meanings belong to the system of 'modulation'. Lyons (1977:844-5), on the other hand, argues that the root meaning of deontic necessity "serves as the analogical model" for objective epistemic necessity (although he does argue that the other "basic notion" is subjective epistemic possibility). Tregidgo (1982) is strongly in favour of a deontic base. But Newmeyer (1975) (quoted in Perkins, 1980:45) suggests that root modals are epistemic modals with an added causative element. Many other authors, of course, like Leech and Coates (1980:86) recognise that, although "the epistemic-root contrast is discrete" yet there is a "common semantic element"; Leech and Coates are discussing MAY and therefore call this element 'possibility'. At a rather higher level of abstraction or of generalisation, I argue that the common semantic element to all modal auxiliaries is nonfactivity.

32. I use this term to refer to sentences with explicit conditions (as in examples (462b) and and (619)) and implied conditions (as in examples (32) and (911)). Another way of expressing this would be to refer, like Coates (1983:74), to the 'HAVE + EN' construction; but I prefer the term 'unreal past conditional' which characterises the context semantically as well as grammatically.

33. Reading Palmer (1986) after I wrote this, I was very struck by the similarity of these results from a small corpus of the English modal auxiliaries and the conclusions drawn by Palmer after studying the expression of modality across languages:

NB4AAF

"Two obvious questions are which are the
categories most likely to be interrelated with
modality and whether there are principles that
explain the interrelationship. It is quite clear
that, in fact, the closest and most frequent
relationship is with <u>tense</u>, but that less
frequently <u>negation</u> and <u>person</u> are involved. It
might be thought that there would be a purely
formal explanation, ie that modality is
associated with the categories that are usually
marked in the same way, by verbal inflection or
auxiliary verbs. But this would not explain why
there is less of a relationship with <u>aspect</u> and
<u>voice</u>. Nor would it explain why person is
involved but not gender or number, when all are
essentially features of noun phrases and only
marked concordially on the verb. The explanation
must be semantic - that tense is, in some
respects, modal, while negation relates to
degrees of speaker belief and confidence and
person is involved in speaker-hearer relations."
(1986:209, my underlining)

34. Similarly the distinction between objective epistemic
    modality and alethic modality (see above, p 47) is
    difficult to draw. Neither distinction is formally
    marked in the set of modal auxiliaries.

35. Lyons (1977:745) uses the term 'mand' "to refer to
    commands, demands, requests, entreaties, etc.".

NOTES TO CHAPTER FIVE

1. In other words I do not agree with Palmer (1986:4)
   that "the real problem with [defining] modality ... is
   ... that there is no clear basic feature". He is
   discussing modality as expressed in language generally
   but to my mind the generalisation does not apply to
   English at least.

2. Of the alternatives offered on p 30, then, my view is
   that 2.ii. most closely describes the semantic range
   of the set of English modal auxiliaries. Compare
   Palmer's more general comment that "it is often fairly
   simple to establish that a grammatical system is modal
   because it is largely concerned with modality in the
   general sense ... Within that system, however, there
   may be forms whose meanings seem to be only marginally
   modal or hardly modal at all" (1986:7, my
   underlining).

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