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NEED TO AND THE MODALITY OF OBLIGATION:

A CORPUS-BASED APPROACH

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1. Introduction.

The study of modality has been one of the most commonly researched topics in linguistics long before the invention of electronic corpora. Although modals are few, they are polysemous and often the same modal verb expresses a whole range of different meanings. In addition there is a great degree of regional variation in the use of modals, as well as variation between registers of spoken and written language. Much of the research undertaken in the recent years benefited greatly from the availability of electronic corpora of written and/or spoken texts. A corpus-based approach allows for an expanded study of grammatical patterns, collocations and language use in different types of discourse. It also allows for empirical analysis of data on a scale that was hardly possible before electronic corpora became widely available.

Several studies on the use of modals that compared regional varieties of English have been undertaken from the corpus perspective, see, for example, Hundt 1997 and Collins 2005. These studies and other corpus-based research, such as D'Arcy and Tagliamonte 2007, Facchinetti 2002 and Nokkonen 2006, have also been concerned with register variation and diachronic development. Research by these authors has been invaluable to the writing of this thesis especially in terms of the framework they laid out for corpus analysis and its application.

In this thesis I will attempt to analyse and explain the rising frequencies of the semi-modal verb NEED TO. In my previous corpus research in the field of the modality of obligation, my attention was drawn to the fact that the use of NEED TO has risen very dramatically in the period from the 1960s to the 1990s. This increase in frequencies was documented in the corpora of written British and American English, see Leech 2003 and Smith 2003.

In order to undertake this analysis and to formulate what some of the factors influencing the rise of NEED TO may be, I chose a corpus of British English that would provide data from both the spoken and the written language – the British National Corpus, or the BNC. It is one of the best and largest corpora available today, with approximately 90 million words from the written language and 10 million words from the spoken, and provides extensive research opportunities. The BNC allows to explore variation in a wide range of domains and genre types as well as to analyse speaker/writer information. Hopefully, the present study will also contribute to the field of corpus linguistics in general and to the body of studies based on the British National Corpus in particular.

My main research objective was to try to determine some of the factors behind the dramatic rise in the frequencies of NEED TO. One set of questions of my research concerned the relationship between NEED TO and other modals of strong obligation, most notably MUST. Has the decline of MUST, attested in the same period from the 1960s to the 1990s (see Smith 2003 and Leech 2003), been influenced by the rise of NEED TO and vice versa? What role do other modal verbs of obligation play with regard to the rise of NEED TO? Can the rise of NEED TO partly be explained by it taking over some of the meanings that have been associated with MUST? Another set of questions was related to the relationship between NEED and NEED TO. What is the best way to describe the two modal expressions – as two different modals, as two forms of the same modal verb, or as one modal verb with a complex syntax? Are there any semantic differences between NEED and NEED TO? Do syntactic differences influence the semantics of these verbs in any way? What can this say about the rising frequencies of NEED TO?

In order to answer these questions, and to obtain a broad picture of the use of NEED TO in Present Day English, a quantitative analysis of the frequencies of NEED TO, as well as MUST, NEED and HAVE TO, has been performed in the BNC in all time periods and all genres of both the spoken and the written components. Most of the texts in the BNC come from the period between 1985 and 1993, but a small proportion dates back to two earlier periods, 1960 to 1974 and 1975 to 1984, thus making diachronic comparison possible. I have also performed a qualitative analysis of semantic and syntactic features in 200-word samples of NEED TO, NEED, MUST and HAVE TO and their forms selected at random from both the spoken and the written language.

Unlike lexical verbs, modal verbs are devoid of meaning if they stand alone. It is therefore essential to analyse the syntactic environments in which a modal verb occurs. For the purpose of this thesis, I have mainly concentrated on subject type variation and the way it influences the semantics of NEED TO. I have also attempted to describe the different meanings that NEED TO can take by introducing semantic categories which are intended to show how the meaning ranges from core to periphery.

I have followed the distinction made by Leech (2003), Smith (2003) and Nokkonen (2006), in that I have analysed NEED TO separately from NEED, which seems to me more natural for functional reasons. Granted their different syntactic behaviour, which also makes it appropriate to place the two verbs into different categories for comparative purposes, I have chosen to view them as two forms that have emerged from different uses of the same modal.

They are not mutually interchangeable, even though they are very close semantically. Henceforth, when I refer both to NEED and NEED TO, a shortening NEED (TO) will be used. In all other cases, the two forms will be discussed separately – for purposes of convenience and clarity, as well as in order to compare and contrast their meaning and uses. It was also deemed necessary to consider two other modals of strong obligation in the present thesis – namely, MUST and HAVE TO. The comparison between MUST and NEED TO is essential due to the fact that the decline of the former may have been connected to the rise of the latter. The status of HAVE TO as a possible competitor of MUST and its difference from NEED TO also had to be considered in this thesis. Thus, NEED TO was analysed in comparison with three other modal verbs – MUST, HAVE TO and NEED.

I am going to discuss the general characteristics of the modality of strong obligation and epistemic necessity in chapter 2 and will provide the theoretical framework for my thesis in chapter 3. A relevant critical evaluation of previous research on NEED TO by the authors referred to in this thesis will be provided in chapter 4. Chapter 5 will provide the description of materials and method of my research, namely, the British National Corpus and the way the data provided in it was obtained and analysed. Chapters 6 and 7 constitute the empirical part. Chapter 6 is devoted to the discussion of the four modals of obligation chosen for my analysis and to quantitative analysis of their frequencies in the BNC. Chapter 7 will focus on NEED TO as the least researched of these modals and the one that has experienced the highest increase recently, within a period of 30 years. It will give the analysis of its frequencies in the BNC and will provide qualitative analysis of its semantics in a random sample. My findings will be summarized in the Conclusion – chapter 8 – while the list of references and the Appendix are provided on pages 92 and 91 respectively.

All examples are from the BNC unless stated otherwise.

2. Modality of Strong Obligation and Epistemic Necessity.

2.1. The domain of obligation and necessity

English modal verbs share some common characteristics that distinguish them from lexical verbs. "As with auxiliaries in general, the modals reject *do*-insertion. They are used to build up complex verb phrases and cannot occur alone unless a lexical verb is recoverable from the context" (Biber et al. 2006:73). Modal verbs precede the subject in *yes-no* questions and are followed in the verb phrase by a bare infinitive verb (Biber et al. 2006:483), they cannot co-occur in standard English, and they do not have the third person -*s* form (Palmer 2003:3). The modality of obligation, an interesting and well-studied domain, is expressed by modals MUST and SHOULD. These verbs show all of the above characteristics and can therefore be called modal verbs proper. As I am specifically interested in the domain of **strong** obligation, I will only be discussing the modal auxiliary MUST. SHOULD expresses a much weaker obligation, the discussion of which is outside the scope of this paper.

Modality of strong obligation is also expressed by other verbs, some on the borderline between auxiliaries and lexical verbs, some behaving like full lexical verbs but expressing modal meaning. Of the borderline cases, or marginal auxiliaries, NEED (TO) in particular must be mentioned, due to the fact that NEED behaves like a modal verb proper with respect to *do*-insertion and *s*-forms (i.e., in exactly the same way as MUST), while NEED TO behaves like a lexical verb, taking on modal meaning. The question that inevitably arises is whether one should view NEED and NEED TO as two forms of the same modal marker or as two separate modal expressions – a modal verb proper and a lexical verb expressing modal meaning. I will discuss the possible differences in meaning between the two forms in 6.5 in my thesis.

The main semantic differences lie in the fact that NEED TO can be used in all contexts while NEED is claimed only to be used in negations and questions (cf. Smith 2003:245) – it would be more correct to say it is used primarily in non-assertive contexts. At the same time, NEED and NEED TO are and have been historically two different forms of the same modal verb. These forms have had different development, judging from differences in use, but are not entirely distinct verbs altogether. Their relationship will be discussed closer in chapters 4, 6.5 and 7.4.

"In addition, there are multi-word verbs which are related in meaning to modal auxiliaries [...]. These expressions together with marginal auxiliaries can be referred to as

semi-modals" (Biber et al. 2006:73). Six different semi-modal verbs that are used to express strong obligation and necessity are mentioned by Biber et al.: HAVE TO, (HAD) BETTER, (HAVE) GOT TO, (BE) SUPPOSED TO, OUGHT TO and NEED TO (2006:489-490). Note that only NEED TO can be a member of the category of multi-word verbs with modal meaning. In this case NEED can be viewed as a modal verb, or NEED (TO) as a marginal auxiliary. The latter seems to be the most reasonable categorization within the terminology used by Biber et al, who do not distinguish sharply between NEED and NEED TO. However, the very fact that a categorization problem exists for the two modal markers shows that they may be two units instead of one. Due to the fact that semi-modals are formally more flexible than modal auxiliaries – they can be marked for tense and person and occur in non-finite forms – they are used extensively to express modal meanings.

In British English (and other Englishes, for that matter), the most common of the above semi-modals are HAVE TO and NEED TO. NEED (TO) is included by Barber et al. among marginal auxiliaries attested to before AD 1400. HAVE TO is first attested to between 1400 and 1650 (Biber et al. 2006:490). I will consider both of them in this paper as possible rivals to MUST. My main focus is going to be on NEED TO, and I will also consider NEED in connection with it. NEED is included in this thesis due to its close relationship with NEED TO, but not due to its frequencies or any competition it may present to MUST or other modals.

Most of the recent research on modal verbs has focused on their declining frequencies, which could be attested through the comparison of diachronic corpora, such as the Brown family corpora: LOB and Flob, representing British English of respectively 1961 and 1992, and Flob and Frown, representing American English of 1961 and 1991. Although some have formulated it in more or less this way, the decline of modal verbs proper is not automatically followed by the rise of semi-modal expressions. The latter category did, however, become slightly more frequent overall (see Leech 2003:228-229 on this). However, the changes that modal verbs of obligation underwent are the most notable. According to Leech (2003), who studied the changes in British and American English from the 1960s to the 1990s by comparing the LOB, FLOB, Brown and Frown corpora, MUST declined by 29% in British English and by 34% in American English. NEED (N'T) declined by 40% in British English and by 12.5% in American English (where it is seldom used in the first place). This is a rather dramatic change in a 30-year period, even though the corpora in question are relatively small and contain only written language. At the same time, HAVE TO has increased in British

English by 9% and in American English by 1%, a relatively insignificant change compared to the frequencies of NEED TO which have risen by 249% in British English and 123% in American English! Judging from the Brown family corpora, no other modal or semi-modal verb has undergone such a dramatic rise in frequency within 30 years. I have therefore focused mainly on the uses and meanings of NEED TO, to the exclusion of a more detailed qualitative research on MUST, NEED and HAVE TO, trying to determine some of the factors behind this remarkable rise in frequency.

When discussing these dramatic changes, it has to be kept in mind that obligation and necessity modals and semi-modals are less common overall than the other modal categories (Biber et al 2006:493). This may be due to several reasons. "First, this relative rarity reflects a general tendency to avoid the face threatening force of expressions with an obligation meaning. In addition, semi-modals have become better established in this semantic domain, apparently replacing the modal verbs to a greater extent" (Biber et al 2006:489-490). HAVE TO is the most common of the four (semi-) modal verbs considered here. It is twice as common in the spoken compared with the written language, according to the BNC data. HAVE TO is followed closely by MUST in written English. NEED TO and NEED are the least common, with especially low frequencies for the latter, see figure 1 for graphically represented occurrences per million words.

Figure 1.

MUST, HAVE TO and NEED (TO) in the BNC
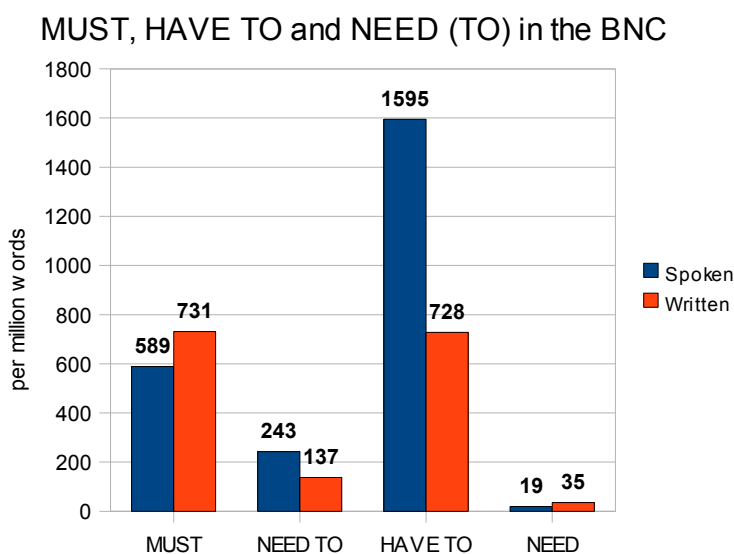
2.2. The types of modality.

The modal expressions referred to above can all express both deontic, or root, obligation and epistemic necessity, although it is only MUST that is common among them in the epistemic sense. Deontic modality has also been called agent-oriented (Bybee et al., 1994) or root (Coates, 1983). It may express permission, ability, volition or obligation. Strong obligation, expressed, most notably, by MUST, involves external pressure on the subject of obligation, and may convey "obligations, duties, directives, recommendations and the like" (Collins, 2005:251). Such strong obligation can be exemplified by the following sentence:

(1) *If all or part of the guarantee or deposit is lost or taken to pay fines or costs, you must pay us the lost amount immediately* (HB5 1539, written).

Here the use of MUST is associated with the authority of the source of obligation. While MUST typically serves as a prototype of the strongest and most subjective obligation, HAVE TO expresses a more impersonal obligation and lacks the implication that the speaker is in authority:

(2) *All you have to do is fill in the details, including your name and address and the amount you wish to give, and sign and date the document in front of a witness* (A01 242, written social sciences).

The meaning of NEED TO is even more neutral than that of HAVE TO and can be said to express an objective compulsion that is not influenced by the will of the speaker. The meaning of NEED is quite close to that of NEED TO, according to most researchers. "*Need* and *need to* are semantically identical, expressing internally-sourced rather than externally-sourced obligation [...]. They thus compete with the other modals of obligation via indirect illocutionary force rather than literal sense" (Collins 2005: 259). Both modals imply that the action is merely being recommended for the doer's own sake. Even if the subject is *I*, the obligation is objective, because the use of NEED (TO) implies that the speaker has no conscious control over the compulsion. "It gives the impression that the speaker is appealing to the assumed needs of the addressee. In consequence, it offers a more polite way of obliging than MUST" (Nokkonen 2006:64):

(3) *So when you are preparing, you need to think about the words you use* (HUU 44, spoken).

In (1), (2) and (3) the reader is addressed directly (*you*). The use of MUST makes (1) sound more harsh and demanding than (2) and (3), suggesting perhaps a certain authority

hierarchy or at least a much more subjective obligation (you must do it because we say so, this is the deal you're offered, not because there are any external and objective factors obliging you).

According to Coates (1983:233), the interpretation of modals as root (deontic in my terminology) depends in many cases on the presence of agentivity – hence also the term agent-oriented modality. As the agent is not always explicit in a sentence, an agentive verb is another clue to recognizing deontic modality. What always plays the most important part is the context of the utterance, compare:

(4) *That argument <u>has to</u> rest on principle that it makes other owners of Utterly Dependables feel better than anyone else!* (AA8 193, written)

(5) *The death of a parent is a loss but it is an unavoidable loss and may be worked through in its effect. It is not usually preceded by long and bitter quarrels between parents and <u>need</u> not affect the child's eye view of dependability and reliability of parents in their relationship with the child* (EW8 1401-2, written).

For both examples, it is the context that defines meaning, and outside of the context the meaning of the modal verb (*has to* and *need*) can be interpreted as both deontic or epistemic. In (4) the epistemic interpretation was suggested to me by the 'tone' of the utterance, visualized in the exclamation mark. In (5) the interpretation problem might be a little more difficult to solve. It appears equally logical to say that the death of a parent will not necessarily affect the child's view of his parents and that there is no need, or necessity, for the death of a parent to affect the child's views. This sentence falls into the category of dubious, although in my opinion epistemic interpretation is more likely.

These and similar cases show that mere presence or absence of an agent or a verb of a certain category is not enough to interpret the meaning of a modal verb – sometimes only a wider context can provide adequate clues to interpretation of meaning. "What this suggests is that any attempt at characterizing the relationship between the two types of modality strictly in terms of the linguistic categories that typically correlate with each one is likely to achieve little more than probabilistic approximations; it is unlikely to explain the relationship" (Heine 1995:27).

Indeed, although epistemic modality is more common with certain combinations of features, such as progressive or perfective aspect, past tense, *it* or *there* as a subject, etc., it is by no means limited to these features, nor is a presence of such features a sure sign of

epistemic modality, compare:

(6) *She <u>needn't</u> have worried; from what I've seen, getting a little bit of cream on your nose was practically compulsory ...* (G0A 2336, written).

Even though the verb phrase *have worried* is in the perfective aspect, NEED TO in (6) has deontic meaning, albeit one that has a past time reference. There is nothing to suggest that an epistemic interpretation of this sentence is possible. I have therefore refrained from limiting any semantic distinctions within the main types of modality to mere list of features, such as subject or verb types, in my research. While there is a certain connection between sentence form and meaning of modals (this connection will be explored in 7.2), the main factor is still the contextual frame.

Unlike deontic obligation, epistemic necessity refers to degrees of certainty, that is, a speaker's attitude towards the truth of a proposition. In other words, epistemic modality occupies a space between *yes* and *no*. As already mentioned on p. 11, of the modals considered here, only MUST is used frequently in its epistemic sense, especially in the spoken language. Epistemic MUST expresses the only possible conclusion on the basis of the evidence available:

(7) *In fact, I thought it <u>must</u> be all finished with because <pause> he, he was quite talkative about it during the summer* (KB8 5287, spoken).

NEED, HAVE TO and especially NEED TO are not typically used in their epistemic meaning, although NEED and HAVE TO may express deductions based on strong evidence, and can be paraphrased "it is necessarily the case that". NEED TO is the modal expression whose epistemic uses are especially hard to come by, although, according to Nokkonen, "[it] is in the process of developing epistemic senses" (2006:67).

The meaning of MUST in the example below (8) indicates that even the basic distinction between root and epistemic modality is not always as clear-cut as may be assumed.

> (8) *This, of course, **could** happen in a particular area. There is nothing to prevent the legislature preferring a tribunal's interpretation of the term, for example, employee, to that of the reviewing court. Greater recognition of this **would** be valuable. The argument postulated above is, however, dependent upon showing not just that this **may** happen, but that it **<u>must</u>** happen* (GU6 837-840, written).

Some of the clues to the meaning of MUST are the meanings of other modal verbs used in the adjacent clauses, especially MAY in the clause immediately preceding. Both MAY and

MUST appear to share the same reference. There is no obligation imposed, but, at the same time, the paragraph seems to be about a potential event, and not about making a conclusion on the basis of the available evidence. Such cases, when a modal (MUST) is used to describe the necessary qualities of a subject, have led many to suggest that there is a third type of modality – ***dynamic***.

Most researchers have chosen to bring in further and finer distinctions within deontic obligation and deontic modality in general (Smith 2003:241-242, Collins 2005:251-253, Palmer 2003:7-8, Nokkonen 2006:32-34). These distinctions were mostly concerned with the source of obligation, and the degree of its resistibility. Palmer (2003:7) distinguishes here between deontic and dynamic modality. By deontic he means a modality where the event is controlled by circumstances external to the subject of the sentence (and this includes permission and obligation), and by dynamic a modality where control is internal to the subject, such as modality of ability or willingness:

Deontic: *You can come in now.*   *- You must come in now.*

Dynamic: *He can run very fast.*   *- I will help you*.

Some, e.g. Nokkonen (2006), choose to define dynamic modality as an objective obligation with subject as source as (such as in the case of NEED TO), in this way contrasting it with the deontic modality of strong subjective obligation (MUST). The cline would be from strong deontic to weak dynamic to epistemic with certain unclear cases in between. I have followed Palmer's distinction and have considered all four modals discussed here to express deontic modality. However, I have used the term 'dynamic' in its narrower sense, meaning that the modal verb describes qualities or abilities of a subject of an utterance. Despite the fact that many authors choose to include a category of dubious cases where it was not possible to distinguish between deontic and epistemic modality, I did not want to have a "dubious" category and distributed such cases according to what seemed to me the most likely meaning within deontic or epistemic modality. Most of these cases are examples of dynamic modality, compare:

(9) *In studying these to find their causes we* <u>*need to*</u> *have done some natural philosophy, because these motions of the mind have their causes in sense and imagination* (ABM 223, written).

While subjective modality of imposed obligation has been said to characterize the meaning of MUST, and objective obligation, that is not imposed by the agent, the meanings

of HAVE TO and especially NEED TO, this division is rather difficult to attest in practice. In the analysis of corpus examples, in most cases, it is hard to determine the source of obligation in order to sort all the examples into the appropriate categories of objective and subjective modality (or dynamic and deontic as per Nokkonen's definition), as some will have mixed features. "Root necessity is a gradient phenomenon with no clear borderline between its intermediate stages" (Leech 2003:242). It appears more natural and uncontroversial to keep the basic distinction between deontic and epistemic modality and rather consider different categories with the deontic meaning.

Collins (2005) also distinguishes between subjective and objective obligation and notes that it is in addition possible to distinguish between degrees of resistibility, "depending on the severity of consequences for non-fulfilment of the obligation. The present data evidenced a tendency for subjective uses to be associated with stronger resistibility, objective with weaker" (Collins 2005:252). He uses a finer division, based both on subject selection and degrees of resistibility. I will exemplify his approach first in the case of MUST, and then discuss how it may be applied to NEED TO in chapter 3.

The meaning of MUST that he calls 'prototypical', representative of the traditional definition of the deontic MUST, is the meaning with a second-person pronoun *you* as subject on whom the obligation is imposed. In this case, Collins says, "the modal expresses strong subjective compulsion" (Collins 2005:252). In other words, the speaker will be transparent as the source of the obligation imposed unto the addressee in case he or she uses a second-person pronoun. However, MUST is not always used in its prototypical meaning even with *you* as subject, as the following example illustrates:

(10) *You <u>must</u> come and try and hear the nightingale's again* [...] (KC9 1754, spoken).

The meaning of MUST in (10) may rather be compared to a mild exhortation, similar to 'you must come and visit us one day'.

On the whole, the meanings of MUST, according to Collins, are ranging from prototypical second-person obligation to external objective obligation with third-person subjects. *Must* with first-person subjects typically expresses self-exhortation. MUST is also used with several formulaic expressions (*I must say*, *I must admit*, etc.) and for rhetorical purposes with different subjects, but mostly first-person subjects, according to both my findings and those of Collins. Finally, when MUST is used with third-person subjects, "the source of obligation is not the speaker, but rather some external body or phenomenon"

(Collins 2005:253). The obligation is then felt less strongly in these cases. I have organized this range of meanings as exemplified in (11-17) below.

(11) PROTOTYPICAL. *Hence one diamond doubled is definitely not going to be a good contract, and you <u>must</u> do something to improve the situation* (HJ3 6531, written).

(12) EXHORTATION. *You must get, you <u>must</u> hear that new song it's really good* (KSR 185, spoken)

(13) SELF-EXHORTATION. *I <u>must</u> be careful how much love I give* (CH5 3678, written).

(14) RHETORICAL. *Er that is something which is er a matter of great regret, but because of circumstances er unfortunately is the case and something that we <u>must</u> er address* (J42 10, spoken).

(15) FORMULAIC. *I <u>must</u> say my daughter seems to have inherited them* (H9Y 723, written).

Rhetorical or formulaic cases in (14) and (15) can also be called idiomatic, or marginal expressions. "What we have here is a type of partially fixed idiomatic construction with a slot that can only be filled by a limited class of lexical items" (Salkie, 2004:17-18). The modality is marginal because the use of a modal verb adds little to the meaning of the utterance as a whole. In my analysis rhetorical and formulaic uses will be viewed as one group with weak, or marginal modal meaning, possessing a low degree of modality. Collins groups NEED TO with third-person subjects into two separate categories:

(16) 3rd PERSON. EXTERNAL OBLIGATION *In a strong wind he <u>must</u> refuse to move until sufficient additional crew arrive to handle the glider safely* (A0H 139, written).

(17) 3rd PERSON PASSIVE. *And adequate software <u>must</u> be made available to ensure GMB activists can put into practice what they've been taught and use it to the labour movement's advantage* (HUE 397, spoken).

However, the above is no clear-cut or self-explanatory division. This gradation of the meanings of MUST is largely descriptive and lacks formal features that could help effectively sort all its occurrences – some of them will inevitably fall outside any of the categories above. It is also not very effective for comparison with NEED TO. The meaning of NEED TO is different from MUST in that its prototypical sense seems to denote objective obligation, or "internally motivated compulsion" (Nokkonen 2006:39), while the prototypical

MUST denotes *subjective* obligation. It is therefore unsuitable to base the investigation of different shades of root meaning of NEED TO on the above criteria for MUST. What is common for the two modals, however, is that meaning changes depending on the subject types used, or put in other words, "the strength of any example depends, to a large degree, on the person of the subject" (Nokkonen 2006:39). This can be clearly seen from the above model, where prototypical uses seem to be associated with a second-person subject, speaker involvement and a meaning of strong obligation, while the weakest modality has a sum of features typically most removed from the prototype. Such approach can be further elaborated on.

It is my conclusion that the distinction into subject types and the strength of obligation is clearer than the distinction into subjective and objective obligation as defined by Nokkonen (2006). With regard to definitions, it seems to me that it is also much clearer to operate with the simple concepts of deontic and epistemic modality. Dynamic meanings can be placed into the periphery within the category of deontic modality. In my analysis these meanings are related to qualities and abilities of a subject (rather that the degree of subjectivity of obligation).

All of the modals discussed here have a clear preference for deontic meaning. It is certainly true in the case of NEED TO which has not been previously described as means of expressing epistemic necessity. I will therefore devote most of the paper to a discussion of deontic necessity, also due to the fact that previous research has shown that it is especially in its deontic sense that MUST has been replaced by other modal expressions.

3. Theoretical Framework.

In general, when discussing modality I will view it in terms of dimensions, as formulated by Huddleston & Pullum (2002:175-180) in the *Cambridge Grammar of the English Language*, the first of these dimensions being **strength**, ranging from week to strong. Prototypical MUST, for example, would represent strong obligation, or, put in different terms, it would possess a strong expression of modality. Strength refers both to a speaker's strength of commitment to the truth of a proposition (for epistemic modality), and to the pragmatic strength of an utterance, where, for example, a semantically strong modal may be weakened by the context (such as cases where deontic MUST is formulaic).

Kind of modality refers to epistemic or deontic, and may also include dynamic (exemplified best by the ability meaning of CAN, but will also be applied to some of the meanings of NEED TO in this thesis). It is also possible to operate with the term peripheral cases, if a clear distinction between root and epistemic modality cannot be made. However, the term 'peripheral' in my analysis includes a wider spectre of meanings than just those referring to 'indeterminate cases'. After much consideration, I decided to use the term 'dynamic meaning' to refer to such cases (i.e., cases that other researchers have called indeterminate) in my analysis of NEED TO, and define as peripheral not only the cases where meaning may border on epistemic, but also all those instances where the meaning of NEED TO is far removed from its core sense. This will be exemplified by the analysis in 7.1.

Degree of modality ranges from high to low, depending on how much a modal element changes the meaning of an expression. In other words, if the additional element of meaning which the modal adds to the sentence is small, it has a low degree of modality, such as in the case of all rhetorical and formulaic uses. If the meaning changes significantly, the degree of modality is high.

Defining the framework for investigation of deontic NEED TO is important for several reasons. This modal verb is not used epistemically, which will be discussed in the empirical part (chapter 7.3), therefore, most of this discussion will focus on its deontic meanings. Since it is the decline of MUST in its deontic sense that is most notable (the frequencies of its epistemic meanings have not changed significantly in the past 30 years, cf. Smith 2003:257), the question arises whether the remarkable rise in the frequencies of NEED TO is in some way related to it. In-depth qualitative research is essential for this purpose, as MUST and NEED TO (and NEED) are less similar in meaning than MUST and HAVE TO, and it is HAVE TO that has often been compared to MUST and suggested as its possible rival. To

repeat the question that was posed in the Introduction, is NEED TO also taking over some of the uses that have been associated with MUST?

In order to answer this question, a main frame for the analysis of NEED TO has to be constructed. This frame should also give a possibility to compare NEED TO with other modal verbs of obligation, giving most attention to MUST, but also, for different reasons mentioned above, NEED and HAVE TO. The initial description laid out by Collins (2005) and exemplified in 2.2, points out how varied deontic meanings of obligation can be for the modal MUST. However, not all meanings of MUST correspond to those of NEED TO, neither did Collins' framework extensively cover all possible meanings that MUST can express. Most importantly, the framework laid out for MUST by him, and most notably Coates (1983), does not always correspond to the one for NEED TO. For example, while core meaning of MUST expresses strong subjective obligation, core meaning of NEED TO expresses objective compulsion. Some of the terminology Coates and Collins use use will be applied for the purpose of this research, but with a different reference, taking into account the range of meanings characteristic of NEED TO.

Despite the fact that a differently structured semantic classification is needed, the approach of the mentioned researchers can and should be adopted for the purposes of this investigation. It may be called *the prototype approach*, and can in fact be applied to all members of the modal category of strong obligation, but will only be exemplified here by the analysis of the cases with NEED TO. The principal idea of the approach is that a modal verb in English would typically have core uses that incorporate all or most of the semantic and pragmatic features associated with the most frequent and typical use of this modal verb, and peripheral uses that are most removed from this 'prototypical' meaning of the modal. Between the two extremes lies a rather broad category that can be sub-divided further, keeping in mind that "modality [...] is not sharply delimited or subdivided, so that we shall need to make reference to the concept of prototypical features and to allow for indeterminacy at the boundaries of the categories" (Huddleston and Pullum, 2002:172). The prototype approach of viewing modality as a 'fuzzy set' ranging from core to periphery has been adopted by many researchers and seems to be the best way of describing the semantic properties of each particular modal. I will attempt using it in analysing my random sample of NEED TO in the BNC.

Nokkonen (2006) performed an extensive analysis of the various meanings of NEED TO in English. I will borrow some of the terminology of this analysis for my research, however,

the sub-division she chooses proved to be quite difficult to follow and duplicate in my own analysis. She chooses to call the core, or prototypical cases, what can actually be viewed as instances when NEED TO is related in meaning to MUST. They have *you* as the subject, speaker/writer in authority and feature direct address to the subject. In other words, core MUST is the same as core NEED TO in her analysis.

I would deem it unnecessary to assign core meaning to NEED TO in a sense of strong obligation, as it is not the prototypical use of this modal. While strong obligation similar to MUST can indeed be attested to in fewer than 10% of all cases, it is closer to the periphery, as this meaning is not typical of NEED TO. When it is used, it is meant to be softened by the very fact that NEED TO, such an unlikely modal to express strong obligation, is employed. The prototype approach has one more strength, underlying the merely descriptive analysis:

> "One way of looking at the semantics of the modals at any given stage of the language is to try to distinguish between central and peripheral meanings [...]. Comparing an earlier stage of the modals with a later stage, one will find, at least if the interval is long enough, that what used to be a peripheral meaning may become central. The corollary will be that the former central meaning has receded to become peripheral, or over an extensive period of time, has been lost. The latter fate may obviously befall former peripheral meanings whose usage is not expanded" (Goossens 1987:216).

The changes Goossens is talking about take place throughout centuries, and I am only concerned here with the present result of historic development of modals and in some cases with short-term change that has occurred in a lifetime of one generation. However, if one is able to correctly classify and describe the meanings of a modal from core to periphery, this could prove to be an invaluable tool for later comparison of the development and change of these meanings. Alternatively, it may be possible to speculate as to which meanings may be moving from periphery to core and vice versa and thus attempt to explain language change in progress. This being said, it seems wrong to construct one's own theoretical framework merely for the purpose of comparability with other modals. I would also be inclined against suggesting, by adopting such a framework, that the peripheral meaning of NEED TO – strong root obligation – has *already* become central and thus ready to replace MUST, although the development may be in this direction. There is, however, still clearly a difference between MUST and NEED TO in (18) and (19) below, and these sentences seem to be representative of the core meaning of each of the modals (I deliberately chose a third-person subject for what I deem to be a prototypical use of MUST, assuming a broader definition of core, that may include other subject types than the most prototypical):

(18) CORE: *But I <u>need to</u> know cos I'll do a turkey <pause> if we're staying home* (KCH 6338, spoken).

(19) *Candidates <u>must</u> provide their own materials for taking dictation* (HBP 1936, written).

Therefore, the core meanings of NEED TO that I will be speaking about are the ones Nokkonen calls Group III, namely, instances that express internal compulsion, cf. (18) above. Even though this is the basic meaning of NEED TO, in the sense that this is the meaning that explains the use of this modal expression, Nokkonen does not call it prototypical or core, probably to maintain a certain comparability with other modals of obligation and necessity or to suggest that the meaning of NEED TO is shifting towards that of MUST. As this seems unnecessary to me, I will call this group the core. The subject of this group is typically first-person singular *I*, and the speaker in this case is communicating a necessity concerning him or herself. However, same meaning is also to be found with other subject types if a broader definition of core is used – this will be shown in the empirical part. The main criterion I used was the presence of objective obligation meaning and total lack of any speaker involvement as source of obligation.

Another group of meanings that NEED TO expresses, reported cases, is easily identified because of the grammatical form the modal verb takes. Reported cases consist mainly of NEED TO in the past tense:

(20) REPORTED: *I agree that this man doesn't sound like God's gift exactly, but try to understand that he <u>needed to</u> sell himself* (CH5 1109, written).

This group is considered on its own due to the fact that the past tense form of NEED TO, used about 10% of the time in written BNC and 4% in spoken, does not have a personal directive meaning: "personal directives are useless if the action referred to in the main verb has already been performed" (Nokkonen 2006:46). The same can be said of HAVE TO in the past, as it only makes a statement of the addressee's past needs. This objective use where the element of the speaker's involvement is missing, is a feature that MUST and NEED do not share with HAVE TO and NEED TO, because neither of the modal verbs has a past tense form. Typically, the past tense of MUST is covered by *had to*, and the past tense of NEED by *needed to*. I have also included questions with NEED TO in this group, with the exception of tag questions. This is due to the fact that in most cases questions do not bear any personal directive or obligation meaning for the subject. Tag questions seem different in this respect as

a statement is made first and the question is used to reinforce it or to seek approval. However, due to the fact that questions are extremely rare with NEED TO, they will consequently receive little attention in this paper.

Cases that were labelled exhortation in my analysis are probably those similar to Nokkonen's group of examples with equal participants where the utterance contained a **hidden** directive. These cases may include impersonal uses of *we, you* and 3rd person subjects, where the subject is people in general rather than any particular person, see example (21). Collins uses the term exhortation in his discussion of the different meanings of MUST with 1st person subjects, ranging "from insistent self-exhortation [...], through pseudo-exhortation of a kind commonly encountered in rhetorical discourse [...], to, even more weakly, [...] formulaic use [...] associated with expressions like *I must say* and *I must confess*" (Collins, 2005: 252-253). I have grouped the last two, rhetorical and formulaic uses into one category of marginal meanings, since both have a low degree of modality are generally restricted to fixed phrases, or fixed contexts in the case of rhetorical discourse. Marginal meanings belong to the periphery of NEED TO.

(21) EXHORTATION: *Seven out of 10 cars on the road are capable of using unleaded petrol, but we need to press on and go further* (HHV 21104, written).

(22) MARGINAL: *For further teaching, we need to look at 1 Corinthians 14 where Paul speaks most clearly about the gift of prophesy* (C8L 1610, written).

The following three types of meaning also belong to the periphery. There are, as mentioned, some cases where NEED TO expresses strong subjective obligation, i.e., those cases when it can be described as similar in meaning to MUST, although connotations are probably still different due to the objective nature of NEED TO. The subject may be *you*, but as a rule, most of the cases with *you* is a subject will not be examples of strong obligation meaning. Occasionally, I found the same meaning expressed with other subject types, such as third person animate (again, a broader understanding of the prototype was applied). The main factor that distinguishes this group is that the meaning of the utterance is that of a strong directive. The main verb is agentive, mostly an activity verb. The sentence often features direct address and the context usually makes it clear that the speaker has authority over the addressee:

(23) STRONG OBLIGATION: *You need to listen very carefully* (FM7 1448, spoken in educational context, with speaker in authority).

This group was featured by less than 10% of all occurrences of NEED TO – 4% in written sample and 7% in the spoken. In fact, Collins made similar observation regarding prototypical MUST which has the same meaning as this group: "It is important to note that members of the prototype are not necessarily more statistically common: in ICE-AUS they represented only 10.2% of root *must* tokens" (Collins 2005:252)[1].

Finally, there are the dynamic cases, where NEED TO describes the necessary qualities of the subject in certain circumstances, expressing a modality exemplified by a sentence like:

(24) *You need to (have to/must) be rich to stay at this hotel* (non-corpus example).

Here the modal loses some of its meaning and can often seem ambiguous in terms of whether it should be placed into deontic or epistemic category. Note also that there seems to be little substantial difference between the meanings of the modals used in the example above – despite the fact that their prototypical meanings are not synonymous – it appears that such weak obligation, bordering on epistemic, also shares the homogeneity of epistemic meaning of necessity. It is this group that expresses dynamic modality according to principles laid out in 2.2, and also according to Nokkonen (2006):

(25) DYNAMIC: *In studying these to find their causes we <u>need to</u> have done some natural philosophy, because these motions of the mind have their causes in sense and imagination* (ABM 223, written).

Thus, we operate with a semantic division into six groups ranging from objective necessity and strong obligation to mere formulaic uses and ambiguous cases that can be interpreted epistemically. The seventh group will be all epistemic cases of NEED TO, if any. This framework is adequate for qualitative research, descriptive and comparative analyses for the purpose of this paper, but its drawback for any quantitative research is that it is largely dependent on a subjective judgement in dubious cases. It may not be granted that similar framework will be chosen by a different author in order to describe all the possible meanings of NEED TO. The objective criteria to describe semantics will inevitably vary depending on what qualities a researcher deems to be the most important for a particular analysis.

Therefore I will also analyse NEED TO by comparing subject types it is used with. This model will easily lend itself to comparison with other modal verbs and expressions, namely, MUST, NEED or HAVE TO. It can also be compared with other analyses of NEED TO,

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[1]In my own findings, of the 142 root cases of MUST in written BNC and 102 in spoken (from a sample of 200 random hits in each), only 11% and 15% respectively were representative of the prototypical meaning of MUST.

should such necessity arise. Low frequencies and limited distribution of NEED are the reason why it is given a less prominent place in this paper, but I will be discussing its relationship with NEED TO in 6.5. The division into subject types is closely related to the framework laid out above. For example, *I* and *we* will have to be treated separately due to the fact that they tend to give different shades of meaning to NEED TO. The first is mostly used with the internal compulsion meaning (or what Collins calls self-exhortation in the case of MUST; this is the core meaning of NEED TO), while *we* can be used impersonally or rhetorically, as well as to express a hidden directive. I also believe it is important to consider the passive voice on its own, as well as to distinguish between third-person animate and inanimate subjects, due to the fact that with inanimate subjects (such as laws, books and states) the obligation may be felt more externalized and objective. Animals and words like *one*, *somebody*, etc. are counted as animate subjects, while common nouns, such as *the government*, *the company*, *the state* are counted as inanimate. Metonymy (26) falls into inanimate category in my research, although one may argue to the contrary:

(26) *Since the conference would not initially focus on the problems inside Afghanistan Kabul <u>need</u> not be invited* (GVK 664, written).

Existential *there* uses are few, but they seem to be important to consider on their own as well. This division into subject types is the same as the one used in Nokkonen (2006). Operating with this double system for analysis will hopefully shed some light on the behaviour of NEED TO and its relationship to other modals of obligation and necessity by describing the most common meanings it takes, while at the same time giving comparable and reproducible results, in case a different random sample is chosen. Within this division, socio-linguistic factors, such as age and sex of speaker will also be analysed, as previous research into this field is somewhat limited, cf. Tagliamonte & D'Arcy (2007:56-57) "To date, however, the social correlates of the modal system have received little analytic attention in literature". The present analysis will help formulate some social factors behind the growing use of NEED TO and suggest possibilities for further research into this field. The main distinction in this paper is between the spoken and written medium, but it may also be relevant to look at text properties such as text type and date of publication. Where these factors are relevant for the semantic and syntactic frameworks used, they will be given special attention.

4. Previous Research on NEED TO.

Extensive research devoted exclusively to NEED TO is found comparatively seldom in literature. It is most often discussed together with other semi-modals of obligation/necessity without receiving special focus on its own. It seems that MUST and HAVE TO are much more popular topics when it comes to discussing the modality of obligation.

In my bibliography there is only one paper, namely Nokkonen (2006), that is devoted solely to NEED TO and its semantic variation in British English. It was, obviously, the primary source of comparison for my own analysis. However, sections from earlier research by other authors have proven useful for a more critical approach to Nokkonen's findings.

In *English Grammar: Theory and Use* by Hasselgård et al. (2001) marginal modals DARE, NEED, USED TO and OUGHT TO are described as verbs that can behave either as auxiliaries proper or as lexical verbs. "It is particularly in negative and interrogative contexts in British English that these verbs behave like auxiliaries. [...] Since it is always correct to use *do*-insertion with these verbs, i.e. treat them as lexical verbs, which is regularly done in American English, we recommend this usage" (Hasselgård et al. 2001:164). This recommendation may point to two reasons for the decline of NEED in favour of NEED TO – americanization and a certain simplification of grammatical rules.

Tottie (2002) makes a similar statement about marginal modals in *An Introduction to American English*: "*Dare* and *need* are the most modal-like: they can be used exactly like modals in negatives and questions [...]. On the other hand, they can also behave like lexical verbs, in that they take *do*-support in negatives and questions and can be followed by *to* plus infinitive" (Tottie 2002:156). She also notes that NEED (most likely, meaning both NEED and NEED TO) is more frequent in British English while Americans probably prefer to use HAVE TO instead. According to Tottie: "In negative sentences *need* is often used without *do* in British English, especially with verbs like *bother*, *fear*, *worry*" (Tottie 2002:156-157). This means that if a speaker of British English would say *You needn't fear him*, a speaker of American English would prefer *You don't need to fear him*.

The presentation of NEED (TO) in the two larger grammar books – by Tottie and Hasselgård et al. – shows that no distinction is made between NEED and NEED TO, but that they are rather viewed as two different forms of the same marginal modal, albeit an unusual one. In both books, it is also pointed out that in this respect NEED (TO) functions similarly to DARE (TO), which can also act as a lexical verb.

In his study of grammaticalization, Krug (2000) discusses NEED TO in a rather concise manner, as his attention is mostly devoted to generalizations regarding the theory of grammaticalization. It is, perhaps, noteworthy that also he does not make any distinction between NEED and NEED TO, in other words, he does not view the former as a modal verb proper and the latter as a semi-modal, but rather lists NEED (TO) along with marginal modals. The fact that there is support for Krug's view of NEED TO as one item can be illustrated by the following pairs of example sentences:

(27)   a)   He needn't do it.

         b)   He doesn't need to do it.

(28)   a)   You dare not do it.

         b)   You don't dare to do it.

(29)   a)   You oughtn't to do it.

         b)   *You don't ought to do it.

The first pair (27) is taken by Krug to illustrate the fact that marginal modals NEED (TO), OUGHT (TO) and DARE (TO) take both NOT negation and DO periphrasis (Krug 2000:199). On the other hand, (29b) is clearly impossible in Standard English, and this illustrates the difference between OUGHT (TO) and NEED (TO) (even though Krug specifically includes OUGHT(TO) in this group of three marginal modals). DARE (TO) in (28) is quite similar to NEED (TO) and seems to comply with Krug's generalization. It can indeed, depending on the context, take both NOT negation and DO periphrasis and alternate between main and modal verb syntax in questions. While I personally choose to analyse NEED and NEED TO separately due to their syntactical differences, there is ample support for Krug's position in historical material related to NEED and its use as a modal verb.

According to Krug (2000), NEED is a lexical verb in Old and Middle English, used at first in impersonal, and then in both personal and impersonal constructions. When exactly NEED first started showing modal characteristics in syntax is a matter of discussion, but it is certain that it had modal meaning in the 16th century. Krug's investigation into the use of NEED (TO) in Shakespeare returned the following results: "modal constructions by far outnumber main verb constructions: the ratio of plain to marked infinitives is approximately eight to one" (Krug 2000:202). In other words, in Shakespeare's time NEED was about 8 times more common than NEED TO. Krug notes rightly that the trend seems to have reversed

since then, as NEED is now 4 times less common than NEED TO in the written language, and nearly 13 times less common than in the spoken, see Fig.1, p. 10.

Interesting in this respect is the apparent-time study based on the spoken component of the BNC, where the use of NOT negation as opposed to DO support is summarized for different age groups (i.e. *needn't* as opposed to *don't need to*). It showed "a striking difference between the over-60-year-olds and the remaining groups. While all speakers under 60 behave rather similarly and predominantly choose DO negation patterns [...], the over-60s opt for NOT negation two out of three times" (Krug 2000:203). It seems, therefore, that the trend to prefer NEED TO to NEED has arisen quite recently, within the past 60 years.

Other distribution patterns found by Krug in the BNC are also supported in my own findings, for example, the rarity of interrogatives for both NEED and NEED TO (see 7.5). At the same time, granted these historical changes, NEED and NEED TO are not used interchangeably with each other in, for example, tag questions (30 to 32 below), which speaks for their treatment as syntactically separate items, at least for the purpose of clarity (semantic differences, if any, will be discussed in chapters 6 and 7).

(30) *But you needn't have waited for that, need you?* (HWE 2252, written)

(31) *We needn't have bothered though, need we?* (KC3 2575, written)

(32) *It needn't have been, need it?* (KCP 6243, written)

A positive form of NEED is used in tag questions to its negative counterpart above, as opposed to *do*-insertion in the case of NEED TO:

(33) *That's what we need to do, don't we?* (non-corpus example)

Nokkonen (2006) goes further than affirming differences in semantics and views NEED TO as separate from the modal verb NEED, and believes they have been discussed together "quite misleadingly" (2006:31). The primary objective of her study is to focus on the semantic properties of modern-day usage of NEED TO, based on the fuzzy set theory as laid out by Jennifer Coates (1983). She gives attention to historic factors, also quoting Krug (2000) on this matter, and to the recent diachronic research into the usage of modal verbs by such authors as Leech (2003) and Smith (2003) that shows the decrease of NEED and increase of NEED TO from LOB to FLOB and from Brown to Frown (this was already discussed in 2.1, pp. 9-10). Nokkonen makes an important observation based on the findings of Smith (2003), with regard to the dramatic rise in the frequencies of NEED TO. On the one

hand, this rise may be due to the fact that NEED TO has become more common (in place of NEED) in non-assertive contexts, having already replaced NEED in assertive ones. On the other hand, the largest increase in frequencies has taken place in affirmative contexts, and not in negations and questions – therefore the rise of NEED TO cannot be explained merely by the falling frequencies of NEED (see fig.10, p.79). Nokkonen suggests that NEED TO may compete with MUST and HAVE TO in these contexts.

Smith states also: "[...] the rise of NEED TO far outstrips the fall of modal NEED [...]. NEED TO grows in use in all types of syntactic environments, and in some of these it is likely to be a competitor also with MUST and HAVE TO" (Smith 2003:255). Therefore, it seems appropriate to analyse in this thesis all four (semi-)modal verbs in question. Most researchers agree that the rapid growth of NEED TO cannot be accounted for merely by the decline of NEED. This can also be confirmed in the research by Smith (2003) and Leech (2003) into the Brown family corpora. British English corpus figures given by these two researchers differ slightly, more so in the case of NEED. Despite those slight differences in figures, the research by both of these authors shows the same tendency for the two modals in question: according to Leech, NEED (N'T) dropped by 40% in British English and by 12.5% in American English (Leech 2003: 228), while according to Smith, it dropped by 43.6% in British English. It is possible that different versions of search programs for searching and analysing the LOB or Flob corpora were used by these two researchers, hence the slight discrepancy in figures. In case of American English, Smith's figures and proportion always agree with Leech. As for NEED TO, it became more frequent by 249.1% (Leech 2003:229) or by 266.7% (Smith 2003:248) in British English and by 123.2% in American English (again, the figures agree here).

Nokkonen performs a rather extensive analysis of NEED TO in speech and writing in British English, and finds some epistemic instances of NEED TO in combination with future tense *will*, existential *there*, and some borderline cases where it can be interpreted as presenting a speaker's judgement about the truth of a proposition. These cases account for 3 per cent of all instances of this modal (Nokkonen 2006:57). I have not found anyone else discussing epistemic NEED TO and, admittedly, all cases exemplified by Nokkonen are rather far-fetched and require a great deal of context-searching. As regards NEED, on the other hand, about one third of its meaning in LOB and FLOB is epistemic, according to data by Leech (2003) and Smith (2003), which makes NEED quite similar to MUST in this respect.

Nokkonen's findings basically confirm that deontic obligation is a fuzzy set also in the case of NEED TO, and covers a wide range of meanings with modality of different strength and degree. As regards kinds of modality, Nokkonen chooses not to use the term "indeterminate cases" for dynamic instances of NEED TO that can often resemble epistemic uses. I have done the same in my analysis. Presumably, it is this kind of modality that was labelled "indeterminate" by e.g. Smith (2003:257) in his analysis of MUST and HAVE TO.

Another important point made by Nokkonen is that negated NEED seems to be synonymous to negated MUST (and *not* to negated NEED TO). In the case of NEEDN'T the speaker is trying to exert his or her authority over the addressee, whereas DON'T NEED TO expresses the constraint the speaker thinks the addressee is feeling (Nokkonen 2006:38). The example she uses in this connection (unclear if it is authentic) illustrates the point:

(34) *You needn't go to the toilet if you don't need to*.

NEEDN'T here is supposed to be semantically similar to negated MUST, which is true in this context. In other contexts, nevertheless, the difference between negated NEED and NEED TO is not so marked and Nokkonen's statement may be true only for part of the range of meanings of NEED (TO). The meaning of NEED TO, according to Nokkonen, in its turn resembles that of HAVE TO, the use of which has also increased, although not so dramatically (p. 10, ch. 2.1).

As mentioned on the previous p.28, there is little reason to suspect that the decline of NEED has contributed to the rise of NEED TO (particularly due to low frequencies of the former), but rather that NEED is in decline due to its similarity to MUST, especially in negations (Nokkonen 2006:66). It has to be said that the decline of MUST has received greater attention in literature than the rise of NEED TO. The decline of NEED has not received much attention either, most studies being concerned with more frequent modals. However, such dramatic rise as that of NEED TO has to be dealt with and analysed as much as possible.

Nokkonen also mentions that there were more instances of strong obligation with NEED TO in spoken British English (COLT and LLC corpora). However, the largest group of meanings is still represented by the objective meaning of NEED TO. Nokkonen divides non-epistemic NEED TO into four subdivisions: internal, dynamic, external and deontic, noting some of the problems posed by the initial division from core to periphery as discussed in chapter 3 here. While semantic analysis is in some cases determined by subjective

judgements and does not lend itself easily to universal classification, Nokkonen's framework was used for further research in order to perform my own analysis. However, I have grouped the meaning of NEED TO into groups that seemed more descriptive of its semantics, at the same time applying general principles of interpretation of meaning as laid out by Collins (see 2.2) and Nokkonen.

Most other researchers in my list of sources mention NEED TO, even if briefly, for the purpose of comparison to other modals of obligation and necessity. Collins (2005) has a small section on NEED and NEED TO where he states that the two modals are semantically identical and their differences in frequencies arise from the greater syntactic flexibility of NEED TO (something Nokkonen would not entirely agree with). Other than this, it seems that research into the use and frequencies of NEED TO is not as extensive as in the case of other modal verbs and is therefore an interesting field that can and will be explored further.

5. Material and Method

5.1. The British National Corpus (BNC)

The British National Corpus has become an important resource for English language research since it was released over ten years ago. It was designed to represent a wide cross-section of British English from the latter part of th 20th century, and includes both spoken and written sources. "The British National Corpus was released in 1995. The complete corpus totals some 100m running words of text, of which 90m words are written and 10m words are spoken British English" (Krug 2000:34). Due to the fact that NEED TO and especially NEED are infrequent modals, the size of the BNC is an advantage as it allows for greater numbers and hopefully higher representativeness of the results, also making the findings more accurate. This gives a researcher ability to make generalizations about language use as such. The on-line corpus has a user-friendly interface and "is currently the only corpus available that allows large-scale quantitative research along different parameters of variation" (Krug 2000:35). These parameters include sex, age and social class of speaker/writer and audience, text type, publication date for written texts and other data that can be searched for qualitative research. The corpus is fully tagged.

The BNC was accessed from http://omilia.uio.no/cgi-bin/bncweb/. In addition to that, towards the end of my work on this thesis, the contents of the whole of the BNC was also found to be available at the Brigham-Young University website, http://view.byu.edu/, compiled by Mark Davies, Professor of Corpus Linguistics. While the search engine seemed a little less user-friendly, the architecture and interface of the corpus on this latter website allows for different search combinations, such as, for example, comparing newspapers with academic prose. This latter search engine was not used for main research, only for the purpose of revision.

5.2. Method

In my search for NEED TO in the BNC, all instances of its other forms, namely past tense (*needed to*) and third-person singular (*needs to*), had to be included. My basic search algorithm for NEED TO was to look for *need*=VVB. The results were then sorted by following word at position 1 (to the right) with tag-restriction TO0. The occasional occurrences of nouns and lexical verbs were at about 1 to 3%. For example, out of 200 random occurrences of NEED TO (and its forms) in the written part of the BNC, 5 were lexical verbs, and one was a noun. For the same number of hits in the spoken part of the

corpus the number of lexical verbs and nouns was zero. Thus the error margin was fairly low for such a big corpus.

A suitable method for looking up all the forms of NEED TO had to be found. Initially, I started by looking up *needed to* and *needs to* without resorting to tags in the corpus, i.e. by simple input of the text in the search field. However, on subsequent analysis, 22 out of 50 written examples of *needed to* (i.e., 44%!) turned out to be past tense or passive of the lexical verb *need*. Obviously, this made the results that were thus obtained invalid. Although the error figures for the spoken registers and for *needs to* in the written language were much lower, I had to sort my results in order to produce a more reliable overview. In the BNC, 'word lookup' function can be used to find out all tags which can be assigned to a particular verb and its forms and compounds. Thus, it was possible to find out that one can look for 'needed=VVD', then sorted as described above, and 'needs=VVZ', also sorted as above (i.e., by looking for the tag TO0 for *to*, at 1 word to the right). The same results can be obtained even faster by entering the following search strings for each of the three forms of the verb respectively: '(need=VVB)(to=TO0)', '(needed=VVD)(to=TO0)' and '(needs=VVZ)(to=TO0)'.

In order to perform a qualitative analysis of NEED TO and all of its forms, a sample of 200 random occurrences in written and 200 in spoken language was chosen (a total of 400 sentences, spoken plus written). It had to be selected in accordance with the total frequencies of the forms of NEED TO and their proportion to the sum of all occurrences of this modal. In other words, the proportion of each of the three forms in a sample had to be the same as the proportion of these forms in the full corpus. In this way, the sample for qualitative analysis in the written language consists of 118 randomly selected cases of *need to* from a total of 81 hits per million words (or 59% of the total sum of frequencies), 20 random cases of *needed to* from 14 hits per million words (or 10% of total) and 62 random cases of *needs to* from 41 hits per million words (or 31% of total), a total of 200 sentences. The same 200-sentence sample in the spoken language was split into 158 *need to* from 190 hits per million words (or 79% of total), 8 *needed to* from 10 hits per million words (or 4% of total) and 34 *needs to* from 42 hits per million words (or 17% of total). This proportional representation was important to make the selective analysis of subject types and semantic meaning more reliable. For example, *needs to* only takes third-person subjects and *needed to* typically expresses reported obligation (see p.21). The proportion of mistakes in a sample obtained by using the above search strings was 3.5% in the written part (5 lexical verbs and 3 nouns out of 200

random hits), and 1% in a spoken sample (2 lexical verbs out of 200 hits). This shows that the reliability of quantitative analysis of the BNC is high, but not absolute, due to many wrongly-tagged words.

This is especially notable in the case of NEED. The search string 'need=VM0' is intended to return all hits where NEED functions as a modal verb, negations included. In the spoken part of the BNC, some 8% of the hits were tagged incorrectly and instead of a total of 210 hits (out of 10,341,729 words) I found only 193 matches where NEED was a modal verb, thus changing the figure from 20.3 to 18.7 hits per million words. The error margin for the written part of the corpus was considerably lower, in my sample of 200 random hits about 2.5% were assigned the wrong tag, this out of a total of 3,040 hits or 34.8 per million words. I am, however, reluctant to reduce the number of hits per million words by the same figure of 2.5%, as it may not be so exactly representative of the whole corpus, only of my limited sample.

My sample of the instances of MUST consists of 200 examples from the spoken section of the BNC, and 200 from the written one, all chosen at random from the total number of 589 and 731 hits per million words respectively. The negated forms (*mustn't* and *must not*) were included in the sample. The search string was '*must*=VM0'.

HAVE TO, in the same way as NEED TO, has all the forms of a lexical verb, that is, past tense/participle *had to*, third-person singular *has t*o and in principle can also be contracted *'s/'ve to*. It is possible to look for *'s* as a contraction of *has* in the BNC, otherwise it would have been impossible to separate it from the contractions of *is*. The contracted form 'S TO was not found in the written language, but search string for '("'s"=VHZ)(to=TO0)' returned 41 hits in the spoken BNC, or 3.96 hits per million words. Contracted *'ve to* was not particularly common either, search string '"'ve" (to=TO0)' returned 31 hits in the written language (0.36 per million words) and 66 hits in the spoken language (6.38 per million words). Small as these numbers may be, I have included them into total figures for HAVE TO in this investigation: 1595 cases per million words in the spoken language and 728 cases in the written. The sample of HAVE TO in the spoken language consisted of 136 random cases of *have to*, 50 cases of *had to* and 14 of *has to*, totalling 200 random sentences. The sample in the written language was distributed differently due to the different proportion of hits: 102 random cases of *have to*, 72 of *had to* and 26 of *has to*. This proportional distribution of samples originates in the total number of hits in the BNC, in exactly the same way as in the case of NEED TO.

6. NEED TO and other modals of obligation and necessity.

6.1. Subject types with deontic meaning.

Before NEED TO can be considered on its own, it has to be viewed within the larger context of the modality of strong obligation and epistemic necessity. Any peculiarities of its distribution will only be made clear by comparing it to other modals. In order to identify and analyse differences in distribution and use of MUST, NEED, NEED TO and HAVE TO, I have performed a qualitative analysis of 400 random sentences with each of the modals (200 written and 200 spoken). Only deontic uses of each of the modals were included in the comparison, with most common subject types marked in **bold**. It is notable that although there are many similarities in the distribution of subject types with different modals, they do not mirror one another in all ways.

Table 1. Distribution of subject types with deontic meaning (BNC, per 100 words in a random sample).

See Appendix p.91 for raw figures.

	Written				Spoken			
	MUST	**NEED**	**NEED TO**	**HAVE TO**	**MUST**	**NEED**	**NEED TO**	**HAVE TO**
you	13.0	8.6	14.6	10.7	19.6	**30.7**	**28.3**	**29.2**
I	12.0	4.9	3.1	7.1	**33.3**	15.0	14.1	17.4
we	10.0	5.4	18.8	7.6	14.7	8.4	31.8	18.0
3rd p. animate	10.0	23.8	25.5	**37.0**	15.7	14.5	8.6	26.7
3rd p. inanimate	**27.5**	**40.6**	10.4	18.8	6.9	29.0	7.6	4.1
there	1.5	1.6	0.5	1.0	2.0	0.0	1.0	1.5
passive	26.0	15.1	**27.1**	17.8	7.8	2.8	8.6	3.1

According to Smith and his findings in the Brown family corpora of written English (LOB, FLOB, Brown and Frown), "two of the most common types of grammatical subject used with NEED TO are the first person plural and passivized third person" (Smith 2003:261). Indeed, in my random sample, the first-person plural subject (*we*) occurs 18.8% of the time with written NEED TO and 31.8% of the time with spoken NEED TO. In the spoken sample, it is the most commonly used subject type (marked in bold in Table 1). Passives (most of which have third-person subjects) are used with NEED TO in 27.1% of

cases in the written sample and 8.6% in the spoken one, being the most commonly used subject type in the ***written*** medium. Smith's formulation can thus be re-defined by saying that first-person plural is the grammatical subject type that is the most common with NEED TO in the spoken language while passivized third person – in the written language. Smith mentions in his account that this percentage was about twice the proportion of HAVE TO and MUST (Smith 2003:261). According to my random sample, this is remarkably true, as 10% of all the written deontic uses of MUST had first-person plural subject, and 14.7% of the spoken. Indeed, this is two times lower than in the case of NEED TO. The frequencies of HAVE TO are even lower in the written sample, but somewhat higher than those of MUST in the spoken. Thus, despite different corpora being used, the results of my analysis and the one performed by Smith appear to agree, but of course a larger sample of random examples would have been even more representative. It should be safe to say that in the analysed sample NEED TO is twice as common as MUST and HAVE TO with first-person plural subjects. NEED was three times less common with *we* than NEED TO, in both the written and the spoken media.

Passives and third-person subjects are more common in the written language than in the spoken, which is a general characteristic of written discourse. However, passives in the written language are much less common with MUST and HAVE TO than with NEED and NEED TO. When it comes to spoken language, first- and second-person subjects predominate, although the distribution is also different here, *you* being the most common subject type with NEED and HAVE TO, *I* with MUST and *we* with NEED TO. The peculiarity (and perhaps limited distribution) of NEED can be seen from the fact that third-person inanimate subject was the second most common subject type with this modal in the ***spoken*** language. It was also the most common subject type in the written medium.

There may be a connection between the use of NEED TO with passives in the written language and with first-person plural *we* in the spoken. Both of these may facilitate the use of NEED TO as a marker of politely expressed obligation. Passives and first-person plural were the most common only with NEED TO, and no other modal considered here shared the same distribution, although MUST comes quite close in the written language at least with regard to passives. *We*, however, was much less common in the spoken language with other modals then it was with NEED TO. Given the fact that the most common meanings of NEED TO with this subject type are core and exhortation (see 7.1.1, 7.1.2 and 7.2.1.3), and that the inclusive quality of *we* is an important factor for how NEED TO is perceived in discourse,

this observation is certainly noteworthy. It seems that it is important for speakers to use NEED TO when the context may suggest a possibility of an inclusive and objective interpretation:

(35) *We <u>need to</u> be clearer than we usually are about what we mean by "democracy"* (EVP 68, written).

Another observation that seems to be important is that first-person plural subjects are more common in spoken British English, for NEED TO as well as all other modals considered here. According to Smith, "any sense of imposed authority is likely to be reduced by the inclusive quality of *we*" (Smith 2003:261). The meaning given to the verb by this inclusive quality is defined by Collins as "exhortation", especially in reference to oneself, that is, with *I* as a subject (Collins 2005:252). Exhortation is clearly also possible with *we* as a subject. Judging by subject type distribution, NEED TO is more commonly used for rhetorical self-exhortation with first-person plural subjects than MUST and HAVE TO. The latter are half as likely to have *we* as a subject. A directly opposite trend appears to occur with first-person singular (*I*) subjects, where MUST is twice as common as NEED TO. This type of subject was the most common one with spoken MUST in my sample. The one explanation for this is that MUST with first-person singular subjects bears no sense of obligation imposed on others and is therefore not pragmatically threatening. Its meaning then is often similar to NEED TO. Besides, MUST is also often used in formulaic expressions with *I* as subject (especially in the spoken language in my sample), where any sense of strong obligation is almost lost. The fact that no other modal expression considered here was as common with *I* in the spoken language as MUST is noteworthy, but its explanation is probably not limited to the two options suggested above, namely, that MUST is the most frequent where its pragmatic force is the weakest – either in formulaic expressions, or in self-exhortation.

I can infer with relative confidence that even when the speaker is conscious to refrain from any authoritative expressions is conversation, it is safe to use MUST with reference to oneself. In order to express reported obligation, *had to* is used instead of MUST. In a random sample of 100 cases of *had to*, 27% had *I* as subject in spoken and 16% in written British English. It is noteworthy how close these figures are to the distribution of deontic MUST with first-person singular subjects (33% and 12% respectively). This seems to agree with the above proposition that MUST is a 'safe' modal when referring to the speaker, *I*. Its past tense meaning, as expressed by *had to*, shares the same distribution. Its decline can therefore be the result of growing reluctance to impose obligation directly, hence also the lowest frequencies

with *you* as subject among modals in the spoken language.

In a research by Smith (2003:258), MUST was shown to have declined most with second-person subjects: a decline by 50% has occurred from written British English of 1961 in the LOB corpus to British English of 1991 in FLOB (as compared to a decline by 29.5% with third-person subjects). Since the greatest decline has been attested for precisely this subject type, it may be tempting to say that MUST has declined most in its prototypical meaning, but I have not performed any analysis to confirm this, and we have seen that many of the cases with *you* as subject are in fact not prototypical (p.15). However, "even when MUST is used with no obvious hint of speaker-imposed deontic meaning [...], in Present Day English it is liable to be perceived as odd, perhaps because it sounds unduly insistent" (Smith 2003:259). Smith concludes therefore that the decline of MUST is a casualty of a society where more and more emphasis is placed on the appearance of the equality of power and where discourse becomes more and more informal, even with superiors. "Just as these conditions are likely to disfavour the use of MUST, they should correspondingly favour other forms which express obligation less directly" (Smith 2003:259). In this respect the rise of NEED TO can be explained by the fact that even though pragmatically it can function as a marker of strong obligation, its unique feature is that the speaker or writer can claim that the action is being recommended for the doer's own sake:

(36) *In order to make a success of study, you* <u>*need to*</u> *learn how to manage your time* (EEB 267, written).

The obligation referred to here seems to be of approximately the same pragmatic value as in the following sentence from LOB, used by Smith to exemplify British English of the 1960s that seems rather dated now:

(37) *WHAT do you do nowadays if you* <u>*must*</u> *buy a house? One major authority on the subject today declares: "It will be a hard winter for the home buyer"*. (LOB, A16)

The first choice for a modal verb nowadays would probably have been NEED TO, and it is probable that in this and similar contexts MUST has been replaced by precisely NEED TO.

The passive voice was used 27.1% of times with NEED TO in the written sample and 8.6% in the spoken sample. The passive is the least common with NEED compared with other modals discussed here, while MUST differs little from NEED TO in its frequency with passive subjects. The passive was the most common with NEED TO in the written language. In my sample the distribution of NEED TO was therefore quite similar to the results reported

by Smith (2003): 26% of passivized subjects, it is unclear which corpus or corpora were analysed, most likely a corpus of written English. "When NEED TO is used with a passive verb phrase [...] it appears that the speaker/writer is reporting a need for action in a rather vague way, as if the source of the requirement is the situation itself" (Smith, 2003: 261). The same applies also to other modals, but MUST and NEED TO are especially notable in this respect, being the most common with passives. According to Collins, when "the source of obligation is not the speaker, but rather some external body or phenomenon [...] the subject is less strongly felt than in cases with direct speaker involvement" (Collins 2005:253). With third-person subjects in the active voice, obligation is felt much stronger. The role of passives is thus the one of 'softening' the obligation expressed by the modal verb. It is, however, still imposed, even if in a more disguised manner, a manner that is perhaps more suitable to the modern norms of expressing obligation.

For comparison, 26% of all deontic meanings of MUST were passivized in my written sample, which also corresponds to Smith's results for NEED TO (26%) as against only 7.8% of deontic MUST used with passive verbs in the sample of spoken British English. According to Biber et al (2006:497), MUST is most commonly used in the passive voice in academic prose and news. The fact that MUST is commonly used with the passive voice in academic prose corresponds to the frequent use of this modal to mark deontic obligation in this genre. In this way, although the modal meaning is still that of obligation, "the passive voice is used to avoid explicit identification of the person who is obliged to act" (Biber et al., 2006:500).

Due to the fact that a small number of passives (and a greater number of first- and second-person pronouns) is one of the characteristics of spoken discourse, it seems that these differences between spoken and written language do not say much about the use of the modals themselves in each of these mediums. This tendency is similar for all analysed modals, in all cases passives are markedly less common in spoken samples. What is probably important is that MUST and NEED TO have equal distribution with passives, again, probably due to the weak pragmatic force of the utterance. The rise of NEED TO does not appear to influence the distribution of MUST with passive constructions.

Both MUST and NEED TO are more common with second-person subjects (*you*) in the spoken language. This is despite of the fact that by employing direct address, a speaker may risk sounding too authoritative and that overall, deontic MUST is less common in the spoken language (in some analyses, epistemic MUST is even more common than deontic in this medium). A more objective NEED TO is slightly more common with *you*, at least in my

selection, and markedly more common with *we*, while MUST is markedly more common with *I.* This subject distribution, with *you* and *I* being the most common pronouns used with MUST in spoken language, as opposed to passive and third-person inanimate subjects in written, can primarily be explained by pronoun distribution in spoken language as such, and a naturally high proportion of means of direct address in conversation (see also Table 4, p.62). The use of modals of strong obligation is no exception to this.

6.2. Some syntactic differences.

It was already mentioned in the discussion of theoretical framework for this paper in chapter 3 (p.21), that the past tense of NEED TO does not have a personal directive meaning due to the fact that the action referred to by the main verb has already been performed. The same can be said of HAVE TO: it only makes a statement of past obligation. This objective use (the element of the speaker's involvement is missing) is a feature that MUST and NEED do not share with NEED TO and HAVE TO, because MUST does not have a past tense form, and its past tense is typically expressed by HAVE TO (i.e., *had to*). Nothing was found to contradict the statement that the past tense of NEED is expressed by *needed to* in the same manner. Both HAVE TO and NEED TO can combine with all grammatical expressions of tense in English, unlike MUST and NEED. This fact also accounts for the limited distribution of the latter two modals, and to some extent for their lower frequencies. This being said, MUST is twice as common as NEED TO in the spoken language and nearly six times as common in the written, see figure 1, p.10.

The semi-modal that is used instead of MUST in cases required by syntactic considerations as well as, I believe, for semantic reasons, is HAVE TO. It is three times as common as MUST in the spoken language, but the two modals have a nearly equal distribution in the written medium. This suggests to me that as a competitor to MUST, HAVE TO is primarily used in the spoken language. On the whole, HAVE TO had the highest versatility in my random sample with regard to combinations with tense, aspect and voice, and also with other modals and semi-modals. The latter feature seems to be characteristic of HAVE TO and was not found with NEED TO or other modals analysed here, at least not in my random samples. The following examples may illustrate this feature of HAVE TO:

(38) *You used to have to rub all your clothes and on this rub board or get a little brush and and scrub the s-- collar and your cuffs [...]* (FYD 86, spoken).

(39) *I mean it has been referred to that we might have to do them again, I sincerely hope*

that we don't have to go through this process again (JSG 159, spoken).

(40) *To do so you <u>would have to</u> keep careful pedigree records of caddises bred in captivity, and breeding them is difficult* (ARR 1134, written).

(41) *To mitigate this problem, the transferor company <u>may have to</u> be re-financed before the hive-down [...]* (J6S 1009, written).

Unlike HAVE TO, NEED TO in my examples combined primarily with WILL, the modal status of which is somewhat dubious. MAY has also occurred in combinations with NEED TO, but no other combinations were found. (38), colloquial as it is, would have been totally ungrammatical with NEED TO, while the other three examples (39-41) seem to be acceptable, even if not that likely. However, in my random sample, cases when NEED TO collocated with other modal verbs and expressions were much fewer than in the case of HAVE TO. It seems that there is a generally higher syntactic versatility on the part of HAVE TO – not surprising, perhaps, since it is much more common, especially in the spoken language where versatility plays a crucial role in instant speech production. It is unlikely that HAVE TO is subject to any competition on the part of NEED TO for syntactic reasons. In cases when NEED TO is chosen over MUST and HAVE TO, semantic considerations prevail. I believe the use of NEED TO as a competitor to MUST occurs primarily because of its objective meaning that is at the same time different from a more subjective HAVE TO. The only contexts where NEED TO is required syntactically is when it is used instead of NEED – in the past tense, with perfective aspect and with other modals. More on this can be found in 7.5.

6.3. The kinds of modality.

In Longman Spoken and Written English Corpus compiled and used by Biber et al. (2006) for the purposes of *Longman Grammar of Spoken and Written English*, MUST was the only modal verb of obligation with predominant epistemic meaning, and that in conversation. All other modals and semi-modals of obligation are used predominantly to mark personal obligation, i.e. to express deontic meaning.

The fact that MUST with a meaning of logical necessity is most common in conversation, while the deontic meaning of obligation is most common in academic prose, "runs counter to the expectation of personal involvement" (Biber et al., 2006:495). Indeed, the common pattern found in various corpora of English is that "first and second person pronouns are the most common in conversation, the passive voice in academic prose and

third person pronouns in fictional narratives" (Nokkonen 2006:43). As shown in Table 1, p.34, both MUST and NEED TO are more common with first and second-person pronouns in the spoken language also according to my random sample. Therefore, due to the fact that conversation has the highest number of direct address patterns it may be expected that it will also have the highest frequencies of MUST used to indicate personal obligation, not the epistemic modal which is typically used with third person pronouns/words. But this is obviously not the case. "The relative rarity of *must* marking personal obligation in conversation is probably due to strong directive force this modal has when used in face-to face interaction" (Biber et al., 2006:495).

All other modals discussed here had only a few epistemic uses, NEED TO being the least common in this sense, with one dubious epistemic/peripheral case (see (99) on p.73). For epistemic instances of HAVE TO and NEED see (4) and (5) on page 12, and the discussion on the same page. The distribution of deontic and epistemic meanings is graphically represented in Fig. 2:

Figure 2. Deontic and epistemic modality of obligation and necessity in spoken and written English (per 100 sentences in a random sample, BNC)
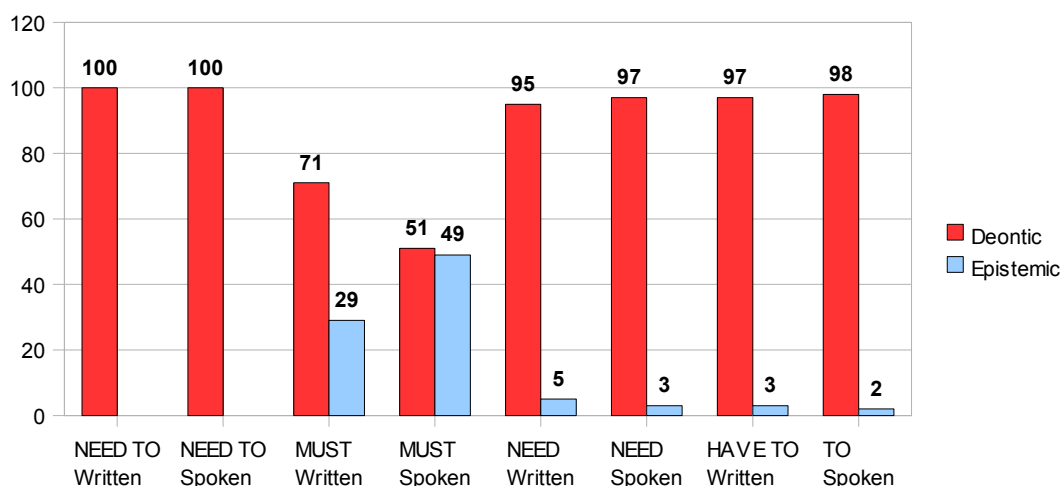
In agreement with the results of my sample, HAVE TO has been documented to have epistemic meaning by Smith (2003:257) in some 1% of the cases in LOB and 3% in FLOB. As most of the researchers on my sources list for this thesis suggest, most notably Nokkonen (2006), Krug (2000) and Ziegler (2003), epistemic meaning is a later development of deontic

meanings (in most cases probably those meanings that were labelled dynamic in my analysis). The fact is, however, that the use of NEED (TO) is attested in Old English well before before AD 1400 (Biber et al. 2006:490), but it has not developed epistemic uses yet. Some cases could probably border on deontic and epistemic modality, but of all the researchers referred to in this thesis, only Nokkonen offers epistemic examples of NEED TO, and none of them seemed particularly convincing to me. Even though NEED seems to be slightly more frequent in epistemic sense than NEED TO, neither of the forms are common markers of epistemic necessity. The development from deontic to epistemic modality is therefore not an automatic evolution, as otherwise the ratio of epistemic to deontic meanings of NEED (TO) would have been closer to that of the older modal MUST, which it is not. At the same time, certain peripheral meanings that border on epistemic modality may show that the potential to develop such epistemic uses is present. Individual cases of NEED TO will be analysed for this purpose in 7.1.6 and 7.3.

6.4. Distributional patterns of MUST, NEED, NEED TO and HAVE TO.

6.4.1. Register variation

"Modal and semi-modal verbs are most common in conversation, and least common in news and academic prose" (Biber et al 2006:486). Conversation and academic prose are the two registers that are in most stark contrast with each other – one register that every speaker of a language masters as opposed to the other of highly specialized academic writing. The comparison of registers is an important factor in determining the forces behind variation and change in the field of modality of obligation. "Some genres, e.g. journalistic prose, are more open to innovation, while others, e.g. academic writing, tend to retain conservative features. These differences do not reflect a change in any grammatical rules but a shift in stylistic preferences due to such factors as colloquialization, wider acceptance of social dialects and the decreasing use of overt indicators of hierarchical relationships" (Nokkonen 2006:40).

Thus, comparing the registers leads to the importance of considering socio-linguistic factors, such as sex of speaker/author or audience. It is these factors that may explain register variation and the shift in stylistic preferences. I have concentrated on gender differences for the purpose of this research, but differences in age of speaker may compensate for the lack of diachronic variation in the spoken component of the BNC. I will look into this factor when discussing NEED TO in greater detail in 7.4.2.

MUST, in the same way as NEED TO, is slightly more common in dialogue, but the

difference is insignificant: only 7 cases per million words (591 in dialogue as opposed to 584 in monologue). The difference in the case of NEED TO was 8 cases per million words. There is thus nothing to suggest that NEED TO is more common in dialogue than MUST. As regards the contexts where direct address is involved, it seems indeed from my findings that NEED TO is more common than MUST in cases where *you* is a subject, especially in spoken discourse (Table 1, p.34). In the spoken language, also NEED and HAVE TO were more common. There is therefore nothing in the interaction types themselves, i.e., monologue versus dialogue, that speaks for differentiation in the use of modals. This applies to all modals considered here as they are used in the BNC: there was also no difference between the use of NEED in monologue as opposed to dialogue, while HAVE TO, on the other hand, was 9% more common in dialogue, compared to 1% difference in the case of MUST, 3% in the case of NEED TO and 0% in the case of NEED. The significance of this is uncertain. Considering the high overall frequencies of HAVE TO, the results ought to be representative of language as such. In this case, distribution of HAVE TO in British English may point to the fact that it is preferred (by small margin) to other modals of obligation as means of direct address. While all semi-modals appear to be more common in speech, "this is especially the case with [...] *have to* in conversation, [it] being used more commonly than any other form in this class" (Biber et al 2006:494).

Greater differences are found in the use of modals in different media, or categories of written texts. For a closer look at how the distribution of NEED TO varies in the written medium, we need to look at a different grouping of texts that is available in the BNC. The BNC division into medium of text applies to the whole written part of the corpus and consists of the following five broad categories: books, periodicals, written texts to-be-spoken, miscellaneous published and miscellaneous unpublished texts. Newspapers are included in the 'periodicals' category. The 'Miscellaneous published' category includes brochures, leaflets, manuals and advertisements. The 'Miscellaneous unpublished' category includes letters, memos, reports, minutes, university essays and creative writing. The 'written-to-be-spoken' category includes scripted television material, play scripts and other material intended to be read aloud; transcripts of more informal broadcast materials such as discussions or phone-ins are included in the spoken part of the corpus[2]. I have grouped these five categories into three even broader ones: books and periodicals, written-to-be-spoken and miscellaneous.

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[2] Information taken from http://www.natcorp.ox.ac.uk/XMLedition/URG/BNCdes.html#wrides accessed 28.06.2008

Figure 3. Modality of obligation in the written medium (per million words, BNC).
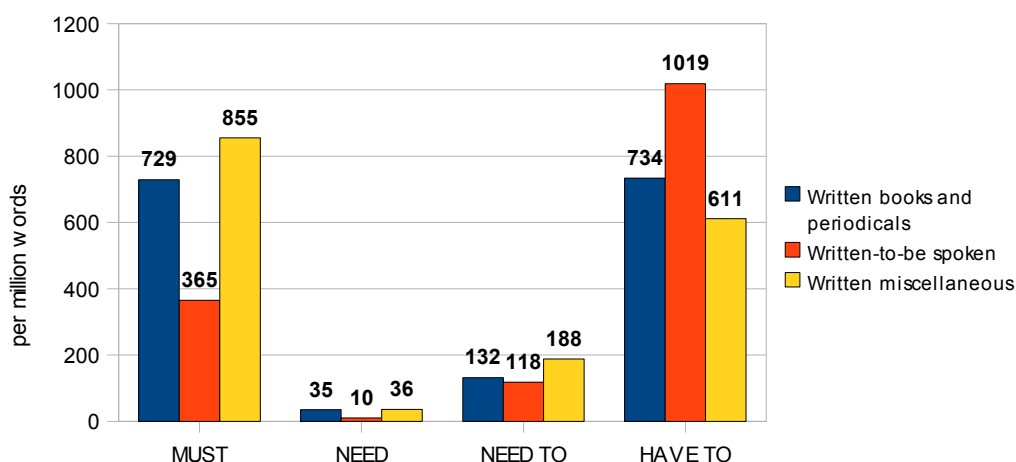
Figure 3 shows some notable differences in the distribution of modals, with HAVE TO seemingly following completely different distributional patterns than the other three verbs. Namely, it is the most common in written texts to-be-spoken, whilst the other three modals are the least common in this category. It is likely that in educational contexts and speeches HAVE TO is preferred over NEED TO and the two obligation modals proper – NEED and MUST. When it comes to text categories of the written language, of which there are nine distinguished in the BNC, differences in use of the same modal between the various categories are as interesting as differences between modals:

Figure 4. Modality of obligation in text categories, written English
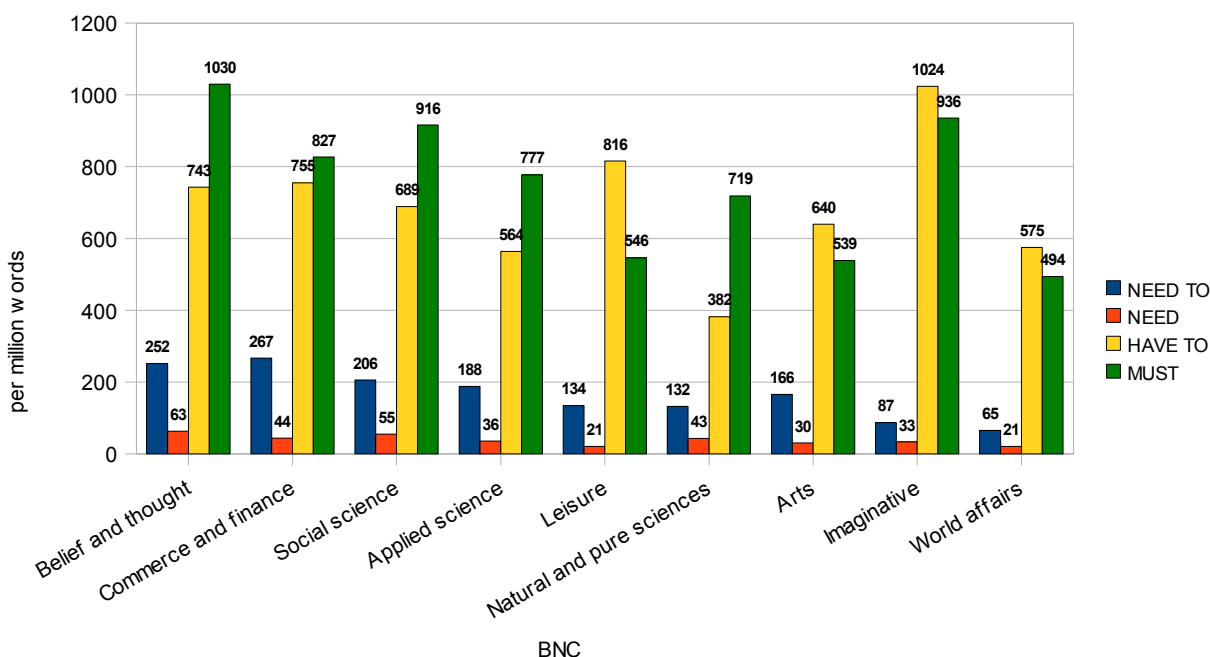
There are certain similarities in the distribution of modals – for example NEED TO, NEED and MUST are the least common in world affairs. This fact seems to indicate that there is little modality of obligation in this text category. Due to the fact that HAVE TO is the most frequent modal in the category of world affairs, although not the most frequent of all categories, it may be that some of its uses are syntactically required, such as past tense use replacing MUST. Imaginative prose, however, proves to be a different case. It was also one of the text categories where NEED TO was the least common, but the explanation for this is not the lack of obligation modality. This category was the most common one with HAVE TO, and MUST has it as the second most common, after belief and thought. Imaginative prose seems therefore to be more open to subjective judgement than (to some extent) commerce and finance and especially arts, where a relatively high proportion of NEED TO contrasts with lower numbers of HAVE TO and MUST.

There are other noteworthy features in this distribution analysis – for example the prominence of MUST in the domain of belief and thought and all sciences. HAVE TO, on the other hand, is dominant in leisure, arts, world affairs and imaginative prose. Of course, the chart also shows that NEED TO, despite its rapid increase, still has a very low frequency in all text categories, as compared to MUST and HAVE TO. It is clear that the distribution of obligation modals in written text categories does not mirror one another. The usage patterns are often different, which I believe is caused by differences in meaning. For example, the prominence of HAVE TO in domains where colloquial features are more common and acceptable – most notably, imaginative prose and leisure – points to the fact that it is still considered to be a more 'colloquial' modal. On the other hand, HAVE TO is the least common in natural and pure science, a domain where obligation modality does not seem to be used very often, and also a very formal domain of science, but even so, MUST dominates the picture here, with the largest gap between its use and the use of all other modals.

Both NEED and NEED TO appear to follow similar distribution patterns with a few exceptions. NEED is more frequent in social science than commerce and finance, while the reverse pattern is true for NEED TO. Again, this may have something to do with overall formality of the genre, NEED TO being more common in more informal categories. NEED is also the least frequent in leisure texts which are somewhere in the middle of frequency distribution for NEED TO. On the other hand, both modals are not often found in world affairs.

6.4.2. Gender variation

Fig. 5 displays how the usage of the four modals considered here varies across genders in speech and writing:

Figure 5.

Distribution of modals according to sex of speaker/ writer. BNC, per million words
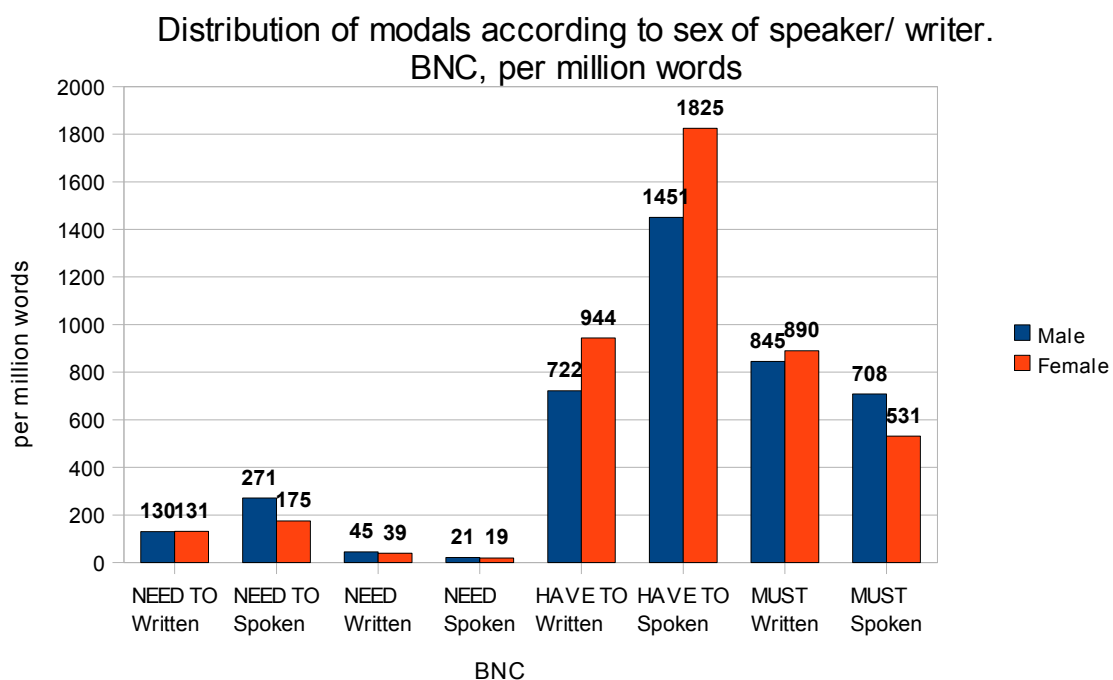
The chart shows that apart from differing frequencies of modals as such – NEED being the least frequent and HAVE TO the most frequent – there are also great gender differences in the use of NEED TO, NEED, HAVE TO and MUST. At the same time, if we look at these differences against the backdrop of the sum of frequencies of the four modals used here, gender variation within this total would not be so marked. In the written language, the sum of the frequencies of the four obligation modals was 1742 occurrences per million words for male speakers, and 2004 for female. In other words, both sexes express obligation – as represented by modals and marginal modals NEED TO, NEED, HAVE TO, and MUST – approximately equally often, with a slight female dominance. Their choices, however, vary greatly as to *which* modals they choose, as can be seen from Fig. 5. In the spoken language, the total use of modality is even more equal – 2451 cases per million words for male speakers and 2550 for female. Thus, if in the written language female writers used modality of obligation a little more often than male ones, in the spoken the differences are almost non-existent and both sexes use obligation modality, as it is represented by the four modals, with

equal frequency. At the same time, it is precisely in the spoken language that modality is used more often and the gender differences are greatest, especially in the use of NEED TO and MUST.

Thus we have an approximately equal usage frequency of obligation modality as the sum of the four modals, but great gender differences in the use of individual modal verbs. Male speakers prefer using NEED in both varieties, written and spoken. In the case of NEED TO, the greatest differences between sexes are found in the spoken language, where it is 62% more common with male speakers, but the distribution in the written language is even between the sexes. HAVE TO is preferred by female speakers and writers, while MUST is somewhat unique, being more common with female *writers* but with male *speakers* (and in the spoken language the difference is more notable).

Due to the fact that I have not here considered other verbs and expressions that communicate obligation modality (such as SHOULD, HAVE GOT TO, or a less frequent OUGHT TO), no final conclusions about gender differences in the use of modality of obligation can be drawn. It seems reasonable to speculate that, at least in some contexts, female speakers prefer HAVE TO over NEED TO and MUST, while male speakers prefer NEED TO and MUST over HAVE TO. One can say very little about the role of NEED in this distribution due to its low frequencies, but it is notable that it shows more similarity with MUST than with NEED TO in that it is more common in the written language (this has become the characteristic of modal verbs proper as some diachronic research suggests). The reasons for that are somewhat different for the two modals, apart from the general decline in use of modal verbs proper, a decline that seems to have begun in the spoken language but was best attested to in the written, see for example Smith (2003) and Leech (2003). While both NEED and MUST function syntactically as modal verbs proper and thus have a limited distribution, MUST expresses the strongest obligation, while NEED, not being a face-threatening modal, sounds obsolete in most contexts nowadays, and is therefore a less likely choice, especially in informal speech.

In the written language, gender differences are the greatest percentage-wise in the case of HAVE TO, while MUST and NEED TO have a more equal distribution between genders. Due to the fact that HAVE TO is considerably more frequent than MUST and NEED TO, it is difficult to say how often NEED TO is used instead of it, if it is at all. It is notable that, in the written language, modality of obligation is used more often by female writers than by male ones, with a difference of 262 hits per million words.

It should also be noted that the frequencies here do not take into account deontic and epistemic meanings – and the latter have a considerable share in the case of MUST. A bigger and much more detailed research on gender and modality would be needed to answer all questions posed by this distribution picture. It seems that much of such research is yet to be undertaken in future studies, covering both semantics and socio-linguistic factors of all expressions of obligation modality, and not just the most common ones.

6.5. NEED TO and NEED

NEED and NEED TO are often dealt with separately from other forms, perhaps due to the fact that both express internally-motivated obligation, "whereas obligation is prototypically felt to come from a source external to the agent" (Smith 2003:244). This may also be one of the reasons why these modals received less attention from researchers whose main focus was on the more 'prototypical' means of expressing obligation, such as MUST and HAVE TO.

NEED and NEED TO are typically referred to under the same heading NEED (TO). They have an intertwined history and are different syntactically in that the distribution of NEED is much more limited (see 2.1). Similarly to MUST, it does not have a past tense form and does not combine with other modals and *will*. In addition, its use in assertive contexts (statements) is very restricted or non-existent. NEED, similarly to MUST and other modal verbs proper, has no non-finite forms and cannot combine with other modals. On the other hand, NEED TO functions as a lexical verb and thus takes *do*-insertion, and can have non-finite forms and combines freely with other modals.

Another syntactic consideration can be exemplified by the following two sentences (non-corpus examples):

(42) *You needn't have said it*.

(43) *You didn't need to say it*.

Due to the fact that NEED does not take *do*-support, (43) is not grammatically possible with it. The same would, of course, apply also to MUST and any other modal verb proper. However, in this case this feature of NEED leads to a Simple Past tense being used with NEED TO and a perfective aspect in the present tense with NEED. In this way, a semantic difference arises out of a syntactic one, (42) and (43) also become different in meaning – in (42) the situation has a connection to the present and the Present Perfect tense is used, while

in (43) the action referred to has no relation to the present. Moreover, the differences reflect themselves in the following extensions of the above sentences (non-corpus examples):

(44) *I think Mark looks a little offended at what you said. You needn't have said it. I'm sure we could have sorted it out between us.*

(45) *It's good you never told Mark how you felt about that. He understood eventually. You didn't need to say it.*

In (44) the action is completed while in (45) the completion of the action is not in focus – rather the lack of necessity to perform it. Thus the grammatical differences between the uses of the two forms – that arise due to the fact that NEED cannot be used in a Simple Past tense – also lead to differences that affect the meaning of NEED TO and NEED. The semantic difference between the two is, however, not always so clear as the syntactic gap exemplified by (42) and (43) above. Many would claim that these are only nuances of meaning distinguishing the two, that they are otherwise "almost synonymous" (Smith 2003:245). This statement is not shared by all, for example, Nokkonen states: "In most examples, NEED TO seems to be the negative counterpart of MUST, and it also differs in meaning from NEED TO in the same way as MUST in affirmative contexts" (Nokkonen 2006:65).

It is natural to assume that differing frequencies of NEED and NEED TO are primarily due to syntactic flexibility of the latter. NEED is said to be limited to non-assertive contexts, that is, it is used almost exclusively in negations and questions, while NEED TO is used in all assertive and non-assertive contexts and combines freely with tense, aspect and voice. For example, NEED cannot be used in constructions such as the following:

(46) *You <u>may need to</u> turn to professional advice* (FMS 308, spoken).

(47) *He would check it if he <u>needed to</u>, but he could not at the moment see why Morgan would have wanted to kill the daughter to whom he had plainly been so devoted* (AB9 1439, written).

In (46) a non-tensed form, the bare infinitive is used, which is not possible with NEED. In (47) NEED TO is in the past tense form that NEED does not have. In the next example, an assertive statement, the use of NEED instead of NEED TO is not possible either, and would have probably been considered a slip of the tongue, had it been used in spoken language:

(48) *I <u>need to</u> get out of this place* (HH0 1656, written).

Considering Tottie's statement quoted on p.25, that NEED is often used in negatives in

British English, especially with verbs like *bother, fear, worry*, I have analysed the sentences in my random sample of NEED for the most typical verbs to occur with this modal. The most common verb that occurs with NEED in my sample is *be*, used in about one fourth of all cases in the written language and in nearly half of all cases in the spoken. *Worry* was indeed a common verb with NEED, used 12 times in a 200-sentence sample in the written language and 5 times out of 193-sentence sample in the spoken language. *Bother* with NEED was found 3 times in the written sample, and there were no instances of *fear*, but the construction *need not be afraid* was found in both the written and the spoken sample. In the latter, consisting of a total of 193 occurrences of NEED from the whole of the spoken BNC, *be* and *do* were the most common verbs with NEED. *Bother* was found 9 times out of 193 and the verb *fear* was used once with NEED. There were also cases where fear was used as a noun such as in (49):

(49) *But as I said they <u>need</u> have no <u>fear</u>* (K6M 175, spoken).

I can therefore conclude that, granted its limited distribution, NEED is used in a wider variety of contexts in British English than Tottie's description seems to suggest. Other verbs used with this modal include *concern, say, be aware of, include, interfere, have*, etc.

As regards the epistemic uses of NEED, there were rather few epistemic instances. However, unlike NEED TO, NEED is fully capable of taking epistemic meaning, and of the instances I have found, most were quite clear and straightforward (see Fig.2 p.41 for a graphic representation of deontic and epistemic modality in my sample). This is quite unlike the examples suggested for NEED TO to in 7.3 (98) and (99) on p.73. The following examples illustrate the epistemic uses of NEED:

(50) *In a general sense this is probably always true but it <u>need</u> not be true in a detailed sense* (H0E 1110, written).

(51) *So he <u>needn't</u> have been right you see* [...] (KP1 4565, spoken).

The typical structures where NEED is used are negations and questions, and in all these cases it can easily be replaced by NEED TO. Thus, while NEED cannot be used instead of NEED TO in may contexts, it can always be replaced by the semi-modal. This status of NEED explains it low frequencies. Most of the speakers are obviously preferring the uniformity of using the one modal expression that also has syntactic behaviour of a lexical verb – NEED TO.

(52) *The curve <u>need</u> not be downward-sloping* (H9J 649, written).

(53) *You <u>needn't</u> stop because I'm gone* (G5K 1361, spoken).

(54) *Oh <u>need</u> you ask (KCA 1338, spoken).*

In my sample, NEED was not limited purely to negations and questions. I have found no information in previous research on the use of NEED in assertive contexts. Compare Smith (2003:245): "...NEED has all the characteristics of a modal but is limited to non-assertive contexts..." and Nokkonen (2006:36): "In modern usage, modal NEED appears in non-assertive contexts, otherwise it is very rare". NEED is, indeed, very rare, especially in spoken English. Of 10,341,729 words of the spoken part of the BNC, the modal verb NEED is only used 193 times, which amounts to 18.7 hits per million words. It is about twice as common in the spoken corpus, with 34.8 hits per million words (possibly reduced by approximately 2.5% of erroneously attached tags).

Rare as it is, the BNC sample of NEED shows that the modal is *not* restricted to merely negations and questions, at least not exclusively so, in British English. On the contrary, 24% of analysed cases in the written sample, and 22% of all hits in spoken BNC featured NEED that is not directly negated and not in a question. Most of the other cases were negations. Questions in my sample were very rare, a feature NEED shares with NEED TO. However, to call these uses assertive would not be correct in most of the cases, with NEED used in fixed phrases, conditionals and very often with a negation within the clause. Compare:

(55) *[...] well I've said that one so many time* (sic!) *I don't think I <u>need</u> repeat it* (JT8 38, spoken).

In (55) NEED itself is not negated. However, the main clause, *I don't think*, is negated, and the construction could be paraphrased as *I think I needn't repeat it* without much change in meaning. This type of construction seems to be a rather common prerequisite for using NEED in its positive form. It can be called 'implied' negation and is even more obvious in the following sentence:

(56) *This gave Parliament still more control in that the comptroller's report <u>need</u> no longer be taken at face value, but could be subjected to detailed investigation by the PAC* (H7T 470, written)

Conditional phrase *if need be* (57) is very common with NEED and seems to be a fixed expression that thrives equally well in the spoken and the written language, although of course in absolute terms its frequency is insignificant:

(57) *Erm, again it's an option for them to have if <u>need</u> be* (KGU 261, spoken).

Where there is what seems to be an assertive phrase, without conditionals or 'implied' negation, the contexts in which NEED is used seem to be rather limited, with fixed phrases such as *need only, need be (done)*, *need I say*, etc., and a rather limited number of verbs, compare:

(58) *He took this to be a truth "so near and obvious to the mind, that a man <u>need</u> only open his eyes to see" it* (ABM 1279, written).

(59) *Well, if you'll convey my apologies to Miss Smith, I think we've said all we <u>need</u> say* (BMU 2244, written).

(60) *You only <u>need</u> ask* (EE6 317, written).

In the last example, (60), coming from a university prospectus published between 1985 and 1993, NEED seems to thrive well in an assertive context. However, even though it can still be used in sentences similar to (60), its limited collocation can be proved by the fact that a phrase like **You <u>need</u> read this* is not likely to be used in modern English. Thus NEED in assertive contexts is almost idiomatic and Salkie's definition of what I called formulaic use in 2.2 can also be applied to the assertive form of NEED – an idiomatic construction with a slot that can only be filled by a limited class of lexical items.

To sum up, even though NEED can sometimes be used in assertive contexts in British English, it appears in idiomatic expressions mostly, and also in conditional phrases and with negative pronouns such as *nothing*, *nobody*, etc. I can thus conclude that my findings support the statement that NEED is restricted to non-assertive contexts, although it is not restricted to purely questions and negations, as some examples given by for example Nokkonen (2006) and many grammar books seem to suggest. NEED is indeed used mostly with negations, but it is as rare in questions and patterns with inverted word order as it is in positive clauses.

As regards the meaning of NEED, said to be similar to that of NEED TO, i.e., expressing internally-motivated obligation (Smith 2003:244), it ought to be considered in more detail, especially in the case of negations. According to Nokkonen, NEED in negations is more similar to negated MUST than NEED TO: "NEED seems to be one of the negative counterparts of MUST in both root and epistemic meaning" (Nokkonen 2006:67). Negations are also important for comparative purposes due to the fact that NEED TO can be used in a negated form. The question to be asked is what qualities of the two modals make speakers or writers choose one over the other in non-assertive contexts.

According to Smith, who analysed some of the factors motivating the rise of NEED TO, although negation seems to follow the same trend, "most of the increased uses of NEED TO are in affirmative contexts" (Smith 2003:261). Negated NEED TO is relatively infrequent, in BNC it accounted for about 5% of the total frequency. Yet in negations, where semantic differences seem to be somewhat neutralised, it can also be freely used as a substitute for DON'T HAVE TO and NEEDN'T, because all three modals seem to express approximately the same meaning when negated (*it is not necessary to*), compare:

(61) *So women <u>don't need to</u> wear Burkhas to avoid being seen by strange men* (A6V 680, written).

DON'T NEED TO, however, cannot be used as a substitute for deontic MUSTN'T/ MUST NOT, because the latter means prohibition. In this respect it is interesting to look into Nokkonen's claim that NEEDN'T and MUST NOT are semantically similar, and different from DON'T NEED TO and DON'T HAVE TO. There are clearly different nuances of meaning in the use of these modals and in some cases it seems that there is no difference between the use of negated MUST and NEED TO. However, when compared against each other MUSTN'T and NEEDN'T seem very different to me:

(62) *I could put in another coin, or <u>I needn't</u>* (BMS 977, written).

(63) *He <u>mustn't</u> be expected to make an effort when he doesn't feel like it [...]* (H9G 1635, written).

(64) *We <u>needn't</u> debate it here* (FUJ 451, spoken).

(65) *Kirsty's future <u>mustn't</u> be decided in such a way* (JSX 3142, written).

In the above examples (62) to (65) the difference between the two modals lies in the way the obligation is negated – auxiliary negation as opposed to main verb negation. In the case of MUST, there is an obligation **not** to perform an action, while in the case of NEED there is **no obligation** to perform an action. This last meaning of negated obligation applies also to NEED TO and HAVE TO. I can therefore see no support for Nokkonen's proposition in the BNC examples, which leads to the double conclusion that NEEDN'T and MUSTN'T are not syntactically similar, while at the same time NEED is more similar to NEED TO then Nokkonen claims. Therefore, their separate treatment is appropriate for practical purposes due to the syntactic differences, but is hardly justified semantically. It would be more correct to call the them two different forms of the same verb rather than two different modal verbs. At the same time, due to very low frequencies of NEED and to the considerable syntactic

differences between the two forms, it seems justified to focus on NEED TO as the form that has increased in frequencies and is thriving in the modern language use.

7. Meanings and Communicative Functions of NEED TO.

7.1. Semantics of NEED TO. Deontic meaning.

Even though it is difficult – and perhaps unnecessary – to set perfectly clear boundaries between the semantic categories chosen for analysis here, I have attempted to exemplify the semantic meanings of NEED TO and discuss the ways in which the use of a subject influences the perception of the message this modal carries. The categories as presented in chapter 3 may be viewed as milestones along the lines of which the modality of NEED TO is expressed. They ought to show different shades of meaning NEED TO can take, and also help to group other factors that influence this meaning, which tends to flow from one category into another rather than have sharply-defined boundaries. Among these factors, the variation in subject types is the most important one and will in its turn help to shed light on the essence of semantic categories. I am going to start my discussion with the semantic categories of NEED TO. These categories have been introduced in chapter 3, pp. 20-25.

7.1.1. Core meaning

The core meaning of NEED TO can also be called prototypical and it is also the most common meaning of this modal, found in approximately two-thirds of cases in both written and spoken samples, see Table 2, p.61. Its shades of meaning are influenced by the subject types NEED TO occurs with, but core meaning always expresses internally-motivated compulsion. Core NEED TO with first-person subjects may be called the 'narrowly-defined core'. It is such use that best describes NEED TO in the meaning of internally-motivated compulsion where the speaker at the same time has little control over the source of obligation. NEED TO with first-person subjects is therefore also the clearest example of such a relationship between subject type and meaning of the modal verb:

(66) *I will erm, I tell you what, I'll phone the publishers this morning and see if I can get them to, to er, I need to phone them anyway* (HUL 684, spoken).

In *I need to phone them anyway*, where the subject is also the speaker, NEED TO expresses objective obligation. Its main characteristics are that it is directed towards oneself (*I*) and is not enforced or required but rather originates from the circumstances. The obligation thus becomes a natural consequence of the events that occurred prior to the time of speaking, rather than a duty. It is also not perceived by the speaker as something he or she can control (as opposed to *I must*). I will adopt a broader definition of core, considering also other subject types than first-person singular and plural.

Core NEED TO with *we* as a subject denotes an objectively-motivated need or necessity, a need that the speaker feels compelled to attend to. It is somewhat different from the sense of duty or obligation imposed on the speaker by others, most commonly those in a position of authority, that is characteristic of MUST:

(67) *It is clear we need to sell and bring in a fair amount of money before we can think of buying again* (CEP 7188, written).

In (67), the inclusive *we* simply refers to a plural subject, but the meaning of NEED TO is the same as with singular *I*.

As mentioned on p.15 and p.21, some researchers, e.g. Nokkonen (2006) or Collins (2005) choose to restrict core meaning to particular subject types, such as *you* in the case of MUST, and *I* or *we* in the case of NEED TO. However, used with other subject types, NEED TO can have an equally distinct 'extended' core meaning, even if this meaning is viewed from a different angle:

(68) *So you need to be aware of too many carbohydrates* (F8A 393, spoken).

In (68), obligation is not directed towards the speaker as in the cases when *I* or *we* were used, but towards the addressee (*you*). However, the speaker is referring to the assumed needs of the addressee that also appear to originate naturally from the circumstances, similarly to (66) above. Thus the obligation in core cases with *you* as a subject seems to flow naturally from such assumed needs, and the addressee anticipates and agrees with this objective compulsion. Similar shade of meaning can be seen in the examples with third-person animate subjects:

(69) *It's about really the tragedy of a man who's too old to change and too stupid to realize he needs to* (KGH 1040, spoken).

(70)   *Ruth*   *<-|-> Give it to Andrew. <-|->*

         Paul   *<-|-> Mum.*

                   Uncle An--, Uncle Andrew needs to look at it <-|-> (KD0 9723-25, spoken).

Due to the fact that with third-person inanimate subjects obligation is felt to be very impersonal, the already objective core meaning of NEED TO has a more removed and subtle shade:

(71) *Firms need to include a contingency fund within the budget* (CHS 278, written).

(72) *Companies need to be both big and quick, or to get big quickly* (EF6 571, written).

Examples (71) and (72) show that core cases with inanimate subjects usually have a low degree of modality and may look like mere statements of facts and therefore resemble dynamic meanings. The difference lies in the type of verb used with NEED TO. An activity verb, such as *include* in (71), would suggest core interpretation while the use of a stative *be* implies that NEED TO describes certain qualities that are necessary for the subject, as in (72), and is therefore peripheral.

Extending core instances of NEED TO to subject types other than first-person singular and plural seems to me justifiable when the meaning and reference of NEED TO allow it. The main features of core NEED TO are objectivity and lack of speaker authority.

7.1.2. Exhortation

Core meaning flows over into cases when NEED TO expresses exhortation**.** This can be a suggestion, advice or admonishing without any necessary reference to a source of obligation or to an objective need of the addressee at all:

(73) *But erm <pause> you need to come down, once we get the double glazing I'll give you a shout and <pause> come down for a coffee and what have you* (KD7 1103, spoken).

You is the most common subject type with this category. It is also possible that exhortation also occurs with first-person subjects, such as in the following context:

(74) *That's right, Keith said that he certainly would take that into consideration. I said I'd let him know the total number of, of contact days or whatever with Sherburn over the period so that is something I need to get from you Bill* (H5E 385, spoken).

Example (74) is an utterance made in a business conversation, at a Careers Service meeting, by a female career advisor to her equal. The main concern of the speaker is to try and make obligation sound less personal and subjective, and it is here formulated it in such a way as to avoid second-person address. In all cases, the purpose of the utterance will be to admonish the addressee – an equal – to do something, but without referring to any need that arises out of the circumstances, as was the case of core meaning.

7.1.3. Strong obligation

Nokkonen suggests that NEED TO can also express the meaning of a personal directive. "In such instances the directive element is provided by the context or the cotext of the utterance rather than the basic lexical meaning of NEED TO" (Nokkonen 2006:37). Then in cases classified as strong obligation, NEED TO can be used instead of MUST to downplay the speaker's authority and claim that a certain action is recommended for the doer's own sake. At the same time, it will be clear from the cotext or the context of the utterance that such claim is merely a rhetorical device, and the real intention of the speaker is to convey obligation that is similar in meaning to the core modality of MUST.

The meaning of strong obligation is rare with NEED TO. This is not surprising, since even in the semantic analysis of MUST – a prototypical strong obligation modal – this meaning was not very frequent[3]. What may be surprising is that I have found more cases where NEED TO had this meaning in the spoken language, bearing in mind the tendency for democratization of speech and avoidance of overt power markers in face-to-face conversation that so many of the researchers write about.

I believe this discrepancy can actually be one of the explanations for the remarkable rise of NEED TO, in that it is precisely in the peripheral meaning of strong subjective obligation that NEED TO is being used instead of MUST, which is no longer the preferred modal of expressing strong obligation in speech. This paradigm shift may have its roots in the different connotations that the two verbs have and which I have already discussed in the introductory chapters. It is true that also HAVE TO can and does replace MUST, but the unique objective meaning of NEED TO can often be the preferred option. The decline in frequencies of NEED alone cannot account for all of the documented increase of NEED TO. Some of these new uses must have replaced other modals of obligation, and I believe MUST is the most prominent of them. It has declined rapidly in the latter years, and while some of this decline may be explained by the growing use of HAVE TO and HAVE GOT TO, NEED TO is obviously favoured over these modals in some contexts. The use of NEED TO, even when it is quite clear that it expresses strong obligation with the speaker as its source, still produces a less authoritative effect, due to the meaning associated with its core use, thus giving an impersonal sense to obligation modality:

(75) *You know you, you, you <u>need to</u> be doing some of that* (G3Y 760, spoken).

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[3]   Cf. Collins 2005:252, who included only MUST with second-person subjects in this semantic category.

The fact that this use of strong obligation is more common and more marked in spoken language, a medium that normally reflects a more advanced stage of language development, shows that the rise of NEED TO may indeed be due to some of its peripheral uses taking the place of the traditional modals of obligation, most notably MUST, but also NEED. Strong obligation is also found in the written language, whenever it is clear that the speaker has authority over the addressee:

(76) *In order to make a success of study, you <u>need to</u> learn how to manage your time* (EED 267, written).

With subject types other than *you*, strong obligation meaning is possible, but in most cases other interpretations, such as exhortation, would be more appropriate. This is not to say that the utterance will only have a strong pragmatic force with *you* as subject, but exceptions will be rare and depend on a wider context, perhaps including voice quality and the setting of conversation.

7.1.4. Reported meaning

Reported cases form a separate group in my analysis, by virtue of their past time reference. Reported obligation is more common in the written language (see Table 2, p.61) as the past tense of NEED TO is used twice as often in writing as in speech (see p. 32). It is also most common with third-person animate subjects (see Table 8, p.68). This being said, it is not particularly frequent in relation to other meanings with any of the subject types, except with third-person animate subjects. All of the reported forms come from the past tense forms. There were no reported questions, because all questions in my sample (and there were very few of them) had future reference and direct address and were therefore placed into the core category.

One reported example that shows the typical features of this category is found in the written section of the BNC:

(77) *In order for him to maintain interest he <u>needed to</u> work in short spurts* (CRS 1482, written).

It is a core case with past time reference, and thus no explicit obligation meaning, even though in the past the need was clearly present and well motivated. Due to the fact that this obligation has no connection with the present, the function of NEED TO is only that of reporting a past state of affairs, hence the 'reported' label.

7.1.5. Marginal (rhetorical and formulaic) meaning

Marginal expressions that were relatively common with MUST and first-person singular subjects, both according to my own previous research and to the findings of Collins (2005) discussed in chapter 2, are also possible with NEED TO. The latter, however, does not take marginal meaning that often. Typical instances would include formulaic expressions with *I need to say, I need to point out*, etc.:

(78) *And if I may just, that's <u>the last thing I need to say</u> is the Christmas Fair dates somehow were muddled up and somebody put the wrong dates to the day, it's Wednesday the sixteenth and Thursday the seventeenth* (J9P 1368, spoken).

(79) *But I just <u>I simply need to point out</u> that these five allocations are targeted at twenty eight percent of the workforce* (JAD 145, spoken).

Both sentences have a low degree of modality and the use of NEED TO changes little of the meaning of the utterance. The point is not any pressing need of the subject (*I*), but the fact that it has become common to use NEED TO in certain expressions and word combinations. It has lost much of its individual meaning in these expressions that now function as a unit, much in the same way as idioms. In some cases it may look as if the speaker wishes to use NEED TO precisely to refer to his concern over passing the information on to his listeners – *I have a pressing need to tell you ...* . This shade of meaning is perhaps particularly notable in (79), where the speaker also uses adverbs *just* and *simply*. In all cases, however, these and similar expressions with NEED TO resemble a unit of speech, with the modal verb carrying very little meaning of its own. Most of these expressions are fixed, and the verb often refers to acts of speech (typical verbs are *say, confess, tell*, etc.).

7.1.6. Dynamic meaning

The peripheral uses, where NEED TO describes the necessary qualities of a subject, are not frequent overall. The typical main verb with this category is *be*. They were most common with third-person inanimate subjects. Peripheral uses also occurred with *you, we* and third-person animate subjects:

(80) *"One <u>needs to</u> be very alert to go creeping round with a couple of bottles up one's sleeve, trying to hide them in the coal-scuttle or under the sink"* (G0X 1996, written).

With dynamic meaning of NEED TO, *you* as subject was used impersonally, meaning people in general:

(81) *You <u>need to</u> be either in the charts or heading that way to earn space in those gossipy pages* (A6A 299, written).

In all of the peripheral dynamic cases the modality of NEED TO is of a very low degree when it comes to expressing obligation. It rather appears to border on epistemic necessity. At the same time, dynamic meanings do not seem to form a category of their own, i.e. a third kind of modality, in the case of NEED TO. The fact that they are borderline cases between deontic and epistemic meanings, does not place them into a unique category or type of modality. They can rather be characterised as weak instances of deontic modality. Nevertheless, their borderline status speaks for the fact that it is possible for epistemic meanings to grow out of dynamic ones, even if only in principle.

A summary of the meanings of NEED TO in written and spoken British English, as they appeared in my selective analysis, is presented in Table 2.

Table 2. Meanings of NEED TO in the written and spoken samples (per 100 cases).

	Written	Spoken
Core	66	65
Exhortation	10	13
Strong obligation	4	7
Reported	9	4
Marginal	5	5
Dynamic	6	6
TOTAL	**100**	**100**

7.2. Subject types with deontic meaning. Selective analysis.

Grammatical features are a more comparable category to base the analysis on than semantics, as they are more universal and widely known. Opinions may vary as to semantic labels and gradations that are approximately as many as there are researchers writing on the subject. Subject type division in a random sample can, on the other hand, be compared to larger corpus samples, to the distribution in the whole BNC and to other analyses by different authors. All figures in subject type analysis here are taken from a sample of 200 written and 200 spoken random hits selected by method described in 5.2. Table 3 presents a summary of my analysis into subject types.

Table 3. Distribution of subject types with deontic meanings of NEED TO (BNC, per 100 words in a random sample).

	NEED TO, Written	NEED TO, Spoken
you	14.6	28.3
I	3.1	14.1
we	18.8	31.8
3rd p. animate	25.5	8.6
3rd p. inanimate	10.9	7.6
there	0.5	1.0
passive	26.6	8.6
TOTAL	**100**	**100**

In order to get a fuller picture as to how my relatively small sample is representative of the *whole* of the BNC, I looked up NEED TO in combination with *you*, *I* and *we* in the whole corpus. This is due to the fact that these three subject types seem to be markedly more prominent in the spoken language (together they constitute 74% of all subject types in the spoken sample). They are also common in the written section, but are not as prominent as third-person subjects and passives. The latter, however, do not lend themselves easily to a qualitative corpus analysis. The distribution in both spoken and written sections is shown in Table 4. No intervening items were allowed in the search string, which consisted of the respective pronoun and a past or present form of NEED TO (i.e., in the case of the pronoun *you*, the figure in table 4 is the sum of the results of two search strings "*you need to*" and "*you needed to*"). I did not resort to tags in the corpus in order to perform this search.

Table 4. Distribution of NEED TO in the BNC with first and second-person subjects (per million words).

	Written	Spoken
You need/-ed to	18	56
I need/-ed to	7	28
We need/-ed to	20	78
TOTAL (all subjects)	137	243

There are some discrepancies between the frequencies in my sample and the BNC as a whole, especially in the distribution of *we*, which is even more markedly frequent in the full corpus with NEED TO in the spoken language. It was twice as frequent in the spoken language as opposed to written in my sample, while the total BNC distribution shows that *we*+NEED TO is nearly four times more frequent in the spoken corpus than in the written. The actual corpus distribution is therefore even higher in the case of *we* in the spoken language. Also *you*+NEED TO seems more common in the spoken language of the full corpus than in my sample. As regards the distribution of *I*+NEED TO, my sample is representative of the distribution in the whole of the corpus. The total number of cases of NEED TO per million words in the full BNC is shown in the table 7.3 above for comparative purposes. The sum of first- and second-person subjects with NEED TO in the written language amounts to 32% of the total number of NEED TO per million words in the BNC. In my sample, the percentage was only slightly higher, 36.5%, which speaks for its representativeness. In the spoken language, first and second-person subjects are much more common, amounting to 67% of the whole range of subjects in the BNC. In my sample, these subjects totaled 74%, which means that there are probably slightly more third-person and passivized subjects in the BNC than my sample shows. On the whole, however, my sample is representative of the basic tendencies of subject distribution in that it shows the correct proportion of first and second-person subjects.

7.2.1. The Active Voice

7.2.1.1. Second-person *you*

You is the subject type with NEED TO that demands the most attention due to the fact that it denotes direct address and is a potential marker of strong subjective obligation. However, cases when NEED TO expresses strong obligation are infrequent (a total of 4% in the written sample and 7% in the spoken, see table 2, p.61), and cannot account for all uses of *you*, of which there are 28.3% in the spoken sections of the sample and 14.6% in the written. In other words, no more than approximately one-third of all cases of NEED TO with *you* as subject have strong obligation meaning.

The objective meaning of NEED TO inevitably colours all other uses involving a more or less direct address to the subject, i.e. both those uses that express strong subjective obligation or mild exhortation. It seems to me that part of the purpose of using NEED TO instead of, for example, MUST, is to mask a personal directive as an appeal to the assumed

needs of the addressee. The authority structure between the participants is equal in core cases and unequal – in a sense that one part has authority over the other – in cases of strong obligation. The expression of this authority is, however, much softer than in cases when MUST or HAVE TO is used, compare example (23) from p.22:

(23) *You need to listen very carefully* (FM7 1448, spoken)

It must be noted that quite often *you* is used impersonally, as in (82):

(82) *You generally need to remove the thick spine before finely shredding the leaf* (AK6 1199, written).

In such cases, it is most often core meaning that NEED TO expresses. In some cases, impersonal sentences express peripheral meaning as well, describing the necessary qualities of an impersonal subject, that will then refer to people in general, compare (81) on p.61.

You is the second most common subject type used with NEED TO in the spoken part of the BNC, and the fourth most common in the written component. The greatest proportion of all the uses of *you* is core cases which constituted about one half of all the sentences with *you* as a subject, both in the spoken and in the written sample. The following table sums up all the semantic categories of NEED TO with *you* as a subject.

Table 5. NEED TO with second-person subjects (*you*) in a sample selection (raw figures).

	Written	Spoken
Core	17	28
Exhortation	6	14
Strong obligation	1	10
Reported	3	1
Marginal	0	1
Dynamic	1	2
TOTAL	**28**	**56**

7.2.1.2. First-person singular *I.*

It was mentioned on p.55 in 7.1.1 that NEED TO with *I* as subject is in a sense a 'prototypical' core. This is due to the fact that the speaker is at the same time a subject and is also felt to be the source of the obligation. Indeed, NEED TO with first-person singular subjects is almost exclusively used in its core meaning:

(83) *Since returning from leave I have heard that "Environment Wales" is unable to assist with funding, so I urgently* <u>*need to*</u> *find in excess of £2,000 to publish and circulate the document* (CXG 661, written).

I is one of the least common subject types with NEED TO in the written section with seven cases per million words in the BNC (3.1 cases out of 100 in my sample), only existential *there* was less common. It is more frequent in the spoken language with 28 cases per million words and is the third most common subject type in my sample with 14.1 instances out of 100.

Table 6 shows distribution of semantic types of NEED TO with first-person singular *I*:

Table 6. NEED TO with first-person singular subjects (*I*) in a sample selection (raw figures).

	Written	Spoken
Core	5	25
Exhortation	0	1
Reported	1	0
Marginal	0	2
TOTAL	**6**	**28**

7.2.1.3. First-person plural *we*.

We is the most common subject type with NEED TO in the spoken section of the BNC. It was also the most common in my random spoken sample. In combination with NEED TO, *we* occurred 78 times per million words in the spoken component of the BNC. It is not as common in the written language (20 cases per million words), but still occupies the third place in my sample. It appears that this popularity of *we* in the spoken language is peculiar to NEED TO when compared to other modals. This was discussed in greater detail in 6.1. It is partly due to the extended use of idiomatic and exhortation meanings that *we* is a favoured subject type with NEED TO, while those meanings are not equally common with other modals. There is thus clearly a connection between the choice of a subject pronoun and the meaning of a modal. It can also be seen in that *we* as a subject is often impersonal. Such use is especially common in educational material: textbooks and lectures. There, the speaker or writer uses *we* rhetorically, not necessarily including him/herself in whatever the students are encouraged to do. The use of *we* instead of *you* softens the directives that would have been

too authoritarian otherwise.

first-person plural subjects include a larger group of people than merely the speaker, and may sometimes be used to politely express directives. By indicating that he includes himself in the group of addressees (*we* used instead of *you*), the speaker will thus avoid any overt power markers and direct address when expressing obligation.

(84) *We now <u>need to</u> respond to this change by adopting a new forward paddle stroke when coaching in shorter boats* (BMF 643, written).

(85) *We <u>need to</u> understand how and why male fantasies may commonly differ from the female ones, and why the sort of fantasies I have mentioned, which may in some ways seem antithetical to feminism, may still have a strong appeal to women who have a feminist allegiance* (ECV 1513, written).

It is the inclusive quality of *we* that masks any obligation expressed by NEED TO. Coupled with the objective quality of this modal, this subject type may be so popular in expressions of obligation precisely because it allows for more democratic-sounding personal directives.

Table 7. NEED TO with first-person plural subjects (*we*) in a sample selection, raw figures.

	Written	Spoken
Core	15	41
Exhortation	10	10
Reported	1	2
Marginal	9	6
Dynamic	1	4
TOTAL	**36**	**63**

7.2.1.4. Third-person subjects: animate and inanimate.

Third-person animate subjects had the highest proportion of reported cases of all subject types analysed here. It has to be noted that 'reported' in my sample refers only to past tense uses. In principle, it should be possible to use each subject type with *needed to* equally often – there seems to be nothing in the past time reference alone that would advocate the use of only certain subject types. However, the way speakers use and apply language is clearly

different, and third-person animate subjects seem to be the most common in 'storytelling' past tense, at least with NEED TO. It is also notable that reported instances of NEED TO are more common in the written language, see Table 2, p.61, the medium where the use of third-person subjects is much higher than in speech.

The speakers find it appropriate to use NEED TO in the past tense to refer to animate entities – men, women, and sometimes animals, often when telling a story in the past tense. A sentence would then typically be a part of a larger section with past time reference, with a speaker 'reporting' all events and characters. One reasonable explanation for such distribution is that the contexts when obligation is used with third-person animate subjects are fewer than with other subject types when this obligation has a future or present time reference. Compare:

(86) *Then everyone realised that <u>he</u> really <u>needed to go and sort himself out</u>* (CGC 1886, written).

Clearly, it is fully possible to discuss a man or a woman and refer to a present obligation (*I think he needs to go and sort himself out*). In most cases, this is what the examples show, after all, only 22% of third-person animate subjects in the written and 17% in the spoken language have past time reference (see Table 8, p.68). But even if not all of the cases with third-person animate subjects are in the past tense, 22 and 17 cases out of 100 are still very high numbers compared with other subjects and the passive voice. The difference lies in the fact that third-person subjects are not employed as means of direct address. It is possible that some other modal verb would have been used if a person were addressed directly (*you must go and sort yourself out*). But while MUST and NEED cannot be used in the past tense, NEED TO gives the speaker the option of using the past tense, while at the same time giving an objective 'ring' to the story. A situation can thus be retold in objective terms, and in retrospect the speaker perhaps chooses more objectively-sounding modals simply because the situation can be analysed from a distance. It is also true that third-person animate subjects are a natural choice in storytelling due to the fact that they replace second-person address in reported speech, and therefore the proportion of past tense *needed to* will also be higher with them.

Table 8. NEED TO with third-person animate subjects (raw figures).

	Written	Spoken
Core	26	7
Exhortation	2	1
Strong obligation	7	3
Reported	11	3
Marginal	0	1
Dynamic	3	2
TOTAL	**49**	**17**

In contrast with third-person animate, reported obligation is used little with third-person *inanimate* subjects. However, inanimate entities – books, cars, houses, etc. can have objective needs that have direct reference to the present, even if we cannot address inanimate things directly. A house may need painting, a car may need fixing, etc., in the same way as a person may need a haircut. It is typically examples of this kind, referring to objective needs of an entity, one finds with third-person inanimate subjects. Not surprisingly, most of these cases feature core NEED TO.

At the same time, obligation with third-person inanimate subjects is felt to be very impersonal and objective. This is natural, due to the fact that inanimate entities cannot be talked to, cannot contradict, and, by implication, there is something in their state that undeniably shows a need that is present. Therefore, core meanings with inanimate subjects express obligation that is somewhat weaker and more 'removed' than with other subject types. It is the most objective use of NEED TO:

(87) *What <u>needs to</u> happen is for players to learn how to ruck and maul more efficiently* (CB3 421, written).

(88) *All our systems <u>need to</u> be consistent because in that way we can manage and control them and yet they need to deal with the variable requirements of our different categories of users* (HDE 286, spoken).

Table 9. NEED TO with third-person inanimate subjects (raw figures).

	Written	Spoken
Core	13	9
Exhortation	1	0
Reported	1	1
Dynamic	6	4
TOTAL	**20**	**14**

7.2.1.5. Existential *there.*

In my sample, there was one case of existential *there* with NEED TO in the written section, and two cases in the spoken section. Clearly, little generalizations can be made from these single instances, but it is interesting to look at how the use of existential *there* affects modal meaning:

(89) *There <u>needs to</u> be a realization of how far Rock noise trails behind the avant garde and new jazz* (AB3 943, written).

(90) *And that's why it's important that there <u>needs to</u> be an open debate, both within the union, and there needs to be a proper flow of information from the Executive in these discussions to the branches and to the members to tell them what's going on* (HLW 162, spoken).

(91) *There <u>needs to</u> be a tiebreaker* (JP0 457, spoken).

In all these constructions, existential *there* 'anticipates' the subject, which thus receives the syntactic function of an object. This influences the way obligation is perceived. The lack of a formal subject makes the obligation sound both impersonal and very objective: *it is really the case that there needs to be ...* . In a certain way, constructions with existential *there* form a category of their own, although they express core meaning fully. The objective need is present and well motivated, but its expression is impersonal. There is no subject towards which the obligation is directed. Such construction would help shift focus to the verb phrase instead of the subject, and this in turn helps to avoid overt power markers in discourse. In this sense, constructions with existential *there* have a function similar to that of the passive voice.

7.2.2. The passive voice. Selective analysis.

The passive voice is a separate category in subject type analysis. The subject in a passive construction is not an acting entity. The 'doer' of the action may be indicated in a *by*-phrase (*all corrections were done by me*), but most passive constructions omit mentioning the acting entity altogether. For various reasons, the speaker or writer does not consider it important to inform the addressees about the identity of the Agent or 'doer' of the action. The important matter, and also the theme of the utterance, is the object of the action which is moved into subject position, and of course the passive verb phrase itself. "One of the major functions of the passive is that it denotes the agent of the verb, [...] while giving topic status to [...] the entity being acted on." (Biber et al, 2006:477). While NEED TO itself remains active in a passive construction, it is its relationship to the passivized subject that becomes of particular interest in passive constructions.

Due to the fact that subjects of passive clauses are objects in active constructions (*all corrections were done by me – I did all the corrections*), I have not distinguished between passivized subjects, most of which are third-person inanimate (all subjects but one, see example (92) below). Instead, I have grouped all passive constructions into a category of its own. The verb phrase in this category is thematically more prominent, and more attention is drawn to it. This function of the passive also has relevance to how obligation is perceived in the case of NEED TO.

Passives are most common in academic prose and least common in conversation (Biber et al. 2006:476). They are also more common in the written medium as such. In my sample, passives were the most common form in the written section with 27.1 cases per 100 sentences. Passives were much less common in the spoken sample, with the same frequency as third-person animate subjects, 8.6 cases per 100 sentences in a 200-sentence sample.

The rare *get*-passive was only found in samples from conversation, compare:

(92) *[...] I know they do keep records in the office but, you know just, just something so, so we know where you are erm and it also kind of er will perhaps help concentrate the mind on what you <u>need to</u> get done erm <sigh> so er* (JYN 642, spoken).

In this case, the subject is made explicit – *you*. It is also the 'doer' of the action. *Get*-passives were therefore not included into the passive voice category but placed into their respective subject groups in my analysis. In this case, it was *you* with a core NEED TO. Notably, all of the passive cases in my sample have third-person passivized subjects, with the

exception of the *get*-passive above, where the subject is *you*. It also seems that *get*-passives are somewhat different in meaning from the past participle passive in that the subject is actually not "the entity being acted on", but the 'actor', which may have implications for how the obligation is perceived. There is clearly a difference between *you need to get it done* and *it needs to be done*: in the first case the addressee of the directive is explicitly mentioned: *you*, while in the second case the addressee is deliberately omitted from the construction, depersonalizing the obligation. It may be more convenient to express a directive using the regular passive construction, especially when one wants to avoid addressing a person – for example, for reasons of politeness. When a group of addressees is present, passives are an excellent way to avoid addressing any one member in particular.

In most of the cases when NEED TO is used with passives in both spoken and written sections it is essentially core in meaning, with one exception, marginal (here, formulaic) use in (93) below:

(93) *The assertion that "good" workers are good and "bad" workers are bad irrespective of location (and that that is all that <u>needs to</u> be said) must be displaced or qualified by a demonstration that organizational form exerts an influence* (ALN 72, written).

Often the use of the passive means a somewhat tentative approach, and may be combined with a tentative formulation as in (94), coming from a 70-year old female speaker:

(94) *Which is really quite right but then, I mean, you can't sort of just <pause> love <u>needs to</u> <u>be</u> sort of <u>spread out</u> a bit doesn't it?* (KE2 4180, spoken).

The passive may thus be a polite and 'impersonal' way of expressing obligation, at least in the written language. Judging from my findings, the same purpose may be fulfilled by marginal (rhetorical and formulaic) uses of NEED TO with *we* in the spoken language, compare (93) above and (95) where a passive construction is used with (96) where *we* is a subject:

(95) *Something <u>needs to</u> be done about Lukic. He cannot handle the back pass ... never has done. That is unfortunately a major part of a keepers job these days* (J1E 1440-42, written).

(96) *But you've raised a very valid point and it's one that we <u>need to</u> see through to the end* (FUL 353, spoken).

It is likely that NEED TO with first-person plural subjects in the spoken language,

especially in rhetorical utterances as well as directives given in an educational context (as discussed in 7.2.3), functions as a marker of politely expressed obligation in the same way as it does with passives in the written language. This could account for its distribution and explain why certain types of meanings are the most common. It is namely so that passives dominate in the written language and first-person plural subjects in the spoken when NEED TO is used. The obligation that is 'softened' in both cases thus becomes the preferred use of NEED TO. Also, in both cases, with *we* and passives, the utterance is not likely to have a meaning of strong obligation that would be prototypical of MUST (but notably rare with it).

It has been attested by several researchers that the very nature of the written medium suggests a higher use of passives, while the spoken medium will have a prevalence of first and second-person pronouns (cf. Biber et al. 2006). However, some of this distribution is peculiar to NEED TO – no other modal considered here is as common with either *we* or passives in respectively speech and writing (see Table 1, p.34). Apart from the general distribution patterns in written and spoken medium, the frequency of the use of NEED TO is clearly influenced by prevalent shades of meaning associated with a particular subject type or verb form. For the same reason, MUST, NEED and HAVE TO have a different subject type distribution. It is noteworthy that core meaning is prevalent also with passives – this meaning is indeed not just prototypical but also the most commonly used with NEED TO – something that cannot be said of the prototypical meaning of MUST.

(97) *However, notice <u>need</u> not be given where the defendant does not appear, or where in a fixed date action he has failed to deliver a defence in time* (J6U 917, written).

Table 10. NEED TO with passivized subjects in a sample selection (raw figures).

	Written	Spoken
Core	51	17
Marginal	1	0
TOTAL	**52**	**17**

7.3. Epistemic meaning.

The statement that NEED TO is used only in its root meaning, which is encountered in most of the traditional grammar books, is found to be basically true, with a few exceptions. Certain cases I came across in the BNC may be interpreted as epistemic, such as the following:

(98) *That's the end of the game, that's the end of it because on on erm once h-- Holland <u>needed to</u> lose right, they had to lose, Holland, and er Poland <u>needed to</u> beat Holland and England had to win by a seven goal majority I E* (sic!) *seven nil or eight one, seven one wouldn't have been enough even if Holland had lost* (KPA 1125, spoken).

This case is originally from the COLT corpus that Nokkonen (2006) also uses in her analysis, where this sentence was counted among epistemic cases. COLT, a corpus of spoken British English of London teenagers, was subsequently incorporated into the BNC and is also available as a part of this larger corpus. In my opinion, however, the epistemic interpretation of (98) is rather unconvincing. Even if *Holland needed to lose* cannot be interpreted as referring to a literal objective need of the team, the meaning of the utterance is that certain results had to be achieved in order for England to win. There is hardly anything epistemic about that.

Another case that has been assigned a dynamic label in my analysis, could actually be interpreted in both ways, as describing the necessary qualities of a subject (dynamic), or as making a judgement about the truth of a proposition (epistemic – *one must indeed be very alert to go creeping round..*, etc.):

(99) *"One <u>needs to</u> be very alert to go creeping round with a couple of bottles up one's sleeve, trying to hide them in the coal-scuttle or under the sink"* (G0X 1996, written).

It is one of the inherently dubious cases where both deontic and epistemic interpretations are possible. However, no other cases of epistemic NEED TO were found, and I would therefore prefer to avoid any particular conclusions as to Nokkonnen's claim that NEED TO is in the process of developing epistemic meanings (Nokkonen, 2006:64). None of the cases in my sample were *clearly* epistemic, without any other possible interpretations. There is thus no reason to believe that any significant changes have occurred with respect to epistemic meanings of NEED TO – they are still rare, if not to say non-existent. It appears that other obligation modals, most notably MUST, are not being replaced by NEED TO in epistemic meaning. The advance of NEED TO is thus in the field of deontic modality, also including
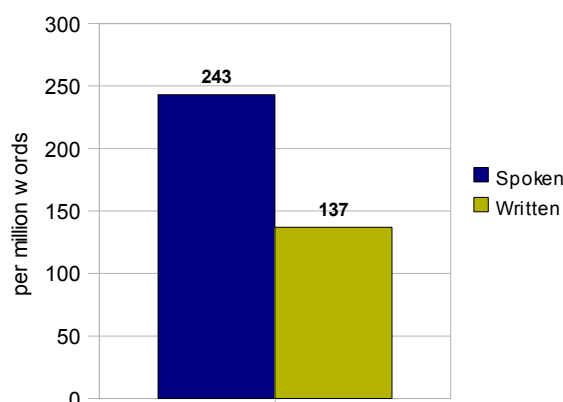
dynamic meanings.

7.4. Distribution according to text type and socio-linguistic factors.

7.4.1. Register variation.

NEED TO is nearly 80% more common in spoken than in written British English, see fig. 6:

Figure 6. Distribution of NEED TO in spoken and written British English (frequencies per million words).

300

250   **243**

200

per million words

150   **137**

100   ■ Spoken
   ■ Written
50

0

This fact is understood better in comparison with other modals and semi-modals discussed here, see fig.1 from p.10, copied to the following page. This could be an indicator of the fact that the rise of NEED TO has been initiated in the spoken language and is gradually spreading to the written. Similarly to HAVE TO and HAVE GOT TO, that have long been considered colloquial (especially HAVE GOT TO) but may be becoming more and more common in the written language, NEED TO seems to be be following the same course of development. Its rising frequencies show that democratization of discourse has allowed for introduction of more spoken language features into the written language (more on this, see Krug, 2000). The fact that NEED TO is more frequent in colloquial speech is significant in explaining its remarkable rise. It may be that in the near future the differences between spoken and written medium will be evening out. If the rise of NEED TO was initiated in the spoken discourse, it may develop similarly to HAVE TO and HAVE GOT TO, in line with a general democratization of discourse.

Figure 1.

MUST, HAVE TO and NEED (TO) in the BNC
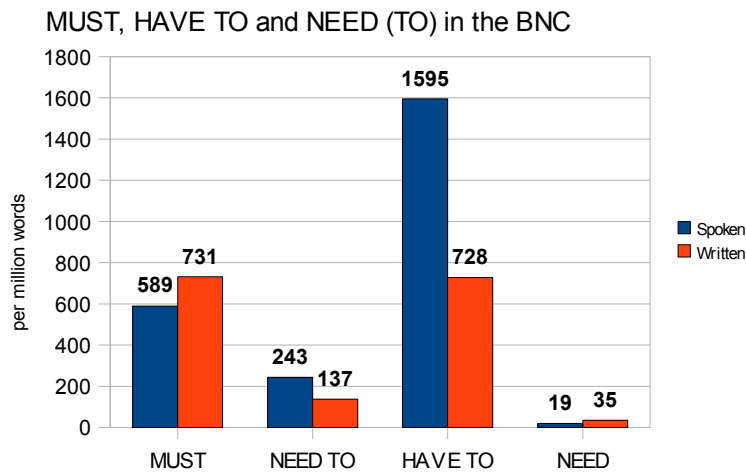
Since NEED TO is a much less authoritarian way to express necessity than MUST, due to the fact that it denotes an objective compulsion outside the control of the speaker and denies the speaker's involvement, it may be more commonly used to express obligation in contexts where direct address is involved, for example in conversation. I assumed therefore that it could be more common in dialogue as opposed to monologue. The actual findings in the BNC can be seen in Fig. 7.

Figure 7. NEED TO in the spoken language, monologue versus dialogue (frequencies per million words).
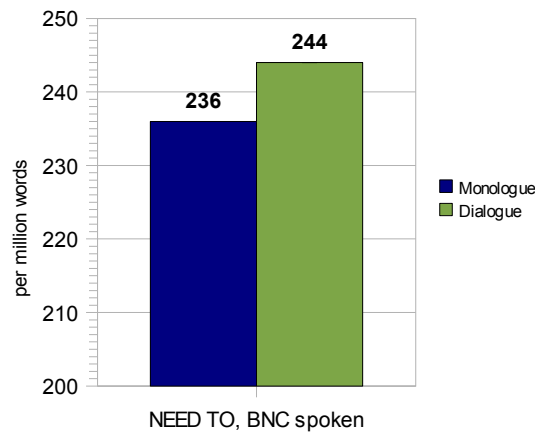

It appears from the BNC data that there are few differences between the use of NEED TO in monologue and dialogue. NEED TO is indeed slightly more common in dialogue, but the difference of 8 cases per million words does not seem particularly significant to me.

NEED TO may still be more common in contexts where direct address is involved (as opposed to, for example, MUST), but this has to be considered in each particular case, depending on the context, and not for a general category of monologue as opposed to dialogue. This seems to apply to other modals as well, see pp.42-43 where similar distribution was discussed in the case of MUST. Some interesting facts about the distribution of modals in written text categories can be found in 6.4, see fig. 4 p.44. For a more detailed discussion of how these differences in distribution apply to NEED TO, a closer look at its frequencies needs to be taken.

The distribution of NEED TO in written text categories can be seen in figure 8:

Figure 8. Distribution of NEED TO in written text categories in the BNC (per million words).
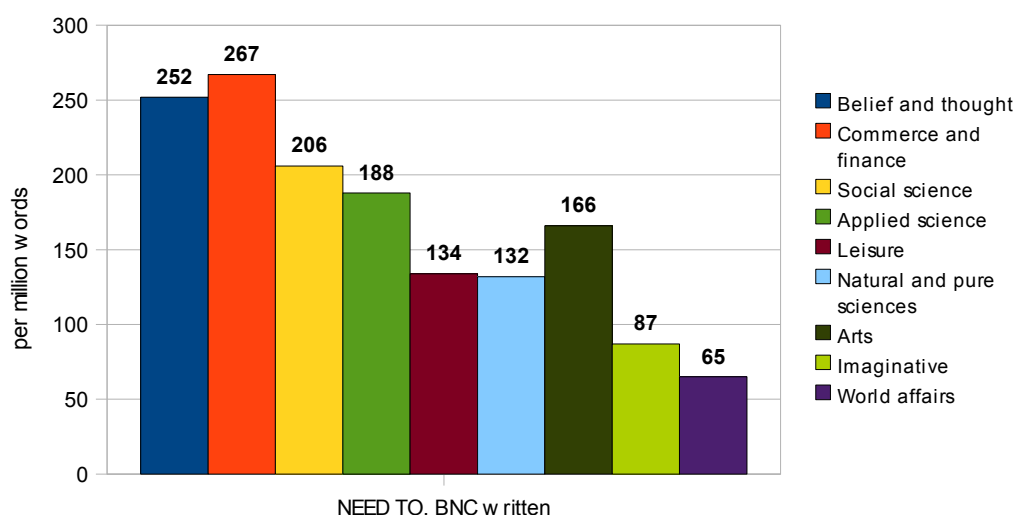
The results in the BNC show that NEED TO is the most common in Commerce and finance and the least common in World affairs, with more than four times difference between the two extremes. The frequencies were 267 and 65 cases per million words respectively. Such a big gap is very significant. Other written text categories where NEED TO is common are belief and thought (252 cases per million words) and social science (206 cases per million words). Imaginative texts are among those text categories where NEED TO is the least common, with 87 cases of NEED TO per million words. Some reasons for such distribution may be different ways of presenting information – depending on a subject field. There are also factors referred to on p. 68, namely, that it may be more popular in discourse where speaker(s) is/are aware of the subjectivity of their topic. When it is important to formulate a

judgment on matters of faith and morals, speakers tend to be more and more cautious in their choice of words, for discourse that is to a greater extent democratically-oriented:

(100) *The Church of England's authorities <u>need to</u> be careful lest in their desire to maintain "ethos" and "style" they miss completely the breath of the Holy Spirit's life as it blows past them* (C8L 921, written).

In such a subjective domain as belief and thought the use of NEED TO serves a double purpose of softening any advice or obligation and adding some objectively-coloured modal meaning. NEED TO seems to be more common in interaction where several opinions are acceptable and perhaps equally respected, or where the speaker is aware that his or her utterance is merely a subjective opinion. The fact that it has become more common to formulate oneself along these lines in recent years could explain some of the reasons for the popularity of NEED TO.

Then it is perhaps not so surprising that NEED TO is less common in natural and pure sciences where a concept of universal truth still exists and can be referred to. On the other hand, NEED TO is the least popular in imaginative prose and world affairs, the categories of texts that in principle contain a lot of information that the writer may want to present using the same democratically-oriented language as in the domain of belief and thought. It could be, however, that texts in these two categories contain little obligation modality as such and are mainly descriptive, which also accounts for lower frequencies of NEED TO, because it also belongs to the field of obligation modality. This is true in the case of NEED, NEED TO and MUST, while HAVE TO does not comply with this generalization, see fig. 4, p.44.

Another peculiarity of NEED TO is found in its distribution in media of the written language. The distribution of NEED TO in these text categories was as follows:

Figure 9. Distribution of NEED TO in the written medium (BNC, per million words).
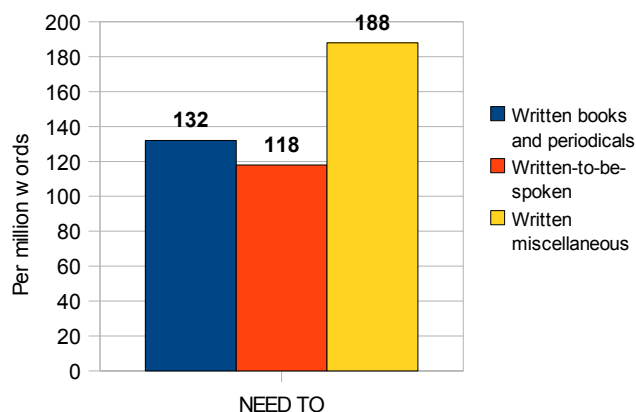

For types of texts that are included in each of the categories, see page 43. It is notable that NEED TO in written British English is the least frequent in written texts to-be-spoken, since it is nearly twice more common in spoken language than in written (compare fig. 6, p.74. Written texts to-be-spoken include prepared speeches, lectures, and other material intended to be said out loud. It was therefore expected that this text type would bear the closest resemblance to the spoken language. However, the frequencies of NEED TO in this category (118 cases per million words) were lower than the average frequencies in the *written* medium as a whole (137 cases per million words), and much more lower than in the spoken language. There may be several reasons for this discrepancy, for example, the fact that written texts to-be-spoken employ other modals than NEED TO more often − such as HAVE TO and HAVE GOT TO. Indeed, of the modals considered here, NEED TO, NEED and MUST were the least common in written texts to-be-spoken, while HAVE TO had the highest frequencies in precisely this category, see fig.3, p.44.

7.4.2. Diachronic variation.

While most of the previous diachronic research on NEED TO has been conducted comparing the Brown family corpora, it is possible to trace diachronic variation also in the written section of the BNC. However, the earlier texts comprise a very small portion of the corpus: 1,741,623 words from the years 1960 to 1974 measured against 89,343,984 words from 1985 to 1993 (that is, over 51 times more words in the latest texts). This suggests that any results obtained will be less reliable statistically than had the diachronic distribution been more even. For reference purposes, however, the following chart gives a rather clear representation of the development of the use of NEED TO in the BNC. A comparison with

NEED seems essential at this point, as the two forms have had an opposite development in the recent years. Both forms have been looked up in the BNC according to the algorithm laid out in 5.2.

Figure 10.

Diachronic Variation of NEED TO and NEED
in Written British English
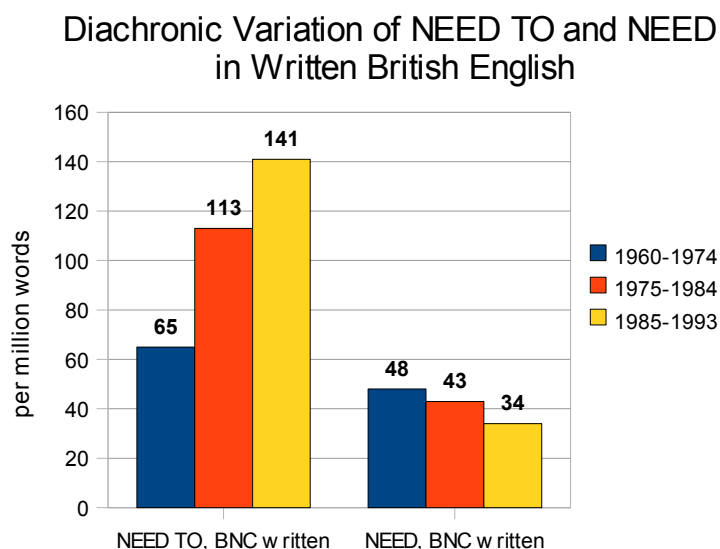
This scheme of development agrees with the trend attested by other researchers (see Smith 2003 and Leech 2003), that of the growing use of NEED TO and the decline of NEED. The most dramatic growth in frequencies of NEED TO occurred between 1975 and 1984, see fig 10. The decline of NEED has been steady, even if not that dramatic, and was the greatest from 1985 to 1993. It has probably continued up to the present time. In pure numbers, NEED TO was used in 76 cases per million words more often in 1985-1993 as compared to 1960-1974. Within the same time frame, NEED has decreased by 14 cases per million words. These figures show clearly that the decline of NEED does not explain all the cases of the growth of NEED TO, as this growth has numerically exceeded the decline of NEED.

According to the BNC results, however, the use of NEED TO has only grown by 141% from the 1960s to the 1990s. Compare this to a 249% (Leech, 2003) or 267% (Smith, 2003) increase attested to in the written British English of LOB to Flob corpora (1960s to 1990s). It is difficult to say how great a significance should be attached to this, due to the above-mentioned discrepancies in the amount of texts coming from different time periods in the BNC. Even though the BNC results confirm that a significant increase in the frequencies of NEED TO has occurred, differences between its frequencies in LOB (1961) and Flob (1991) are much greater. Uneven distribution of texts for diachronic comparison (very few texts from the earlier years in the BNC) seems to me to be the main reason for this discrepancy.

The divergence could also be due to differences in the size of the corpora, the different sampling methods used, such as text types or genres chosen to be represented in the BNC as opposed to the LOB and Flob corpora, but also due to some other factors that are difficult to determine without a closer research. The fact that is nevertheless quite clear is that the use of NEED TO has increased in the written language, and this increase has probably followed the trend in the spoken language, where the use of NEED TO grew and became established earlier. The latter proposition cannot be proven by corpus research due to the fact that no diachronically comparable spoken corpora are available.

However, something that Krug called an "apparent-time study" (see p.27) is possible in the spoken component of the BNC because of the available age of speaker information. One is then able to see whether there are differences in the use of NEED TO by older as opposed to younger speakers. The younger speakers are most likely to adopt newer language features, thus reflecting language change in progress, while the older speakers will typically use language in a more traditional way, perhaps retaining features that were more common in a preceding generation.

Figure 11 shows the actual distribution of NEED TO and NEED per million words in the BNC according to age of speaker:

Figure 11.

Distribution of NEED (TO) according to age of speaker
In Spoken British English
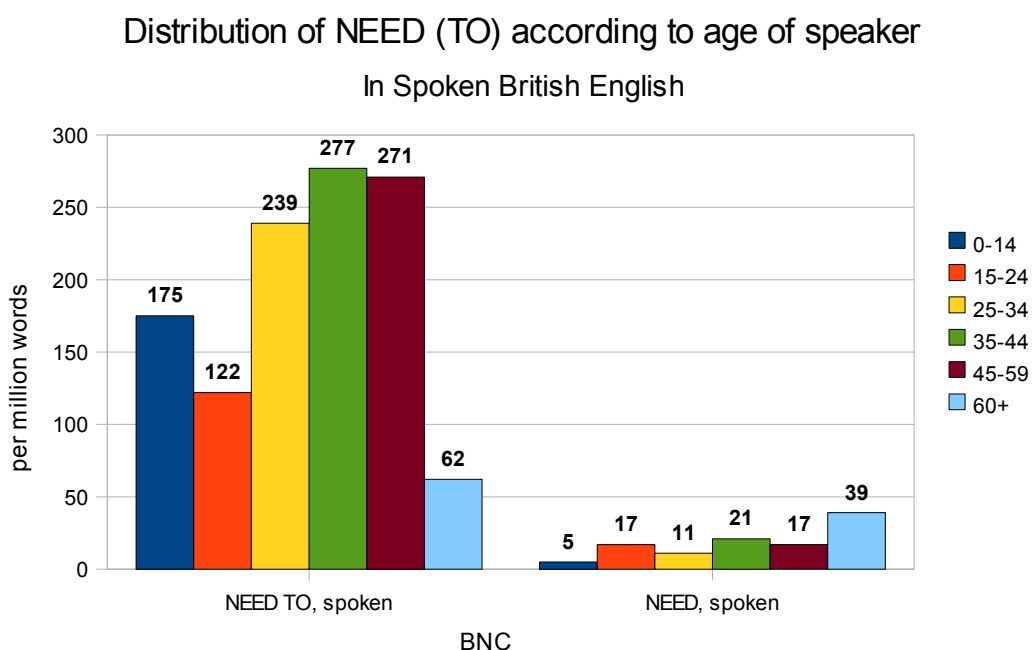
Similarly to Krug's results discussed on p.27, the group of over-60-year-olds, a category of speakers that is perhaps the most conservative and the least affected by language change in progress, due to age, health and, most important, work situation, is markedly different from all other groups. These speakers use NEED TO least often, using at the same time NEED most often of all other age groups. The difference of this age group from all others is especially marked in the case of NEED TO. This clearly shows that there may have been different distribution patterns of NEED and NEED TO thirty to forty years ago in speech as well, and not merely in writing. Even though NEED TO was more common than NEED even then, it has increased dramatically also in the spoken language. This can be inferred from the fact that it is used nearly four times more often by those aged 25 to 34 than by over-60-year-olds and over four times more often by those aged 35 to 59 as compared to the same group of those over the age of 60. It is interesting that the group aged 25 to 34 uses NEED four times *less* often than over-60-year-olds using NEED TO four times *more* often. It seems from the overall frequencies in age groups younger than 60 that the fall of NEED has not been as dramatic as the rise of NEED TO in the spoken language. The dramatic difference between those over 60 and other age groups is quite remarkable, and suggests that a rapid change in language use has occurred at a time when this group has already established patterns of speech that also included the use of modality.

Figure 11 above also gives some interesting insight into the language use by the age groups as such. The group of 15- to 24-year-olds emerges as rather interesting due to the fact that it uses NEED TO least of all the speakers under the age of 60, but has at the same time a relatively high usage of NEED. The youngest speakers, children up to the age of 14, who were also the least represented group in the BNC, used NEED least of all speakers. This was to be expected judging from diachronic development in the written language, but their frequencies of NEED TO were not particularly high either, 175 cases per million words as compared to 277 in the case of 35- to 44-year-olds. It is possible that this group uses other modals in preference to NEED TO, perhaps HAVE (GOT) TO, but this is so far only a speculation which I have not looked into yet. On the whole, 35- to 59-year-olds use NEED TO most, while the youngest speakers, up to the age of 24 are more reluctant to use it. NEED is infrequent in any of the groups but is used least by children and speakers aged 25 to 34. This picture seems to suggest that there are other factors besides age that influence the choice of modal verbs. The marked difference between over-60-year-olds and all other speakers indicates that a change in usage of NEED and NEED TO has also occurred in the spoken

language.

7.4.3. Gender variation.

NEED TO is markedly more common with male speakers in the spoken language. In the written medium, gender distinction is not significant, with the difference of only one case per million words between male and female writers (see Fig.12). See also discussion on pages 83 and 84 for discrepancies in the BNC figures:
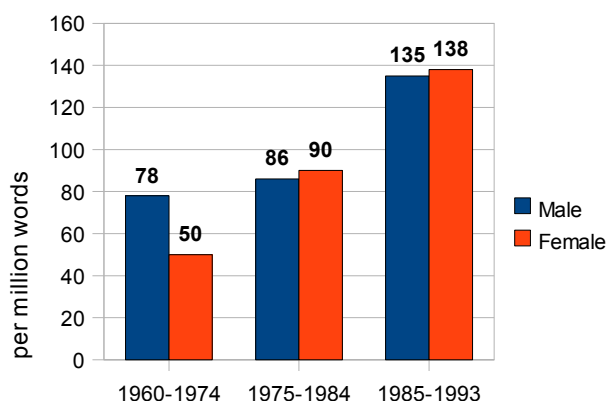
Figure 12. Distribution of NEED TO in the BNC according to sex of speaker/writer (per million words)[4].
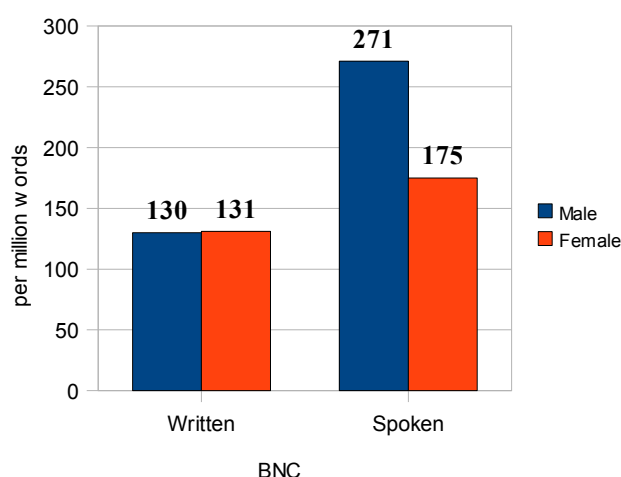
Given that spoken language tends to be more advanced in terms of new language features or developments, it is interesting to speculate whether it has become more common for male speakers to use NEED TO, and whether this development is reflected in the uneven gender distribution in the spoken language. I have analysed the written sections of the BNC for any possible changes in the proportion of male to female writers/speakers in a period of 30 years. The results are shown in Figure 13 on the following page.

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[4]   For written BNC, figures in Fig.12 are hits per million words, obtained according to the search method laid out in 5.2, p___, that come up when all three publication periods (1960-1974, 1975-1984, 1985-1993) are ticked off on the search page. This was done for comparability with Fig. 13, as different figures come up when nothing is ticked off. Spoken language figures in Fig.12 are obtained as laid out in 5.2.

160
140
120
100
80
60
40
20
0

per million words

78 · 50 · 1960-1974
86 · 90 · 1975-1984
135 · 138 · 1985-1993

■ Male
■ Female

Due to the fact that the largest proportion of texts come from the last period – 1985 to 1993 – the overall equal distribution of NEED TO between genders in the written language in Fig. 12 is in accordance with the figures for its diachronic development in Fig. 13. It is, however, interesting to note the fact that in the period from 1960 to 1974 NEED TO was clearly more common with male authors, but its use has evened out between genders in the latter two decades. The results show that NEED TO has in fact grown most with female speakers from 1960 to 1984. The gap between male and female usage of the modal has not increased since 1975. On the contrary, the data shows that NEED TO has become slightly more common with female writers.

Some words need to be said with respect to the discrepancies found in the BNC when performing the searches described above and presented in figures 12 and 13. As regards diachronic variation in the written language, in the time period from 1960 to 1974 of 1,741,623 words 1,705,509 are marked for gender of speaker/writer. Of these, 975,835 words were assigned to male writers and 729,674 to female ones, in other words, distribution between genders is approximately equal, and therefore reliable in this relatively very small sample. In the time period from 1975 to 1984, of 4,726,435 words 3,655,508 are marked for gender of writer. Of these, 634,400 have female writers and 2,983,856 have male ones – a very uneven distribution between genders in this section of the BNC – and 37,252 are mixed gender, which was not included in my calculations and figures. The time period from 1985 to 1993 represents the largest portion of the BNC, with 89,343,984 words of which only 45,911,382 were marked for gender. This number breaks into 13,075,714 words that have

female writers, 26,337,66 that have male and 6,498,002 have mixed gender of speaker/writer, which was again not included into this account. There are obviously some irregularities in marking the publication date periods in the BNC. This can be seen from the fact that a total of 95,812,042 words come up when all three publication date periods are ticked off on the search page. At the same time, if no publication date period is ticked off, a total of 87,284,364 words come up in the written language (as the total number of words that were included in the search – this and other figures in this paragraph apply for all searches that have been performed in connection with this thesis). I have not been able to find any explanation for this discrepancy.

For comparative purposes I chose to analyse the results of the search where all three publication date periods are ticked off on the search page. In this case, a total of 51,272,399 words are marked for gender, of which 30,297,357 words belong to male writers, 14,439,788 to female ones and 6,535,254 mixed gender. It is notable that male writers have contributed more than double the amount of words in the BNC than the female writers have. This is also true for the two last time periods, 1975 to 1984 and 1985 to 1993. Only in the earliest time period, 1960 to 1974, the contribution of genders is approximately equal, but this period only accounts for an insignificant fraction of corpus material. This fact of uneven distribution of written material according to gender of writer also has a certain significance for the reliability of the results obtained.

It can also be noted that less than two-thirds of the written BNC are marked for gender of writer, and therefore the distribution may not be fully representative of the whole corpus. However, a large proportion of texts *is* included. Written texts to-be-spoken are also included in the written category, and this analysis therefore extends also to female speakers, such as lecturers. Written texts also include letters and other unpublished material (classified under miscellaneous category). In any case, even if the results are not taken at face value, the tendency in the written language is towards a more unified use of NEED TO by both genders.

This observation requires further discussion, some of which was done in comparison with other modals of obligation and necessity in 6.4.2. It is essential to analyse language samples for any possible clues that may explain the diachronic development in gender distribution as well as to confirm the quantitative analysis with specific examples. As regards NEED TO specifically, not all of its uses in spoken or written language are marked for gender. I have also not included the 'mixed' category, which accounted for 18 cases per million words in the written section, into fig. 13 above. The difficulty in determining the

gender of speaker in written texts is due to the fact that the author gives both voice and gender to his or her fictional speakers. However, in the spoken language such a distinction poses no problem, wherever gender is recorded by BNC samplers. My assumption is that it is likely that in personal interaction gender roles will be more transparent and important to the speakers than in writing. I have therefore analysed only my spoken 200-case sample for gender of speaker.

About 17% of cases in my spoken language sample had no gender information for speaker, 30% of the utterances had a female speaker, and 53% a male one. In the whole spoken part of the corpus the proportion of male speakers was somewhat higher in cases where speaker information was available, but some conclusions can still be made from my sample alone.

With regard to subject distribution, the pronouns *you* and *I* were used nearly twice as often by female speakers as by male ones, while *we* was more than 50% more common with male speakers. *We* was the most common subject type with male speakers, while *you* was the most common with female speakers, see table 11 that summarizes my findings of subject type distribution (only cases with existing speaker information were included):

Table 11. Subject type distribution and gender of speaker with NEED TO in spoken British English (standardized per 100 sentences in a random sample).

	Male speakers	Female speakers
you	25	38
I	11	21
we	34	21
3rd p.anim.	12	5
3rd p.inanim.	7	10
There	2	0
passive	9	5

Comparing these results with table 12 below, it is clear that male speakers do not tend to use *we* in the meaning of exhortation in all of the cases. More often, the semantic meaning that *we+NEED TO* tends to have with male speakers is core. Female speakers, on the other hand, tend to use *we* and *you* with NEED TO having the meaning of exhortation much more often. Other figures are too low to make any distinct conclusions.

I have also grouped semantic meanings of NEED TO in sentences where gender information was available. The distribution was as follows:

Table 12. Semantic categories and gender of speaker with NEED TO in spoken British English (standardized per 100 sentences in a random sample).

	Male speakers	Female speakers
Core	61	61
Strong obligation	9	8
Exhortation	10	21
Reported	7	2
Marginal	6	4
Dynamic	7	4

While there is no difference with regard to the use of core meanings (although there is a slightly different distribution of subject types there, with male speakers preferring *we* and female speakers preferring *you* and *I*) , NEED TO in the meaning of exhortation is used quite differently by male and female speakers. In my sample, it was used twice as often by female speakers, mostly at the expense of other peripheral meanings. There were at the same time no striking differences in the use of strong obligation. It can only be concluded that there is a tendency for female speakers to use tentative formulations with NEED TO, cf. (94) on p.71, that can be interpreted as exhortation, admonishing or personal suggestion.

To sum up, we see that there is a clear preference for using NEED TO in the spoken language. It can be explained by several factors, the main one being, in my opinion, the democratization of discourse, something that most people in the Western world have experienced and that stretches beyond the English-speaking culture. The meaning of NEED TO that denies speaker's involvement into the source of obligation makes it a favoured choice to express directives in face-to-face interaction. In the written language, MUST seems to be a less 'dangerous' option, while in the spoken medium the speakers choose the way they express obligation more carefully and will tend to avoid using the strong modal. Another possible factor influencing language change in favour of semi-modals could be the tendency to colloquialization and simplification of grammatical rules. This results in using the more universal lexical verbs to express modality rather than the modal verbs proper. The simplification of grammatical rules as one of the reasons for the rise of NEED TO was touched upon briefly in chapter 4, but would require more research for any definitive

conclusions. Colloquialization of discourse is accepted as a fact by most of the researchers in my list of sources. It is also interesting to note that NEED TO shares many of its distributional patterns with 'old' modals MUST and NEED, while HAVE TO typically behaves differently.

In this connection, gender factors are of high importance. If one considers the prevalence of male speakers using NEED TO in the spoken language, it could be concluded that they are more self-conscious when it comes to expressing obligation. In other words, it would seem that male speakers prefer NEED TO as a means of expressing obligation in order to downplay their authority. Female speakers, on the other hand, use NEED TO more often to exhort and admonish their listeners, but generally seem to prefer HAVE TO as means of expressing obligation in the spoken language.

If one looks at gender distribution of all four modals considered here (fig. 5, p.46) and adds up the frequencies of each modal used by male and female speakers in corresponding mediums of communication, one sees that in total the modality of obligation is used approximately equally often by both sexes, but there are great differences in the use of particular modals. Therefore, even if NEED TO is indeed preferred by male speakers on 'democratic' grounds in the spoken language, the same explanation cannot apply also to the use of MUST, which is not a 'democratic' modal. It was, however, used nearly 35% more often by male speakers in the spoken BNC – and there is hardly any way to downplay the expression of authority with this modal verb. There are factors other than merely social or 'democratic' considerations, such as the preference for exhortation meaning of NEED TO by female speakers, that influence the choice of modal verbs. The core meaning of MUST may not have been used by male speakers at all, or used very little, and instead some other meaning, such as self-exhortation, could be predominant, judging from the frequencies of MUST with first-person subjects (see table 1, p.34). It is therefore important to consider semantic and syntactic as well as social factors when analysing modality. Hopefully, the research reported in the present thesis has shown the significance of this and has contributed to answering the questions posed by the dramatic increase in the frequencies of NEED TO, even if this was in part done by asking further questions. More research will be essential for answering these deeper questions as well.

8. Conclusion.

The primary objective of my thesis is to enrich the understanding of the present developments within the field of the modality of strong obligation and epistemic necessity. The starting point of the present investigation was to find solutions to the problem posed by the rapid increase of NEED TO in the last few decades of the twentieth century. After performing both quantitative and qualitative analyses of the frequencies and distribution of NEED TO in the BNC, it is clear that its rise is in many ways related to the falling frequencies of MUST and NEED. In the case of MUST, NEED TO seems to grow in use as an adequate substitute for this modal in personal interaction when a speaker wishes to avoid overt power markers and to downplay strong obligation by using NEED TO in its objective core meaning. Even when NEED TO expresses strong obligation and one of the speakers is in the position of authority over the other, the implications of using this modal are quite different from the cases when MUST is used, due to the very objective connotations associated with the use of NEED TO regardless of the context. My findings also suggest that in cases when HAVE TO expresses modal meaning similar to that of the core MUST, i.e. strong obligation, NEED TO will be preferred over HAVE TO as a more objective modal.

In cases when NEED TO is syntactically required, it is used instead of NEED – in declarative statements, combinations with tense and aspect and with other modal verbs. It may also be used instead of NEED as a result of a certain simplification of grammatical rules, where the less syntactically versatile NEED is becoming less and less common in favour of the verb form that can be used in all syntactic contexts. However, the decline of NEED does not explain all of the cases of the growth of NEED TO, as the growth of the latter has numerically exceeded the decline of the former. Even though the possibilities of diachronic research are limited in the BNC, due to the fact that most of the texts come from the period between 1985 and 1993, a small proportion of texts dates to the earlier periods: 1960 to 1974 and 1975 to 1984. My research shows that the use of NEED TO has grown by nearly 120 % from 1960 to 1993 while the use of NEED has declined by 30% in approximately the same period.

At the same time, the decline of NEED cannot be semantically motivated, due to the fact that semantic differences between NEED TO and NEED are for the most part grounded in their differing syntax. No significant semantic differences between NEED TO and NEED were found in analysing corpus samples. I can therefore not agree with Nokkonen's proposition that NEED and NEED TO are two completely different entities that were

mistakenly viewed under one heading (cf. Nokkonen 2006). Neither was there found any evidence to support Nokkonen's claim that NEED TO is in the process of developing epistemic meanings. None of the examples in my sample were clearly epistemic, even though dynamic cases can be said to be on the borderline between deontic and epistemic modality. Nevertheless, none of these cases had a meaning of epistemic necessity.

Certain meanings of NEED TO were particularly frequent in a random sample chosen for qualitative analysis and seem to reflect the most common uses of this modal. These uses correspond at the same time to the modern tendencies of the democratization of discourse and avoiding the very subjective expressions of strong obligation, such as are represented by MUST. These uses, called *core* in my analysis, were found with all subject types, and had an especially objective expression with the Passive voice and third-person inanimate subjects. The use of first-person plural subject *we* was, alongside the Passive voice, a means of softening personal directives and of avoiding direct address. The fact that *we* and the Passive were the most frequent with NEED TO in the spoken and the written language respectively points to the main reasons for using NEED TO as means of softening the expression of strong obligation. These findings support the earlier theories of the democratization of discourse and grammaticalization of semi-modal verbs.

I have also performed a quantitative analysis of NEED TO in the BNC, on its own as well as in comparison with MUST, HAVE TO and NEED. Like all semi-modals (see Krug 2000), NEED TO is more common in the spoken language. This feature distinguishes it from NEED (when it acts as a modal verb proper), which, although infrequent, is more common in the written BNC. In written English, the text categories where NEED TO was the most frequent, with over 200 cases per million words, were commerce and finance, belief and thought, and social science. These were also the categories where NEED was the most frequent, while MUST and HAVE TO followed a different distribution, with belief and thought being, however, the domain where both NEED and MUST were the most frequent in the BNC. NEED TO was the least frequent in imaginative prose and world affairs.

In the spoken English, an apparent-time study into the frequencies of NEED TO was performed. It was the most frequent in the speech of two age groups: 35- to 44-year-olds and 45- to 59-year-olds, 277 and 271 cases per million words respectively. This contrasts strongly with the frequencies of NEED TO in the speech of those aged 60+, with 62 cases per million words. This dramatic difference suggests a rapid increase in the frequencies of NEED TO, something that also corresponds to its rapid increase in the written language that occurred in

the period after 1974.

Gender variation in the use of NEED TO is particularly notable in the spoken language, where it is 55% more frequent with male speakers. In the written language of the BNC, there are at present no gender differences between the use of NEED TO by male and female writers. However, in the earliest portion of texts in the corpus, dated 1960 to 1974, male writers used NEED TO more frequently, approximately by 35%, with a very even distribution of texts between genders. The trend has reversed in the later years, female speakers using NEED TO more frequently, even if only by 5% in the decade from 1975 to 1984 and by 3% from 1985 to 1993. Thus, rapid increase in the frequencies of NEED TO after 1974 also corresponds to changes in gender distribution of this modal. At the same time, qualitative analysis has shown that female speakers may have a tendency to use NEED TO more frequently in tentative formulations, expressing exhortation or admonishing. In a random sample, NEED TO was more common with female speakers as means of direct address (*you* as a subject), while male speakers opted for an inclusive *we* as the most common subject type with NEED TO.

The present research has also pointed out certain flaws in the tagging system of the corpus, which any future student or researcher needs to be aware of. Wrong tagging is especially noticeable in the case of NEED, a very infrequent modal verb, which was assigned a tag VM0. In the spoken part of the BNC, out of 10,341,729 words, NEED was tagged as a modal verb 210 times. On closer investigation, out of these cases, only 193 were tagged correctly, in other cases NEED was either a lexical verb or a noun. This means 8% of erroneously attached tags, a very high number that required adjustment of all other distribution figures that were automatically obtained. In other search strings, the amount of erroneous tags in the sample selections ranged from 1% to 3.5%.

The present analysis will hopefully contribute to the body of research based on the British National Corpus, the largest and the most comprehensive corpus of British English available to date. I also hope my investigation will help any potential reader to become aware of the resources that the British National Corpus offers and that may be conductive to further research in the field of the modality of obligation in general and NEED TO in particular.

Distribution of subject types with deontic meaning, per 100 words in a random sample of 200 hits, raw figures in parentheses.

	Written				Spoken			
	NEED TO	**MUST**	**NEED**	**HAVE TO**	**NEED TO**	**MUST**	**NEED**	**HAVE TO**
you	14.6 (28)	13.0 (19)	8.6 (16)	10.7 (21)	28.3 (56)	19.6 (20)	**30.7** (55)	**29.2 (57)**
I	3.1 (6)	12.0 (17)	4.9 (9)	7.1 (14)	14.1 (28)	**33.3** (34)	15.0 (27)	17.4 (34)
we	18.8 (36)	10.0 (14)	5.4 (10)	7.6 (15)	**31.8 (63)**	14.7 (15)	8.4 (15)	18.0 (35)
3rd p. animate	25.5 (49)	10.0 (14)	23.8 (44)	**37.0 (73)**	8.6 (17)	15.7 (16)	14.5(26)	26.7 (52)
3rd p. inanimate	10.4 (20)	**27.5** (39)	**40.6** (75)	18.8 (37)	7.6 (15)	6.9 (7)	29.0 (52)	4.1 (8)
there	0.5 (1)	1.5 (2)	1.6 (3)	1.0 (2)	1.0 (2)	2.0 (2)	0	1.5 (3)
passive	**27.1 (52)**	26.0 (37)	15.1 (28)	17.8 (35)	8.6 (17)	7.8 (8)	2.8 (5)	3.1 (6)
TOTAL	**192**	**142**	**185**	**197**	**198**	**102**	**179**	**195**

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