BIBLIOGRAFÍA

a. RECENSIONES Y RESEÑAS

THE ENGLISH MODALS RECONSIDERED*

The semantic analysis of the English modal auxiliaries (*will, would, shall, should, can, could, may, might, must, ought)* and their distribution in everyday speech, has in recent years attracted a good deal of attention, both from linguists and from logicians. A major problem among most linguists has been that of reconciling several dimensions:

a) a semantic classification of the modal auxiliaries under such notions as volition, necessity, obligation, permission, various degrees —and two different kinds— of possibility, etc... according to a comprehensive theory;

b) the fact that, even with such a classification, indeterminacy arises;

c) the relationship of the modal auxiliaries proper to other 'quasi-modals' such as *have to*, *be able to*, *be bound to*, and also to other carriers of modal expression such as adverbs and adjectives;

d) the prosodic features displayed by modal verbs;

e) the pragmatic uses of the modal verbs; for instance, 'May I ask what you are doing here?' is not a request for permission, as is usually signalled by May + interrogative clause, but is, rather, what Fraser (1975) calls a 'hedged performative'; in the example quoted, the speaker avoids making a categorical command;

f) the syntactic occurences of the modal verbs;

g) a complete coverage of all meanings of each modal at the time of writing;

h) a realistic account of the distribution of the modal auxiliaries according to stylistic parameters, i.e. the way the 'logical' notions are 'remoulded by the psychological and situational pressures between speakers, involving factors such as tact, irony and condescension.' (Leech, 1971: 67).

In fact, early accounts of the modals often fail to make explicit the source or type of language which furnishes their examples. Even when they do (as in the case of Joos, 1964), there has tended to be an excessive preference towards the formal varieties, despite the lip-service paid to the 'primacy' of the spoken language in all theoretical works on linguistics.

^{*} Jennifer Coates, *The Semantics of the Modal Auxiliaries*, London and Canberra, 1983, 259 pages.

The result has been a falsified picture of the distribuion of the modals, with disproportionate attention paid to certain uses which are almost certainly recessive (e.g. may in permission, *shall* in obligation), and insufficient attention paid to emerging uses such as the meanings of *could* and *should* as modals in their own right and not simply past forms of *can* and *shall*. In particular, many writers on the subject, in their desire to set up a neat and tidy classification, have either ignored the factors specified under b) to h), or, if they have acknowledged these factors, are aghast at the 'messiness' and intractability of the data.

The author of the book under review aims to avoid these pitfalls by basing her study on a 545.000 word sample, taken from 109 texts drawn from two surveys: spoken material and unpublished written material was taken from the Survey of English Usage (which was also used by Palmer for his 1979 study) and which at the time Coates was writing consisted of 725.000 words; printed written material was taken from the 1.000.000 word Lancaster corpus (now superceded by the Lancaster-Oslo/Bergen corpus). Between these two Surveys, Coates handles material covering a wide range of styles and registers: spoken (private conversation); spoken-public (e.g. B.B.C. discussions); written to be spoken (e.g. B.B.C. news, plays); written manuscripts (letters, diaries); written printed (including learned articles, memoirs, novels).

But there are inherent risks in using a corpus, for no corpus, however comprehensive, can guarantee full coverage, much less unquestionable representativity of individual realisations. Coates' answer to this is to supplement the material from the Surveys files with informant tests, particularly in problematic areas and in particular cases of indeterminancy. The informant tests also served to study the native speaker's intuitions regarding similarities and dissimilarities in the meaning of the modals.

Let us return to point a): the semantic classification of the modal auxiliaries. Approaches to this can be divided into two groups: the monosemantic and the polysemantic. Those who favour the monosemantic approach, represented by Joos (1964) and Erhman (1966), postulate a unitary meaning for each modal. Erhman, for instance, analyses according to three terms: a) the 'basic' meaning; b) the use, conditioned by the context of the sentence; and c) what she calls 'overtones', that is, subsidiary meanings. She fails, however, to carry out this scheme systematically. *May* is not presented as having a basic unitary meaning, but as a continuum between two dimensions. With *should*, not surprisingly, she fails to identify a basic meaning at all. Erhman's study marked a landmark in its day as being the first corpus-based account of the modals. Unfortunately, less than a third of the Brown corpus was used, and no references are given as to style or context. It was, however, the most informative treatment of modals before Leech's (1969/1971) treatment.

The desire to reduce the 'messiness' of the modals to neat and tidy categories has not ceased to attract linguists, and two recent studies have appeared based on the monosemantic criterion. Haegeman (1983) restricts her analysis to the uses of *Will* in present-day British English and suggests a unified basic meaning of this modal auxiliary described in terms of the three components: non-factuality, actuality and event-time orientation.

By contrast, Perkins' (1983) study is more ambitious, taking as its scope not even the relatively well defined modal auxiliary system, but modal expressions in general, both lexical (such as nouns, adjectives and adverbs) and grammatical (such as tense). His book also includes chapters on 'Modal Expressions and Politeness' and 'Modal Expressions in Child Language'. Following up the initiative of Wertheimer (1972), who takes the modals to be 'univocal' and describes their apparently various meanings "in terms, not of different senses, but of their employment in connection with various more os less independent systems of laws" (Wertheimer, 1972: 49); and the work of Miller (1978), who summarises these systems

of laws and the various phenomena they interact with, Perkins applies these concepts to the analysis and semantic characterisation of each modal. Obviously, a global meaning of a modal auxiliary can only be attained at a level of considerable abstraction. The definition of CAN, for instance, that will cover all possible uses of this auxiliary, is that, given a set of circumstances and a system of laws (natural, physical or social as the case may be), 'the circumstance is not such as to preclude the event occurring (Perkins, 1983: 34), which is not all that different from Erhman's notion of 'nihil obstat'.

Leech (1969/1971) is an exponent of the polysemantic approach. This implies a classification into discreet categories and undoubtedly provides a greater coverage than does the unitary approach, the difficulty being that an assignation into discreet categories leaves no room for overlap. Leech is aware of this dilemma in, for instance, the area of modal negat^a ic A sentence such as 'She won't listen to what I say' can, according to Leech, be assigned two readings: a) She is not willing to listen... (by negation of the modal predication = will not + listen); b) She insists on not listening... (by negation of the main predication = will + not listen). In point of fact, the distinction is not important, for the practical result is the same. Curiously, however, while observing that "the difficulty of assigning semantic specifications to these forms is due to an unusual coincidence of polysemy and synonimy" (Leech, 1969: 232), Leech fails to point out a third reading of the above example, viz. that of predication, which we may paraphrase as 'I predict that on a future occasion, she is not going to listen to what I say'. The convergence of these three readings represents in fact an important case of ambiguity, produced by the polysemy of will in the meanings of volition and prediction. Other mergers and ambiguities, such as those manifested by should, are not dealt with by Leech. This author's categorial treatment, however, such as the distinction between 'theoretical' and 'factual' possibility (corresponding to 'non-epistemic' and 'epistemic' possibility respectively, exemplified in 'The gates can be locked' as opposed to 'The gates may be locked'), and his 'rule of inversion' by which he demonstrates the inverse relationship between the members of the three axes:

Permission	-	Obligation
Possibility	-	Logical necessity
Willingness	_	Insistence

represents an advance on previous analyses.

Conceptual and terminological refinement continued to make progress in treatment of the modals, and in Palmer (1979) we find a more precise terminology taken over from Von Wright (1951) and other logical philosophers. Palmer makes an initial distinction between epistemic modality and the rest, dividing the latter into deontic modality (obligation and permission) and dynamic modality, which includes the *can* of ability and the *will* of willingness. While adopting therefore a categorical approach, Palmer comments specifically on the messiness and untidiness of the overall picture of the modals, and in his concluding chapter devotes some space to the discussion of indeterminancy.

Coates (1983) claims that both categorical and non-categorical approaches are relevant to a description of the modals, and that an adequate account of them must achieve a synthesis between these two approaches, thus reconciling the categorical approach, which implicity discounts indeterminacy, and the non-categorical approach, which assumes indeterminacy while rejecting the possibility of defining concrete categories.

Coates proposes to do this by, first, recognising that a discrete distinction exists between epistemic and non-epistemic modality. The analysis of her corpus data, she claims, leads her

to believe that this distinction, about which Palmer (1979: 35) is very cautious, is in fact a discrete one. Secondly, she proposes three models which will enable her to account for the indeterminacy which appears to occur within each main category, epistemic and non-epistemic, and, finally, which will acount for the occasional indeterminacy which arises between the two main categories.

There seems in fact to be a certain agreement at the present time that the main semantic distinction expressed by the English modal auxiliaries is that between epistemic and non-epistemic modality. Epistemic modality, as in 'I must have lost my key' or 'He may win the election', makes judgements, assesses probabilities and is almost entirely subjective. In Palmer's words, "it is concerned with propositions rather than events" (Palmer 1979: 21) and expresses the speaker's confidence or lack of it in assessing probabilities. It is according to Halliday (Halliday, 1970: 198) a form of participation by the speaker in the speech event, for the speaker takes up a position with reference to the truth of the proposition he formulates. In English it is the modal auxiliaries which grammaticize this attitudinal comment, which can also be expressed, although perhaps less suggestively, by lexical means: adjectives such as possible, probable, likely, doubtful; adverbs such as possibly, frankly; nouns such as the likelihood, chance, probability, etc.; semi-auxiliaries such as bound to. They all form part of what Halliday calls the interpersonal function of language, that is, language as the expression of a role. Through the acquisition and control of this interpersonal function, the child learns to participate as an individual and to express his own personal uniqueness. The acquisition and control of the expression of epistemic modality, and in particular of the grammatical realisations which are the modal auxiliaries, represents then in Halliday's view a small but vital part of the semantic resources of personal participation. Epistemic modality is, then, for Halliday, the only true modality.

Non-epistemic modality, as in 'You must/should/ought to be careful', affects not the proposition but what Palmer calls the 'event' and Halliday the 'process'. These are not the speaker's comments on the process but form part of the content of the clause itself, thus belonging to what Halliday calls the ideational function of language, which serves for the expression of the speaker's experience of the real world and in fact gives structure to this experience. These meanings of obligation, permission, ability and necessity Halliday calls modulations as distinct from modality. The two systems converge when realised by grammatical exponents, i.e. by the modal auxiliaries. In other words, the meanings of both systems, modality and modulation are expressed grammatically by the modal auxiliaries and this fact accounts for the occurrence of blends and ambiguities as in the case quoted above of *will*, or as in the following, of *must:* 'John must travel round the world every month', whose epistemic interpretation is 'It is to be inferred that John travels...', while the non-epistemic interpretation is 'John is obliged to travel...' Of course, when realised by syntactic paraphrase or by lexical items, ambiguity does not occur.

Worth stressing here is the distinction between epistemic and non-epistemic possibility, already identified by Leech (1969/1971) but which in one recent study on the subject (Watts, 1984) has been hopelessly confused. Epistemic possibility is expressed by *may*, *might* and —recently— by *could (not* by *can)*, is usually stressed and is paraphrasable by 'It is possible that...' as in 'The banks may be closed by the time we get there. (= it is possible that the banks will be closed). Non-epistemic possibility is typiccally expressed by *can*, is unstressed and is paraphrasable by 'It is possible (for) to...' as in 'The garage can be locked = It is possible to lock the garage'. Coates quite rightly distinguishes the two, while indicating the merger that sometimes occurs, particularly in formal, often academic, written contexts in which *may* is a favoured exponent of non-epistemic possibility. Thus in the example '... and the methods of

processing may influence its nutritional quality' either paraphrase (It is possible that... or It is possible for... to) fits. Other meanings of *can*, forced by Watts into the fashionable epistemic fold, are clearly aspectual and are identified as such by Coates, following Leech: a) *can* as a replacement for an unacceptable progressive with a stative verb as in 'I can see you'; and b) *can* expressing a combination of iterative aspect and generic possibility as in 'Lightning can be dangerous'.

In search of a model which would combine the categorical with the non-categorical approaches, Coates initially worked with a gradience model based on Quirk's (1965) pioneering study on syntactic gradients. As already reported in Leech and Coates (1980), "gradience (Bolinger, 1961) exists between two categories A and B when there are intermediate cases which cannot clearly be assigned to A or B".

At extreme A there are examples which have the properties a, b, c; at extreme B there are examples which have the properties d, e, f, while in the middle there will be indeterminate examples having the properties c, d, e. Using Lyons' (1977: 828-9) version of a 'gradient of restriction', Leech and Coates (1980:82) had already plotted the two meanings of *can* (possibility and permission) which are related in this way. At the permission end, the man-made end, the meaning is 'Nothing prevents p from taking place in a specific world of man-made freedoms and obligations' and can be paraphrased by 'allow' or 'permit'. At the possibility end, the meaning is 'Everything goes, except what is contrary to so-called natural laws' and a paraphrase with 'possible' is more acceptable. In between, there is no non-arbitrary way to draw the line between 'possibility' and 'permission' as Leech and Coates' illustrations show: (op. cit. 83).

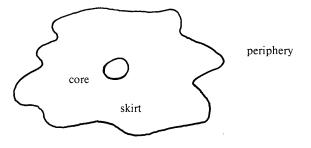
You can't do that - I forbid it (most restricted)
You can't do that - it's against the rules
You can't do that - it would be breaking the law
You can't do that - everyone would think you were mad (i.e. a breach of conversations of acceptable behaviour)
You can't do that - it wouldn't be reasonable
You can't do that - it wouldn't be right
You can't do that - it's contrary to the law of gravity

Coates needed to supplement the gradient model for the description of the modals, however, on finding that most examples lay clustered about the middle of the continuum, and that in some cases only one extreme, not two, was clearly defined. Not only that, but a gradient model failed to account for the other two types of indeterminacy already mentioned: ambiguity, in which two interpretations are in an incompatible relationship, so that the hearer has to choose one in order to interpret the utterance; and merger, by which the two interpretations are mutually compatible in one single reading of the utterance. An example of ambiguity already quoted is 'John must travel round the world every month'; another is that between *can* (permission) and *can* (Possibility) as in 'You can't see him'; another is the four-way ambiguity of might + have + en as in he might have left'. *Might have left* can mean not only 'it's possible that he has left', or 'it's would have been possible for him to leave'. An

after verbs or adjectives or nouns of recommending, suggesting, advising, etc..., and the meaning of weak, or moral, or suggested obligation (as opposed to the strong obligation of must). Merger between these two meanings can occur as in the example 'Churchill recommended that the whole operation should be abandoned'.

In order to account for these findings, Coates then turned to the 'fuzzy sets' theory of Zadeh (Zadeh, 1965, 1970, 1971, 1972), who is, according to Coates, the most notable exponent of the present-day awareness that imprecision of our knowledge of the world is in fact inherent, and that imprecision should therefore be built into any theory, a view that is confirmed by Labov (1973) in his demonstration that some cups are more cuplike than others, and by Lakoff (1972) who showed that members of the set 'bird' can be graded as more or less central. In the field of botany, a similar imprecision between trees and bushes has been observed.

Zadeh's 'fuzzy set theory' represents a modification of the set theory which is the basis of modern mathematics. Whereas standard set theory supposes all-or-none membership of a set, i.e. that membership is a precise concept, Zadeh postulates a graded degree of membership, which he calls a 'fuzzy set'. Words like *tall, clever, red* do not belong to classical sets with a binary membership function (one cannot draw the line between being tall and not being tall), but to fuzzy sets with a more-or-less, that is, graded membership, in which the transition between membership and non-membership is gradual rather than abrupt. Translated to the semantics of the modal auxiliaries, Coates sees both epistemic and non-epistemic meanings as fuzzy. Using as her third model the 'cluster analysis' of Everitt (1974), for each 'cluster' of meanings she establishes a set consisting of examples at the core (with the highest value of 1 or nearly 1), to examples at the periphery (with a low value, o, 1 or 0,2). In between the core and the periphery there are intermediate examples, in the area she terms the 'skirt':

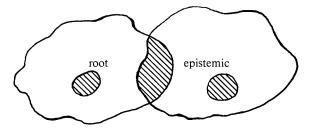


Of great interest are the characteristics of each modal revealed by analysis of the data in accordance with the areas of the fuzzy set. The core usually represents what Coates calls 'the cultural stereotype', that is, what the average speaker takes to be the basic meaning of any particular modal (and invariably reflected in grammars and manuals of English for foreign students), as for instance, 'strong obligation'as the basic meaning of *must*, or 'futurity' as that of *shall*, or 'permission' as that of *may*. The core meanings are those first acquired by children, as is corroborated by Wells (1979) and Perkins (1981) for the system of southern British English; Scots —and no doubt other varieties of English— vary slightly. Statistically, however, according to Coates' use of her surveys, these are not the most frequently occurring meanings in adult usage nowadays. *May*, for instance, is most often epistemic, *shall* either 'intention' or 'addressee's volition'. The majority of examples are found in the skirt or the periphery, the periphery examples in particular often revealing an emergent category such as epistemic *could*. The fact that core examples of non-epistemic modality are those first

SECCIÓN BIBLIOGRÁFICA

acquired by children is not altogether surprising if we bear in mind that the relationships of home and school are in early years quite rule bound. It is only as the child grows up that he acquires the ability to assess situations, make hypotheses and attenuate his demands by politer variants —namely, he acquires the epistemic, hypothetical and pragmatic uses respectively of the modals.

A further advantage of the 'fuzzy set' model is that ambiguity and merger can be easily mapped, an illustration of the latter being diagrammed as follows:



Fuzzy set diagram of SHOULD and OUGHT

Once having recognised the polysemic nature of the modals and having adopted a combination of models which will account for the several meanings most modals exhibit, the problem remains of whether to structure the analyses according to meaning (as with Hermeren, 1978, Palmer, 1979) or according to form (Leech, 1971). As Coates points out, the former has the disavantage of dispersing analysis of a single modal over many chapters. May, for instance, would appear in a chapter on 'epistemic possibility' and in another on 'permission' and would have to appear somewhere else as a quasi-subjunctive, and yet somewhere else for the rare 'benediction' meaning ('May all your Christmases be white'). Analysis according to form, on the other hand, grouping all the meanings of, say, can in one chapter, of *must* in another etc. obscures the fact that the meanings of two different modals may be more similar than two different meanings of the same modal. Non-epistemic should, for example (as in'You should stop smoking') has more in common with non-epistemic must (as in'You must stop smoking') than with the hypothetical meaning of *should* in subordinate clauses (as in 'Should you change your mind let me know). Quirk et al. (1972: 3.44-48) attempt a compromise; they adopt the latter approach, listing in diagram form the meanings of each modal in turn, but add footnotes and contrastive examples of other modals expressing either similar or different meanings. Discussion and analysis of modal meaning in the GCE is, however, minimal, and one feels that the importance of modal meaning and the peculiar character of the English modal auxiliaries deserved more than the eight pages accorded to them, out of a total of 1120 pages in the GCE. Of course, not much attention was being paid to the communicative functions of grammatical functions in linguistic performance before the 1970's when this grammar was in gestation. The same author's 1985 grammar gives a somewhat fuller treatment.

Coates' solution is also a compromise. Intuiting that the modals can be grouped according to their underlying semantic structure, she identifies, by means of informant tests using the card-sorting device devised by Miller (1971), four modal clusters which are semantically distinct: a) Obligation and necessity; b) Intention/Prediction/Futurity; c) Possibility/Ability/Permission; d) Epistemic possibility. These divisions represent the organisation of four of the book's chapters. Within each chapter, the connections between the modals are discussed, while at the same time each modal is discussed in its entirety in the

chapter in which its primary meaning occurs. This works well except with *should* and *could*. Coates is forced to add a fifth grouping which she calls 'the hypothetical modals' in order to account for the important hypothetical meaning of *should*, *should* being one of the most polysemous modals at the present day: whereas the emerging epistemic meaning of *could* places it inevitably in two different chapters. In each chapter, relevant semi-modals and semi-auxiliaries are discussed, as well as the adverbs which most typically accompany verbal expressions of modality in what Lyons (1977: 807) calls 'harmonic combinations' as, for instance 'may possibly', 'might well'. In each chapter, too, detailed description of each modal is followed by discussion of other relevant issues, such as prosodic features and stylistic variation, finishing with a summary and comparison of the realisations of modality involved.

Thus chapter 4 deals with 'The modals of obligation and necessity', namely *must, need, should, ought* and in addition *have to* and *have got to.* Non-epistemic *must* is treated first, a fuzzy set diagram illustrating its gradation from strong obligation which is also subjective, performative, with agentive verb and animate subject having authority over the hearer (as in 'You must play that ten times over') to the periphery of weak obligation, which is non-subjective, non-performative, often with non-agentive verb and inanimate, non-authoritarian subject, expressing necessity rather than obligation (as in 'Clay pots must have some protection from severe weather'). Coates here successfully demonstrates that the meanings of root *must* are not discrete but extend on a cline from strong to weak obligation, and that these gradations can be plotted against syntactic-semantic parameters.

She is equally precise in her analysis of epistemic *must*, through its cooccurrence with such syntactic features as a) progressive aspect (It must be raining); b) existential subject and c) stative verb (both exemplified in 'There must be a lot to do'); d) inanimate subject (This must be one of the best cars). These four syntactic features are associated with all epistemic, as opposed to non-epistemic, meaning, but particularly clearly with must, which has no hypothetical meanings to clutter the binary opposition between epistemic and non-epistemic meaning. A fifth, or rather Coates's first feature, is the most criterial: the have + encombination, (as in 'he must have left') associates exclusively with epistemic meaning. It is only to be lamented that Coates follows so many British linguists (not Lyons) in labelling this form 'Perfective aspect' for, firstly, have + en with most modals is not aspectual but simply a device to indicate past time occurrence of the event, the modal predication remaining the same. Thus 'he must have left' = 'I confidently infer that he left/has left/had left? Secondly, what is realised by the *have* + en form in English is the idea of 'current relevance', inapropriately called the Perfect, which is not the same as perfectivity at all, for the fact is that English does not establish the Perfective/Imperfective distinction, as many other languages do, by purely grammatical devices.

With regard to the status of *have to* and *have got to*, Coates consolidates Palmer's cautious insight that "they may differ in meaning" (Palmer, 1979: 82). Again by establishing syntactic-semantic criteria, Coates makes a convincing case for considering *have got to* as a new emerging modal auxiliary expressing a dynamic aspect ('You've got to stick it out for another few minutes'), whereas *have to* is a semiauxiliary expressing habitual aspect/occurrences ('I have to get up at seven every day'). Coates' data confirm that British English continues to be fairly impervious to the American usage of both *have to* and *have got to* with epistemic meaning ('It's gotta be true, It had to be the same girl'), and the few cases which occur she assigns to 'the teenage subculture'. However, as Samuels (1972) has made us aware, it is the fringe groups like these that provide the raw material for standard usage in later decades.

In subsequent chapters Coates' treatment of the remaining modals is similarly enlightening and thorough, building partly on previous studies but introducing new insights both as to particular uses of certain modals and also to general issues which affect several of them. On the question of epistemic *could*, for instance, Coates is realistic in distinguishing this quite separate meaning of *could* from its other uses (as in 'It could snow tonight = It is possible that it will snow'), as against Palmer, who argues rather unconvincingly against its existence. One would imagine that there is nowadays no doubt as to its existence, at least in certain registers much given to prediction, such as commentaries on international affairs, the weather and sport. As Coates points out, the interesting fact about epistemic *could* is not that it exists, but *why* it exists. English is already well provided with modals expressing epistemic possibility, namely *may* and *might*. All three may occur contrastively in the same sentence, as the following newspaper quotation (not from Coates' material) illustrates:

The provision *might* be deleted altogether; it *may* remain as it stands; or it *could* emerge considerably strengthened and broadened.

Observer, 19.1.75

Coates considers *may* to be neutral, indicated by its admitting the combination 'may or may not', while *might* is assigned to the expression of a higher level of confidence, *could* to a lower. Her conclussion that *might* is becoming the main exponent of epistemic possibility in everyday spoken English is innovative and probably correct. Less convincing, however, is her view that *could*'s main raison d'etre is to fill the gap left by *might* as a low-level exponent. However attractive this explanation may be from a functional point of view, it is not supported by any syntactic considerations, for as far as I can see, both *might* and *could* admit the same harmonic combinations 'well', 'easily', and 'just', while *could* does not admit 'could or could not' and *might* does ('might or might not'). My personal feeling would be to scale these modals as follows: *could* the highest, indicating the greatest confidence in the truth of the predication; *might* in the middle, reserved, neutral; and finally *may*, expressing the least confidence.

Among general issues affecting all or several of the modals, the most innovative is that of factivity. Factivity (Kiparsky & Kiparsky, 1970, 1971) refers to the speaker's commitment to the truth of the proposition expressed in the utterance. The non-factivity of modals —they commit the speaker to neither the truth nor the falsity of the proposition in most cases— is linked to their frequent reference to the future. Since the future is unknown, the speaker cannot assert either the truth of the falsity of the proposition in such an utterance as 'It may rain tomorrow'. Related to non-factivity is Fraser's (1975) concept of 'hedging' or 'hedged performatives' referred to above, by which the speaker avoids such commitment. Typical 'hedges' are 'I wouldn't know' or the 'academic hedge' as in 'That would apply to Swift'. Clearly factive is the aspectual meaning of *can* as in 'Welshmen can be tall'. *Might* is contrafactive in its meaning of 'reproach for something not done' as in 'You might give me a cigarette' or 'You might have waited', and the modals *should/ought* + haven + en are always contrafactive — the speaker is committed to the falsity of the proposition as in 'The key should have been left for us?

Coates makes frequent reference to pragmatic considerations such as the covert imperative in 'Can you pass the salt?' or the use of *will* or *going to* as a directive as in 'Nobody's going to shove me around'. She does not attempt to explain these uses, however, by means of a coherent pragmatic theory.

Her 'summary of the main findings', namely the patterns of negation, and of hypothetical and past time markings allow her to posit with confidence the 'Principle of the Inviolability of Epistemic Modality' and supports the recognition of the epistemic category as discrete. Her summing-up of the characteristics of each category and of the prosodic features in modal meaning brings to a satisfying conclusion a book which is admirable in its concept, method and coverage, and which is likely to remain an authoritative work on modal meaning for a long time.

References

Bolinger, D. (1961). Generality, Gradience and the All-or-None. The Hague: Mouton.

- Erhmann, M. (1966). The Meanings of the Modals in Present-day American English, The Hague: Mouton.
- Everitt, B. (1974). Cluster Analysis, London: Heinemann Educational Books.
- Haegemann, L. (1983). The Semantics of WILL in Present-day British English: a unified account. Brussels: AWLsK.
- Halliday, M.A.K. (1970). 'Functional diversity in language as seen from a consideration of modality and mood in English', *Foundations of Language 4*, 225-42.
- Hermerén, L. (1978). On Modality in English: a study of the semantics of the modals, Lund: CWK Gleerup.
- Joos, M. (1964) *The English Verb: Form and Meaning*, Madison and Milwakee: University of Wisconsin Press.
- Kiparsky & Kiparsky, C. (1970). 'Fact' in Bierwisch, M. & Heidolph, K. Progress in Linguistics, The Hague: Mouton.
- Labov, W. (1971). 'The boundaries of words and their meanings' in Bailey, C-J. & Shuy, R. (eds.) New Ways of Analyzing Variation in English, Washington: Georgetown University Press.
- Lakoff, G. (1972). 'Hedges: a study in meaning criteria and the logic of fuzzy concepts', Chicago Linguistic Society Papers, 8.
- Leech, G. (1969). Towards a Semantic Description of English, London: Longman.
- Leech, G. (1971). Meaning and the English Verb, London: Longman.
- Leech, G. & Coates, J. (1980). Greenbaum, S. et al. (eds.) Studies in English Linguistics, London: Longman.
- Lyons, J. (1977). Semantics, Cambridge: University Press.
- Miller, G.A. (1971). 'Empirical methods in the study of semantics' in Steinberg, D.D. & Jacobovits, L.A. (eds.). Semantics, Cambridge: University Press.
- Miller, G.A. (1978). 'Semantic relations among words' in Halle, M., Bresnan, J. & Miller, G.A. (eds.) Linguistic Theory and Psychological Reality, Cambridge, Mass.: MIT Press.
- Palmer, F.R. (1979). Modality and the English Modals, London: Longman.
- Quirk, R. (1965). 'Descriptive statement and serial relationship' Language 41, 205-217.
- Quirk, R., Greenbaum, S., Leech, G. & Svartvik, J. (1972). A Grammar of Contemporary English, London: Longman.
- Quirk, R., Greenbaum, S., Leech, G. & Svartvik, J. (1985). A Comprehensive Grammar of the English Language, London: Longman.
- Samuels, M.L. (1972) Linguistic Evolution, with special reference to English, Cambridge: University Press.
- von Wright, G.H. (1951). An Essay in Modal Logic, Amsterdam: North Holland.
- Wertheimer, R. (1972). *The Significance of Sense: Meaning, Modality and Morality*, Ithaca: Cornell University Press.
- Zadeh, L.A. (1965). 'Fuzzy sets' Information and Control 8, 338-53.
- Zadeh, L.A. (1970). 'Fuzzy languages and their relation to human and machine intelligence' in Proceedings of the International Conference on Man and Computer, Bordeaux, 130-165.