# TESTING THE MEANINGS OF MODALS

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Modal meaning has for a long time been an apple of discord among philosophers, semanticists and grammarians.

In a dissertation that I am working on I intend to describe the meanings of the nine central modal auxiliaries in contemporary American English, i.e. *shall, should, will, would, can, could, may, might* and *must*. As a means of distinguishing the various meanings of these modals I am going to use paraphrases. The paraphrases of *can* in the following sentence would be an example of the type of paraphrase I am going to use: "Even expert drivers can make mistakes"="It is possible for even expert drivers to make mistakes".

For material I am using parts of the Brown corpus.[1] In order to have various styles represented, I have chosen newspaper texts (sports, cultural, letters to the editor), religious texts and fiction.

With a view to learning more about the modals and the paraphrases with which they may correlate in various contexts I constructed a test with twenty sentences containing modals, all taken from the Brown corpus. Only twenty sentences were chosen so as to avoid informant fatigue, and such examples of modals were selected as were thought either to be difficult to paraphrase or on whose paraphrases it would be interesting to have informant reactions. I shall here give a brief description of the design of the test rather than of its results.

Below each sentence in the test (see example further down) I suggested four paraphrases (a—d) which were to be graded according to a three-point scale, "acceptable", "doubtful" or "wrong". In case the subject found more than one of these paraphrases acceptable, he (or she) was asked to rank the

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[1] See Kučera, H. and W. N. Francis. (1967).

paraphrases in acceptability. For instance, if paraphrase *b* was preferred to *c* and *c* to *a*, the column under "Rank" would look like this:

<div align="center">

Rank

*a* ... 3
*b* ... 1
*c* ... 2

</div>

If the subject found two or more paraphrases equally acceptable, these paraphrases were to be assigned the same number. Since it might happen that, in certain cases, none of the paraphrases provided would be found acceptable, a space was left for the subject to make up his own preferred paraphrase(s). The paraphrase(s) added by the subject was (were) also to be evaluated together with and in the same way as the other four paraphrases. On the right hand side of the column called *Rank*, space was provided for any comments that the subject would like to make, e.g. on the degree of naturalness of a paraphrase (although it might be acceptable as regards sameness of meaning) or whether there were any stylistic differences between the paraphrase and the original sentence.

From the description given above, it will be clear that this test is a blend of various types of test. Thus there is an element of the forced-choice selection test since subjects have to choose primarily between four given paraphrases of one modal. There is also an element of the operation test since subjects are asked to construct paraphrases of their own in case the paraphrases provided are found to be unacceptable. The preference test is represented by the possibility of grading the paraphrases according to a three-point scale, "acceptable", "doubtful" or "wrong" (rating) and by the possibility of evaluating the acceptable paraphrases in relation to each other by assigning a number to them, 1, 2, 3, etc. (ranking).[2]

In order to provide a clue to the wider context in which the modal occurred, the subject-matter (sports, culture, letters to the editor, religion and fiction) of the text from which the sentences were taken was stated at the top of each page of the test. Each page contained two test-sentences, each with four suggested paraphrases, space to make up new paraphrases and space for comments.

By arranging the modals according to the subject-matter of the text in which they occurred rather than according to type of modal, it also became possible in most cases to prevent the meaning of a modal in one sentence from influencing the meaning of the same type of modal in the other sentence on the same page.

[2] For these terms see e.g. Greenbaum, S. and R. Quirk (1970).

On the last page of the test the subject was asked to state his or her name, address, telephone number, occupation, age and in what country he (or she) had spent the first fifteen years of his (her) life.

The test-copies were sent out by post to a number of native speakers of English. A pilot test included ten subjects, representing: the United States (5), England (2), Scotland (1), Australia (1) and New Zealand (1). Their average age is 26.4 years, varying from 15 to 41. Four of the subjects are teachers and the rest students, most of them at university level. Six are female and four male.

As an illustration of the test-sentences, I reproduce below a sentence from the sports page of a newspaper. To save space I present the test results for this sentence in the space provided for the comments of the subjects.

Sentence:

Both are 6 feet tall and weigh between 195 and 200 pounds, .... With their huge backs and overdeveloped shoulders, both *must* have their clothes made to order.

| 0910 A39 1016 | 1 | 2 | 3 | 4 | D | W |
|---|---|---|---|---|---|---|
| Paraphrases: | | | | | | |
| (a) .., both are certain to have their clothes made to order. | | 1 NZ 1 S | | | 2 US 1 E | 3 US 1 A 1 E |
| (b) .., it is certain that both have their clothes made to order. | 1 S | 1 US | 1 NZ | | 1 US 1 E | 3 US 1 A 1 E |
| (c) .., both are compelled to have their clothes made to order. | 3 US 1 NZ | 2 US 1 A 1 E | | | 1 S 1 E | |
| (d) .., it is compulsory for both to have their clothes made to order. | 1 US | | 1 US | 1 US | | 2 US 2 E 1 A 1 NZ 1 S |
| A. it is necessary for both to have ........................................ | 2 E 1 US | | | | | |
| B. both have to have ........................................ | 2 US 1 A | | | | | |
| C. both are forced (obliged) to have ........................................ | 1 S | | 1 US | | | |
| D. both have no other alternative than ........................................ | 1 US | | | | | |
| E. both need to have ........................................ | | 1 E | | | | |

For that purpose I have used a grid with columns for the paraphrases (horizontal) as well as for evaluation (vertical). The code number below the test-sentence is the location marker to the Brown corpus. The numerals 1 to 4 indicate the ranking made by the subject, D stands for "doubtful" and W for "wrong"; A=Australia, E=England, NZ=New Zealand, S=Scotland and US=United States. Thus 1 NZ at the top of column 2 denotes that one subject from New Zealand graded paraphrase *a* second on an acceptability scale ranging from 1 to 4.

The suggested paraphrases (a — d) plus the possibility for the subject of supplying two further paraphrases give a maximum of six rankings. In general, however, most subjects have been content with grading the four suggested paraphrases. The additional paraphrases that were actually supplied for the test-sentence above are here presented in order of acceptability (A — E).

The design of this test may raise certain questions. First, whether using paraphrases to get at the meanings of modals is a good method, or if there is a better technique available which can be used in its stead or complementary to it. Second, whether the provided context as exemplified above can be considered sufficient for a proper understanding of the meaning of the modal. Generally speaking, the more context the better, of course. With certain examples, however, it seems that a small increase in the size of the context does not clarify the meaning of the modal, but very large chunks of text must be provided. On the other hand, a great deal of text will increase the burden on the subjects, who generally cannot be asked to spend too much time over a test. Besides, there is the risk of informant fatigue.

I would very much like to hear the reactions of the readers of this journal to my technique for testing the semantic aspect of English modals.

## REFERENCES

Greenbaum, S. and R. Quirk. 1970. *Elicitation experiments in English: linguistic studies in use and attitude.* London: Longman.

Kučera, H. and W. N. Francis. 1969. *Computational analysis of present-day American English.* Providence, R. I.: Brown University Press.