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Source and strength of modality: An empirical study of root should, ought to and be supposed to in Present-day British English

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Abstract

The parameters of source and strength are often presented as crucial for the semantic profile of modal verbs expressing root necessity such as ‘should’, ‘ought to’ and ‘be supposed to’. Their role, however, is hard to assess because of the lack of clear definitions. This article offers a new perspective on the nature of subjectivity and strength that is grounded in detailed, qualitative corpus analysis of sentences with ‘should’, ‘ought to’ and ‘be supposed to’. It operationalises and refines both parameters and applies them to an extensive corpus of 1200 Present-day English sentences with ‘should’, ‘ought to’ and ‘be supposed to’, which results in an updated and more accurate picture of the meaning distinctions between them. More generally, the study shows that an accurate interpretation of modal meanings is to a large extent dependent on the discourse context, and that a detailed corpus analysis is required to understand the complexity of the parameters interacting in the establishment of modal meanings in context.

Keywords: Root necessity modals; Subjectivity; Source; Strength

1. Introduction

This article offers an analysis of should, ought to and be supposed to when they express root necessity meanings, that is, when they refer to the factors that influence the actualisation of a situation that is said to be necessary (cf. e.g. Depraetere and Reed, 2006:274; Verhulst, 2012:66), as in (1)–(3).

(1) To apply for this card, applications should be made to the Director of Recreation. (BNC HJB 271, root necessity, regulation)

(2) The whole business of convergence raises the intriguing question of who ought to regulate this burgeoning new industry. (BNCHMK 27, root necessity, circumstantial)

(3) About quarter to eight he shoots through to the other room and finds Dick and Joy Hardy there, they were supposed to be picking Gwen up and bringing her round. (BNC GUD 845, root necessity, circumstantial)

Example (1) expresses that there is a regulation stipulating that it is necessary for you to contact the Director of Recreation if you wish to obtain a recreational card. Example (2) expresses that particular circumstances (economic globalization...
require new regulations.\footnote{1} In example (3) the circumstances concern a specific past arrangement in which Dick and Joy were required to pick up Gwen.

We have chosen to focus on should, ought to and be supposed to because they both refer to a necessity that is less pressing than that expressed by must and have to. As Huddleston (2002:186) puts it, they express ‘medium strength modality’. However, while there seems to be a consensus on the feature of ‘inherent strength’ they share compared to ‘inherently strong modals’ like must and have to, there is no unanimous view on what distinguishes them. The difference in effect between the modal verbs should and ought to (when they express root necessity, as in (1)–(3)) has often been analysed in contradictory ways: for instance, they are both classified as subjective by Huddleston (2002:186) and Collins (1991:377), but Declerck (1991:377) and Larreya and Rivière (2005:115) claim that ought to is more objective than should.

Ought to has been considered to be stronger (Westney, 1995:168) but also weaker (Sweetser, 1990:53) than should. When compared to must, should and ought to have been argued to express virtually identical root necessity meanings such as advice or moral suggestions (see, among others, Coates, 1983:81; Myhill, 1995:162, 174; Hoye, 1997:110; Palmer, 2001:73; Huddleston, 2002:207; Smith, 2003:242; Biber et al., 2006:205). Interestingly, the semi-auxiliary\footnote{2} be supposed to is regularly mentioned in the margin of studies of root necessity, but its semantics likewise remains unclear. With respect to the strength of the modal claim it makes, Altman (1986:83), for instance, observes that it is weaker than that of should, whereas according to Biber et al. (2006) it is stronger than should.

In this paper, we argue that the lack of unanimity on the semantic profile of the modal verbs should, ought to and be supposed to is due to the fact that the parameters that have thus far been used to describe them are insufficiently or inaccurately defined: notions such as ‘source’, ‘subjectivity’ and ‘strength’, which are typically resorted to in the discussion of root necessity, are in need of clarification. At the same time, we show that detailed qualitative analysis of corpus data is needed to test the value of these parameters and move beyond existing contradictory claims\footnote{3}. In Section 1 we present a critical discussion of the ways in which the notions ‘source’ and ‘subjectivity’ have been used to characterise root necessity meanings. We suggest alternative definitions and show that, when applied to a corpus, these help capture subtleties of the root necessity meanings of should, ought to and be supposed to that had hitherto gone unnoticed. In Section 2 we consider the notion of strength more closely and present an alternative definition aiming to make the notion operational in the discussion of root modality. Our analysis is based on a set of 1200 examples of root should, ought to and be supposed to from the British National Corpus. In addition to revealing the specifics of each modal verb, the corpus analysis brings to the fore the importance of integrating the discourse context in the analysis of modal auxiliaries, and it allows us to identify the relative importance of each parameter for distinguishing the root necessity modals under investigation from one another. Section 3 draws some conclusions and sketches possible pathways for further analysis.

2. Source, subjectivity and strength

2.1. Parameter 1: source

In order to pin down usage contexts of necessity modals, researchers have looked at the (differences in) sources that the necessities result from. If it is the speaker who is the source, that is, if it is the speaker who wants the situation to be

\footnote{1} We prefer the term ‘root’ to ‘nonepistemic’ necessity because the latter term fails to give a positive characterisation of the element of meaning that unites the relevant uses. The term ‘root’ reflects the fact that root modality is more ‘basic’ than epistemic modality in that epistemic modal meanings have historically developed from nonepistemic ones (cf. e.g. Nordlinger and Closs-Traugott, 1997). While ‘deontic necessity’ is sometimes used as a synonym of non-epistemic necessity (cf. e.g. Bache and Davidsen-Nielsen, 1997), it is often reserved for root necessity meanings which have the illocutionary force of an order, as in ‘You should tell your parents’ (vs. non-deontic necessity: ‘The books should be returned after two weeks.’) (cf. e.g. Huddleston, 2002). We have therefore chosen to use the more neutral and more encompassing concept, ‘root necessity’, which covers any necessity meaning that is nonepistemic.

\footnote{2} Be supposed to has not generally been recognised as having full auxiliary status and has been called a ‘peripheral’ or ‘semi/pseudo-auxiliary’. For a good discussion of the auxiliary status of be supposed to, see Westney (1995: 14–35). Henceforth we will talk about should, ought to and be supposed to as modal verbs, and will ignore the difference in auxiliary status between should and ought to on the one hand, and be supposed to on the other.

\footnote{3} Classification of corpus data, especially when working with semantic and pragmatic parameters of the kind we are, is challenging. However, working intensively with the sample at hand has gradually enabled us to fine-tune the parameters so that in the end, we always managed to classify examples: (1) We thereby took great care to examine the wider context of the BNC examples, taking into account not only the detailed background information provided by BNC (concerning, for instance, the precise source of the data, the nature of the speaker-hearer relation involved and the topic of discussion), but also the actual discourse context; (2) in all, we processed the BNC data three times, with intervals of several months between the different rounds of analysis; (3) to accommodate hybrid or in-between cases, we complemented existing binary descriptions such as weak vs. strong necessity and introduced new categories like ‘intermediate strength’.
actualised, the modal sentence is often qualified as ‘subjective’.\(^4\) Even though in the literature, the link between ‘subjectivity’ and ‘source’ is not always explicitly made, the former is, in fact, just one illustration of the latter: subjectivity is one possible type of source. In what follows, we will first look at how subjectivity has thus far figured in the literature on root necessity (2.1.1). We will then argue that subjectivity constitutes one sub-category of the more generic category of source, i.e. that of discourse-internal source, and we will discuss various other sources that can lie at the origin of root necessity (2.1.2). Finally, we will distinguish three subtypes of discourse-internal or subjective source (2.1.3).

2.1.1. The concept of subjectivity in root necessity

Subjectivity (or ‘speaker involvement/commitment’) is generally recognised as an important feature of root necessity (see, among others, Ehrman, 1966:59; Halliday, 1970:335–336; Lyons, 1977:739; Palmer, 1990:10; Verstraete, 2001; Huddleston, 2002:173; Salkie, 2009). However, defining this concept in such a way that it can be applied to a corpus analysis is not a straightforward task. The challenge involved has led some authors to conclude that subjectivity is not a useful criterion in the study of modality, because it is difficult “to draw the borderline between subjective and objective [modal meaning]” (Narrog, 1995:170). Similarly, Myhill and Smith (1995:241) write that the subjective/objective dichotomy is difficult “to apply objectively to naturally occurring data”. The analysis of (4) and (5) illustrates the problem of interpretation involved.

(4) One should always tell the truth. (Huddleston, 2002:186)
(5) You ought to congratulate her. (Declerck, 1991:377)

Huddleston (2002:186) writes that the necessity in (4) is subjective because it “indicate[es] what the speaker considers … morally . . . ‘right’”. By contrast, Declerck (1991:377) considers (5) objective as it “represent[es] . . . a duty”. In our view, out of context both examples are subjective in the sense that in both the speaker is the source. Example (4) expresses that in the speaker’s view, it is important to ‘always tell the truth’. Similarly, example (5) expresses a discourse-internal necessity: the speaker finds it necessary for the addressee to fulfill a moral duty (i.e. ‘congratulate her’). The difference between (4) and (5) is that the former expresses a general value that the speaker embraces, while (5) refers to a specific action to be carried out by a specific subject. Yet the source of the necessity is the same in both examples, which communicate the speaker’s view on what is morally right.

Subjective root necessity is often illustrated with performative, agentive examples like (6).

(6) You must play this ten times over, Miss Jarova would say. (Coates, 1983:34)

The term ‘performative’ has been used for sentences with a modal verb that contain an agentive infinitive and that have the illocutionary force of a directive because the speaker has authority over the addressee (cf. Van Belle, 1973:282; Palmer, 1990:7). Example (6) can be paraphrased as ‘I order you to play this ten times over’. Yet it has been argued by e.g. Coates (1983) that such so-called ‘performative’ examples illustrate but one, quantitatively infrequent, type of subjective necessity. Quantitatively more frequent subjective uses are illustrated in examples (7)–(8).

(7) If we come in, you ought to be kind to him and not ask him to sacrifice his health by taking office. (BNC EW1 594)
(8) I supported Prescott . . . but I think he’s wrong on this particular issue . . . and I think it should be dropped. (BNC HUC 293)

The examples in (7)–(8) are subjective because in each case the necessity originates in the speaker’s desire for some situation to actualise. In example (7) the speaker gives advice to the addressee; the sentence can be paraphrased as ‘I find it necessary for you to be kind to him’. Example (8) conveys the speaker’s opinion on a proposal; the sentence can be

\(^4\) Note that in the cognitive literature, ‘subjectivity’ is interpreted differently. In Langacker’s view (1990, 1991), both ‘subjective’ and ‘objective’ constructions are speaker-related and only differ in terms of how explicitly the speaker figures in them: structures that for their understanding require reference to the speaker and do so in a formally implicit way (e.g. this book) are considered to be more subjective than structures that explicitly mention the speaker (e.g. the book in front of me). The modal auxiliaries, Langacker (1991:269–275) argues, have moved from ‘objective’ main-verb constructions, with the subject as an objectively construed participant accorded maximal salience (as, for instance, in the original use of may, indicating that its subject had the necessary strength of physical ability to do something) to more ‘subjective’ constructions in which the locus of potency is less prominent and can be the speaker, “some other individual, whose identity may or may not be clear from the context” or “some unspecified facet of the physical or social world” (Langacker 1991:273). In Langacker’s view, all Present-day English core modals as well as periphrastic modals are thus subjective in nature, the speaker being construed with maximal subjectivity in the grounding predication.
paraphrased as ‘I find it necessary for the proposal to be dropped’. These examples show that speaker involvement need not be limited to directing the addressee to do something, but can be as subtle as the reflection of the speaker’s point of view on what is necessary. In the next sections we will propose a view of source that can account for examples like (7)–(8) and which breaks down the existing binary view of source (subjective vs. objective) into more refined subtypes. In Section 2.1.2 we will distinguish three possible sources expressed by root modals, i.e. discourse-internal, discourse-external and mixed sources. The focus in that section will be on non-subjective (objective and mixed) sources that a necessity may result from. In Section 2.1.3 we will further subdivide the category of subjective (or discourse-internal) sources into different types of subjectivity.

2.1.2. *Discourse-internal (subjective), discourse-external (objective) and mixed (intersubjective) sources in root necessity*

‘Source’ has generally been recognised as an important concept in root modal sentences\(^5\) (cf. e.g. Heine, 1993:35; Brandt, 1999:30–32; Diewald, 2001:33) to refer to the authority (e.g. a person or convention) that creates an obligation. For example, in (9) the driving-force behind the necessity is a law on second-hand cars.

(9)  Now if you do that the only right you’ve got, in law, is that the car should be as described. That would mean that any statement made about the car should be true, for example a statement about the number of miles it’s done. (BNC FUT 240, source: regulation)

In some cases, the necessity is due to specific circumstances. For example, in (10) the economic situation of convergence makes it necessary to find new regulations.

(10) The whole business of convergence [economic globalization] raises the intriguing question of who ought to regulate this burgeoning new industry. (BNC HMK 27, source: circumstances)

Sentences that express circumstantial necessity are often not considered to have a source but to express “an inevitability inherent in the situation as a whole” (Nuyts, 2005:8) (cf. also Verstraete, 2001:1508; Huddleston, 2002:185). In our view, any root necessity is linked up with a source: if there is reference to a necessity it must originate somewhere. Depraetere and Verhulst (2008) offer a detailed analysis of the notion of source; the merit of this investigation is that it shows that the dual distinction ‘subjective-objective’ can be made more explicit in ways that turn out to be beneficial to a better understanding of the difference in context of use between the ‘strong necessity’ modal verbs ‘must’ and ‘have to’. We have therefore chosen to apply their taxonomy of sources to the more ‘intermediate strength’ modal verbs ought to, should and be supposed to in an attempt to pin down potential differences in context of use between these verbs. Table 1 gives a survey of the sources which can lie at the origin of root necessity according to Depraetere and Verhulst (2008), who distinguish between discourse-internal and discourse-external sources.\(^6\)

A necessity is subjective if it originates in a discourse-internal (or subjective) source, which is either the speaker or some other person that is part of the discourse situation. As noted above, in (8) it is the speaker who expresses his opinion to drop the proposal. In (11) the addressee is the source: the sentence can be paraphrased as ‘Is it your wish for the Civil List to be abolished?’

(11) Do you think the Civil List [state money paid to the British Royal Family to cover living expenses] should be abolished? (BNC FLE 242, source: addressee)

We will argue in Section 2.1.3 that three further subtypes of ‘subjective’ or ‘discourse-internal’ sources need to be distinguished:

In what have traditionally been labelled ‘objective’ examples of root necessity, the necessity originates in a discourse-external source (a rule, a condition or circumstances). In the category of ‘rules’ the source ranges from more strongly binding forces such as laws (e.g. (9)) and institutional rules to more weakly binding forces such as traditions, instructions for use, rules of a game and social patterns (e.g. (12)–(13)).

(12) It is widely believed in English speaking cultures that women are good listeners. But ‘are’ also has a certain flavour of ‘ought to be.’ (BNC CGF 96, source: rule – social pattern)

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\(^5\) We use ‘root modal sentence’ as a shorthand for ‘sentence with a modal that communicates root modal meaning’.

\(^6\) For more details about each type of source and an application of the taxonomy to have to and must we refer the reader to Depraetere and Verhulst (2008).
Table 1
Survey of possible sources in which root necessity originates (Depraetere and Verhulst, 2008:5).

<table>
<thead>
<tr>
<th>Discourse-internal</th>
<th>Discourse-external</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interlocutor (speaker/other discourse participant)</td>
<td>Regulation</td>
</tr>
</tbody>
</table>

(13) You’re **supposed to** cross the fire as a sort of a purification ceremony, through the ashes of the fire. (BNC FFL 331, source: rule – tradition)

The example in (13) refers to a traditional ceremony in which members of a certain culture are required to take part. The category of ‘condition’ is illustrated by examples like (14)–(15):

(14) What you effectively have in the AIS part of Skymaster is a selective scan of much of the current information you **ought to** be looking at if you’re planning a flight in the UK or near Europe. (BNC ECX 170, source: condition)

(15) To reach a solution several fundamental questions **ought to** be answered: … (BNCBP2 60, source: condition)

In their overview of sources associated with modal necessity, Depraetere and Verhulst (2008:8–11) take their lead from Larreya (1982), who argues in favour of a category of modality which he calls ‘modalité implicative’. Depraetere and Verhulst agree that it is necessary to distinguish between what they call ‘conditional necessity’ (which corresponds to Larreya’s ‘modalité implicative’) and ‘circumstantial necessity’, a crucial difference between both types of source being that the conditioning situation ‘is posterior to the modal meaning of necessity (X is necessary at t in order for Y to actualise at t+1) while in the case of circumstantial necessity, the circumstantial source is simultaneous or anterior to the modal meaning (X is necessary at t because Y ≤ t).’ (Depraetere and Verhulst, 2008:9). In (14) ‘planning a flight in the UK or near Europe’ makes it necessary to look at information on Skymaster. The actualisation of the situation expressed in the conditional clause (‘planning a flight’) requires the actualisation of another situation (‘look at information on Skymaster’). In (15) the necessity for answering several questions has a discourse-external, conditional source: answering questions is necessary if a solution is to be found.

Finally, in cases of circumstantial necessity the source may either be a concrete situation, as in (10) or (16), or a more abstract, existential source, as in (17)–(18):

(16) Women **ought to** drink [alcohol] about two thirds of the safe levels for men, mainly because of their lower average body weight. (BNC J23 98, source: circumstances)

(17) One **ought to** do what one **ought to** do. (BNC ANH 363, source: circumstances)

(18) Usually when you suggest this action [i.e. visiting a dead person to say goodbye] to your family, whether they be Christian or heathen, you will be regaled with horror stories of long-term psychological damage. If that fails to dissuade you, you will be told that it is not very nice: it is frightening and ghoulish… Well, death **is not** **supposed to** be nice. (BNC CCE 1564, source: circumstances)

In (16) the necessity for women to drink less than men originates in some physical circumstances (‘lower average female body weight’). The speaker’s commitment to or opinion about this biologically determined fact is simply irrelevant. In examples (17)–(18) the source is related to ‘the nature of life’. While some argue that in such cases there is no source, because the necessity is simply “force of circumstance…, rather than being imposed by some…source” (Huddleston, 2002:185), we argue that the concept of source applies to all types of circumstantial necessity. Example (17) is a philosophical observation about the fact that life continuously requires us to make decisions in view of the circumstances. The source can be paraphrased as ‘the situations we happen to find ourselves in’. Example (18) says that it is part of life that dying is never a pleasant experience. The source can be paraphrased as ‘the nature of death’. This existential type of source may be less emphatically present (or ‘visible’) than in examples like (9)–(15), but it would not be accurate to say that there is no source.

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7 Note that this example is different from those discussed so far in that the residue predicates a quality of the grammatical subject (it is an inherent feature of ‘death’ that it is not nice). This type of example illustrates ‘subject-orientedness’, which is explained in further detail in footnote 13.
In addition to discourse-internal and discourse-external sources, we also distinguish a mixed type of source, for intersubjective examples in which there is a combination of a discourse-internal and discourse-external source, as in (19)–(20).

(19) You are actually behind the Tories with only 21% support. That . . . should worry you in terms of the case that you’re putting across. (BNC JJD 269, source: speaker and circumstances)

(20) What we do know from research is that children who smoke are more likely to smoke the brands that are heavily advertised. And we also know that advertising reinforces smoking, it makes people think that smoking is okay. So I think these are two very valid reasons why we ought to ban all forms of tobacco advertising. (BNCFLM 347, source: speaker + circumstances)

In example (19) the speaker explicitly motivates his opinion by referring to external circumstances. The sentence can be paraphrased as ‘I consider it necessary because of the case you’re putting across’. In (20) the necessity does not merely originate in the speaker’s opinion but is based on research. The hybrid nature of the source is clear from the fact that there are two aspects to it: ‘I want tobacco advertising to be banned’ and ‘it is necessary to ban tobacco advertising because there is evidence that it encourages smoking’. The classification of such instances as ‘intersubjective’ takes into account this combination of a discourse-external and discourse-internal source.

Table 2 gives an overview of the (sub)types of discourse-internal, discourse-external and mixed sources. The terms ‘discourse-internal’ and ‘subjective’ can be used interchangeably. Similarly, we can talk about ‘discourse-external’ or ‘objective’ root necessity and about examples with a mixed source or ‘intersubjective’ examples.

In the next section we will have a closer look at different types of discourse-internal (or subjective) sources.

2.1.3. Types of discourse-internal source

Subjectivity in root necessity has been regarded as problematic because it is hard to distinguish between subjective and objective root necessity meanings (cf. Section 2.1.1). Yet, given the importance of subjectivity for root necessity it is crucial to find a way to operationalise this parameter and in this way arrive at a better understanding of its impact on the choice of modal verb. In Section 2.1.2 we argued that the triad discourse-internal source, mixed source, discourse-external source is matched by the cline subjective–intersubjective–objective. In this section we will suggest that the subjective pole can be further divided into three types, A, B and C, the defining criterion being the party that is meant to benefit from the fulfilment of the necessity. Each type of source will be illustrated and commented on below. Before we start the discussion, it is important to add that subjectivity is, to a certain extent, a cultural issue; social roles and politeness principles impact on the interpretation and may differ depending on the community (cf. e.g. Stubbs, 1986:2; Hinkel, 1995). In other words, it seems likely that our operationalization of subjectivity is not universally applicable.

2.1.3.1. Subjective source type A – the necessity mainly benefits the discourse-internal source. In examples belonging to this category there is a discourse-internal source and the necessity originates in the desire of the speaker or another discourse-internal source for a situation to be brought about. The actualisation of the necessity is beneficial to the discourse-internal source, as in examples (21)–(22).

(21) If someone in my position [of Prime Minister] is saying this I believe this is the best opportunity for lasting peace, . . . you should listen to what I have to say. (BNC HUW 49, source: discourse-internal – speaker)

(22) This thoroughly annoyed me because . . . every year I’d paid my tax, . . . my national insurance, and as far I’m concerned that should’ve entitled me [to income support]. (BNC JA4 68, source: discourse-internal – speaker)

In (21)–(22) the necessity originates in the speaker. In (21) there is tension between the speaker and listener, so it will be the speaker who benefits from being listened to. In (22) the necessity again originates in the speaker and it is the speaker who will benefit from getting income support.
2.1.3.2. Subjective source type B – the necessity mainly benefits others. In this category the necessity originates in a discourse-internal source but fulfilment of the necessity primarily benefits not the discourse-internal source but some other person(s). The actualisation of some situation may be deemed necessary (mainly) for the good of people other than the discourse-internal source. For example, in (23) the speaker speaks up for his sister. The speaker’s wish for ‘(she) to do as she wishes’ is motivated by concern for somebody other than the speaker himself.

(23) ‘Well, now that you are here, you must stay until you are really well, mustn’t she, David?’ David leaned forward to replace his tea cup on the table and then he straightened up. ‘I think she [my sister] ought to do exactly as she wishes, Mama.’ (BNC FSC 1516, source: speaker)

2.1.3.3. Subjective source type C – the necessity benefits no one in particular. Alternatively, a speaker may utter his opinion without there being any one in particular to whom the actualisation of the situation is beneficial. For instance, in (24) the speaker corrects a formulation that is, in his view, inaccurate. There is no one in particular who benefits from this correction.

(24) The price is enough to make one weep. In the flyer produced by Oxford University Press, Peter Fusco, Curator of European Sculpture and Works of Art at the J. Paul Getty Museum, writes that the catalogue is ‘a work which every art library and student of sculpture will need to own’. Perhaps, at £325, he should have written ‘will want to own’. (BNC CKU 985, source: speaker)

In the next section we will apply the parameter of source to a sample of 1200 tokens from the BNC, the overall aim being that of pinning down differences in context of use between the modal markers under investigation: should, ought to and be supposed to. The database was compiled by extracting 400 root tokens of each modal verb by means of an automatic random selection query of the corpus. This yielded combinations of past and present forms of be supposed to followed by a present or perfect infinitive, and combinations of should and ought to followed by a present or perfect infinitive. We further filtered the data as follows. Examples with a negative form of should or in which should features in a direct question (Should teenagers drink less alcohol?) were removed since in such cases should often functions as a substitute for ought to (cf. Quirk et al., 1985:1380; Huddleston, 2002:109, 878, 894). Also, we did not include examples in which should is used in a that-clause depending on a lexical expression of necessity (It is vital that we should pay more attention to poverty among children), in which should is the default choice.

2.1.4. Findings

Table 3 offers a survey of the main differences between the sources identified in sentences with should, ought to and be supposed to.

The most important point that emerges from the table is that the majority of data with be supposed to is discourse-external (91%), while the majority of data with should (73%) and ought to (66%) is discourse-internal. This observation contradicts claims that ought to is more objective than should (cf. e.g. Declerck, 1991:377; Larreya and Rivière, 2005:115): examples with should and ought to are mostly subjective. Yet the nature of discourse-internal sources in examples with should and ought to is quite different. Table 4 gives an overview of the distribution of subjectivity types A, B and C (as defined above in Section 2.1.3).

Table 4 shows that while there is a fairly even distribution of discourse-internal examples with should over Types A, B and C, the majority of discourse-internal examples with ought to belong to Type B (63%). In discourse-internal examples with ought to the fulfilment of the necessity does not primarily benefit the speaker. For instance, in (25)–(26) the speaker is mainly concerned about other people than himself.

(25) If people have any questions on individual presentations then I think we ought to take those questions while the group is up here. (BNC JYL 5, discourse-internal, Type B)
Table 3
Overview of the types of sources in the corpus data with should, ought to and be supposed to.

<table>
<thead>
<tr>
<th>Sources</th>
<th>disc.-int. (subj.)</th>
<th>disc.-ext. (obj.)</th>
<th>TOTAL disc.-ext.</th>
<th>TOTAL mixed (intersubj.)</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>circumst.</td>
<td>condition</td>
<td>rule</td>
<td></td>
<td></td>
</tr>
<tr>
<td>should</td>
<td>294 (73%)</td>
<td>30 (7%)</td>
<td>4 (1%)</td>
<td>46 (12%)</td>
<td>80 (20%)</td>
</tr>
<tr>
<td>ought to</td>
<td>263 (66%)</td>
<td>63 (15%)</td>
<td>6 (2%)</td>
<td>36 (9%)</td>
<td>105 (26%)</td>
</tr>
<tr>
<td>be supposed to</td>
<td>35 (8%)</td>
<td>256 (64%)</td>
<td>12 (3%)</td>
<td>96 (24%)</td>
<td>364 (91%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>592 (49%)</td>
<td>349 (29%)</td>
<td>22 (2%)</td>
<td>178 (15%)</td>
<td>549 (46%)</td>
</tr>
</tbody>
</table>

Table 4
Types of subjectivity in examples with a discourse-internal source.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>should</td>
<td>89 (30%)</td>
<td>93 (32%)</td>
<td>112 (38%)</td>
<td>294 (100%)</td>
</tr>
<tr>
<td>ought to</td>
<td>22 (8%)</td>
<td>166 (63%)</td>
<td>75 (29%)</td>
<td>263 (100%)</td>
</tr>
<tr>
<td>be supposed to</td>
<td>21 (60%)</td>
<td>9 (26%)</td>
<td>5 (14%)</td>
<td>35 (100%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>132 (23%)</td>
<td>268 (45%)</td>
<td>192 (32%)</td>
<td>592 (100%)</td>
</tr>
</tbody>
</table>

(26) If we’re to take this motion seriously, the Tories are suggesting that council housing should be restricted to those most in need. Now on the face of that, that seems fairly sensible, y’know – if somebody is in need we ought to be doing something about it. (BNC JT7 251, discourse-internal, Type B)

In (25) a lecturer thinks that it is in the group’s interest to answer questions right after the presentations; and in (26) the speaker speaks on behalf of people having housing problems. It is probably the frequent occurrence of examples of Type B that has led researchers to consider ought to as more objective than should. If the fulfilment of some situation benefits someone other than the speaker, this may give the impression that there is an external motivation for the necessity, while it actually originates in the speaker’s opinion. For instance, in (25) the necessity to answer questions will be useful to the group attending but the ideato allow for question time after the individual presentations comes from the speaker, who can therefore be considered the origin of the necessity. It is thus by analyzing the source of the necessity in more detail that we can adjust the common view in which root necessity expressed by should is considered more subjective than ought to. In the next section we turn to the second parameter that impacts on the semantic profile of modal verbs, namely strength of the necessity. We will first look at how ‘strength of modality’ has been defined in the literature (Section 2.2.1). Then we will offer alternative criteria that can be used to determine the strength of root necessity meaning (Section 2.2.2).

2.2. Parameter 2: strength

2.2.1. Strength of root necessity in the literature

2.2.1.1. Introduction. Strength is presented as an important parameter in Coates’ (1983) analysis of modal auxiliaries, one of the first full-fledged empirical studies of modals in English. She paraphrases cases of strong root necessity with ‘it is obligatory/essential that...’ and cases of weak necessity with ‘it is important that...’. On closer analysis, it seems that she fails to provide criteria for the strong/weak distinction: the paraphrases merely describe the distinction but do not help us to classify examples in terms of strength. As Myhill and Smith (1995:242) point out, it is not clear why (27) should be paraphrased with ‘important’ and (28) with ‘obligatory’ and not the other way round.

(27) If you commit murder, Charlotte, you must be punished. (Coates, 1983:34)
(28) They were told by the Chairman, Mr. Jos D. Miller, ‘You must have respect for other people’s property.’ (Coates, 1983:34)
Before we discuss the definitions of strength that have been proposed by other researchers, it should be noted that in the literature a distinction is made between semantic and pragmatic strength. Semantic strength distinguishes must and have to, which are said to express strong root necessity meaning, from should and ought to, which are said to be weak (see, among others, Myhill, 1995:162, 174; Hoye, 1997:110; Palmer, 2001:73). Both strong and weak modal verbs can be subject to ‘pragmatic strengthening or weakening’. For instance, while must is said to convey strong root necessity, it can occasionally be pragmatically weakened, as in the invitation You must try this cake, it’s delicious. Similarly, should is considered to convey weak root necessity meaning but can be used to express stronger necessity meanings, as in example (9), repeated here as (29), which expresses a regulation (cf. e.g. Huddleston, 2002:176–177).

(29) To apply for this card, applications should be made to the Director of Recreation. (BNC HJB 271, root necessity, regulation)

We will not distinguish between ‘semantic strength’ or ‘pragmatic strength’. Since the (extra-)linguistic context will appear to be crucial to determining the (degree of) strength of the necessity, one could say that strength, as studied in this paper, is pragmatic in nature, but not in the sense of the kind of ‘pragmatic strengthening or weakening’ discussed above. Neither does our analysis presuppose any a priori difference in strength between auxiliaries. As in the case of source of the necessity, or subjectivity, we aim to make the criterion of strength operational so that it can be applied to any root necessity sentence, regardless of the modal verb that is used.

2.2.1.2. Common criteria used to determine strength. Some of the existing definitions of strength are fairly intuitive; others hinge on the notion of subjectivity. We will explain and comment on the usefulness of each approach before we present our own definition of strength.

Several authors claim that the impression of ‘inherent strength’ of certain necessity markers may explain differences in strength. For instance, must is often considered to be the strongest root necessity marker simply because it possesses some inherent strength: must seems to sound more emphatic or insistent than, e.g. have to (cf. e.g. Kruisinga, 1925:347; Sweetser, 1990:54; Westney, 1995:160–161; Smith, 2003:259; Depraetere and Verhulst, 2008:22). For instance, Depraetere and Verhulst (2008:22ff) write that the strength of the necessity seems to increase if must is used instead of have to (cp. (30)):

(30) a. The really sad thing about this is that the men who fish in the Clyde and the navy have a fairly well designed liaison system designed precisely to avoid what has happened there. And yet it has happened. And we have to get to the bottom of that [i.e. fishing net incidents]. (ICE-GB: S2B-011)

b. And we must get to the bottom of that.

While the notion of ‘intuitive inherent strength’ seems a valid one to resort to for the description of must, its usefulness appears to be restricted for our purposes, as claims about the intuitive strength of should and ought to by different authors are contradictory. For instance, Westney (1995:168) writes that ought to is “inherently stronger” than should, while Sweetser (1990:53) claims the reverse: she writes that ought to is weaker than should without giving arguments for this view. Similarly, be supposed to is sometimes considered to be as strong as should and ought to (cf. e.g. Biber et al., 2006:205); others have argued that be supposed to is weaker than should (Altman, 1986:83). The observations by Biber et al. (2006) and Altman (1986) are intuitive judgments as the authors do not give a definition of strength.

Some authors link the strength of root necessity to subjectivity: root necessity, in that perspective, has been claimed to be strong if it originates in the speaker. For instance, Huddleston (2002:175) defines ‘strength of modality’ as “strength of the commitment (prototypically the speaker’s commitment) to the . . . actualisation of the situation.” The necessity expressed in You must come in immediately is strong “in that it doesn’t countenance your not doing so” (Huddleston, 2002:176). Berkenfield (2006), too, defines strength in terms of subjectivity when she argues that (31) can get a strong and a weak reading.

(31) The only thing I know is that I’m supposed to go to Przemyśl, she said, naming the Polish–Soviet border town where she was to meet escorts who would take her to Walesa’s new, secret location. (Berkenfield, 2006:58)

Berkenfield comments that “[t]he weak reading emerges when the writer implies . . . that a person other than the speaker made the suggestion that the speaker go to Przemyśl. The strong reading emerges when the writer implies and the reader infers that the speaker herself has imposed the requirement of going to Przemyśl on herself” (Berkenfield, 2006:58). Similarly, Collins (1991:149) argues that if “the source of the obligation is not the speaker . . . the sense of obligation is less
strongly felt than it is in cases with direct speaker involvement”. From that perspective he describes the root necessity meanings expressed by should as ranging from strongly subjective to weakly objective (Collins, 1991:158, 161). A final example is Coates (1983), which contains contradictory views. On the one hand, she interprets strength and subjectivity as clines which range, respectively, from strong to weak and from subjective to objective, and which operate independently of one another. On the other hand, many of her claims suggest that strength and subjectivity are mutually dependent features. For instance, as far as must is concerned, she observes that “[t]he strength . . . of any given example of Root MUST seems to depend . . . on the person of the subject and on the involvement of the speaker (subjectivity). Thus, strong examples are usually subjective and weak examples are usually objective” (Coates, 1983:37).

Yet, it is unclear why a necessity originating in a discourse-internal source would be stronger than, e.g. a circumstantial necessity. The reverse view is actually expressed by McCullum-Bayliss (1985, in Westney, 1995:159), who argues that a root necessity expressed by have (got) to be considered as stronger than its counterpart with must because with have (got) to the necessity arises from an external source, which may be less ‘escapable’ than an obligation issued by the speaker. For instance, the sentence There has got to be a first time for everything expresses what we labelled as an existential necessity, which is strong as it refers to an inevitable or inescapable situation: taking risks is simply part of life; life, by its very nature, involves taking risks. By contrast, in a sentence like You must try this delicious cake the speaker is the source of a weak necessity as it expresses an invitation (rather than an obligation) to taste a piece of cake. In the next section we will argue in favour of a clear distinction between strength and subjectivity. We will propose three degrees of strength (strong, intermediate and weak) and give criteria to distinguish between these degrees. Finally, we will show that there is a need to allow for ‘grey zones’ between the three degrees of strength, because the necessity may be strengthened or weakened by linguistic markers.

2.2.2. An alternative view of strength in root necessity

2.2.2.1. Three degrees of strength. The most reliable factor that determines the strength of root necessity data is the likelihood of actualisation of the situation that is claimed to be necessary. Depraetere and Verhulst (2008) contend that two criteria determine the likelihood of actualisation: (a) the impossibility of non-compliance or (b) the gravity of non-compliance. If criterion (a) is met, a root necessity sentence can automatically be considered to be strong, as in example (32):

(32) Filial imprinting takes place in many species of birds and mammals. . . . Imprinting is adaptive because it enables the young to recognise and follow their parents. They will grow up in a world of many hostile enemies and one or two protective parents. If they are to survive, the young should choose the right animals to follow. (BNC GU8 215, source: circumstances, strong)

The sentence in (32) expresses a scientific observation about young animals: following the right animals constitutes instinctive behaviour, hence non-compliance of the necessity is not an option. 10 If criterion (a) does not apply because it is possible not to fulfil the necessity, strength depends on the impact of potential consequences of non-fulfilment (criterion b). This, in turn, is determined by contextual factors that relate to power, such as the addressee’s attitude towards authority, the social relationship between the discourse participants (in terms of superiority or equality), and the severity of the consequences of non-compliance. For example, in (33)–(35) the necessity is strong because non-compliance of the necessity may impact in a rather negative way on one’s condition.

(33) It is currently 35 degrees Fahrenheit out and the wind is blowing up the canyon at 87 mph hour—the chart says ‘should not be skiing’, which is good because we aren’t. (BNC BMF 251, source: circumstances, strong)

(34) Julie was made comfortable in bed and given a vomit bowl and tissues as she continued to feel nauseated. It was explained to her that she should not drink prior to having an anaesthetic. (BNC EV5 255, source: rule, strong)

(35) Grace had proceeded to have two children, Red and Bibi, whom she and Bart adored and spoilt impossibly. Grace, however, tended to ignore Luke when he came to stay, doing her duty without love or warmth. Then his mother had married again, to a PT Instructor who beat Luke up so badly that a court ruled he should go and live with Bart full time. (BNC CA0 1899, source: discourse-internal, strong)

Example (33) expresses that because of bad weather conditions skiing is dangerous and should be avoided. In (34) the necessity originates in a medical rule which says that one should not drink before taking an anaesthetic. In (35) the

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10 Unlike should and ought to, which can in some contexts exclude the possibility of non-compliance and in others allow for it, must appears to be incapable of expressing ‘escapable obligation’ (Declerck, 1991:378). A sentence like “He must punish her, but he won’t is therefore questionable, while He ought to punish her, but he won’t isn’t.”
necessity is strong because it originates in the power of an official, legal body. Not complying with the requirements imposed by a law court may have serious consequences (e.g. prosecution, fines). Obviously, we venture onto somewhat dangerous grounds by attempting to measure the gravity of potential consequences of non-compliance, as this involves an assessment of extra-linguistic factors that are culture-dependent. However, in the context of modal verbs that are, at the intuitive level, fairly similar in strength, it seems that an approach along the lines described is the only possible one. The next step will then be to determine whether should, ought to or be supposed to are preferably used in a context of strength x, y or z.

Requirements that affect one’s health, safety, or financial issues will generally be considered as more urgent (stronger) than necessity related to affairs such as job-related or personal arrangements.\footnote{The differences in strength that we propose here is based on the following observation: examples in which non-fulfilment of the necessity has financial consequences tend to imply court decisions, fines, punishment. By contrast, circumstantial sources often relate to arrangements between people, which imply weak necessity since the non-fulfilment does not impact dramatically on people’s lives.} For example, the necessity in (36) can be considered as weak, because the sentence features in a conversation between friends, and the consequences of the cancelled meeting are just that: a cancelled meeting.

\begin{quotation}
We were supposed to be doing something with Eric and John, but Eric couldn’t make it, or perhaps didn’t want to. (BNCC9H 205, source: circumstances, weak)
\end{quotation}

In between strong and weak examples, we find data such as the example in (37), which has ‘intermediate strength’.

\begin{quotation}
Make a good breakfast,’ Mrs Johnson advised. ‘And I’ve packed you a currant teacake for a ‘biting on’, though you should be at Dudley afore dinnertime.’ (BNC CB5 453, source: speaker, intermediate strength)
\end{quotation}

This sentence features in a conversation between a young woman who seeks the help and hospitality of an older acquaintance, Mrs Johnson. Even if the consequences of not being in time for dinner are not life-threatening, the necessity is not weak but intermediate because of the landlady’s authority over the woman.\footnote{One referee points out that this example can also get an epistemic reading: ‘I predict that you will be at Dudley afore dinnertime.’ When discussing ‘medium strength modality’, Huddleston (2002:186–187) refers to the ‘primacy of the deontic use’ and argues that in sentences that express epistemic meaning (e.g. ‘Where is the key?’ – ‘It should be in the desk drawer.’) there is often a deontic component as well. He points out that epistemic readings are less likely with unfavourable situations than favourable situations. In the context in which it is used, example (37) can get a root interpretation, and this is why we have included it in our corpus. The availability, at the same time, of an epistemic and root reading brings up Coates’s (1983) concept of ‘merge’ and it will be interesting to examine this topic in more detail in further research.} Another example with intermediate strength is given in (38). The necessity is subject-oriented\footnote{The term ‘subject-oriented’ has been especially used to refer to modal sentences expressing the ability (e.g. He can read Russian) or volition (e.g. I want to go abroad) of the subject-referent (cf. e.g. Palmer, 1990:36). It has occasionally been used to refer to root necessity examples expressing the subject’s internal urge. For instance, You must go poking your nose into everything! expresses a “necessary characteristic” of the subject (Palmer, 1990: 130). The difference with examples like (38) is that the subject (university work) is inanimate.} in the sense that it refers to a feature that is inherent to the referent of the grammatical subject: ‘encouraging intellectual activity’ is an essential feature of university work.

\begin{quotation}
University work is supposed to encourage intellectual activity at the highest level of which any individual is capable. (BNC FA3 1463, source: circumstances, intermediate strength)
\end{quotation}

If the necessity is not complied with by those responsible (the university staff), this will not have drastic consequences, but it does imply that the university work offered is not university work in the proper sense of the term. The strength of this type of subject-oriented necessity can be considered as intermediate because the actualisation of the necessity is determined by the very nature of the subject referent.

By recognizing cases of ‘intermediate strength’, we avoid a binary classification (strong vs. weak examples) and allow for cases in which the necessity is neither very urgent nor minimally urgent. The reason for not distinguishing between more than three degrees is that a finer-grained distinction of degrees of strength is potentially not only endless but also difficult to apply to corpus data. As mentioned above, the overall aim is to define strength in such a way that clear criteria can be applied in empirical research.

The discussion in Section 2.2.2 is summarised in Table 5.\footnote{The category of strong necessity is listed in the top rows of Table 5. As intermediate examples can be understood as examples with a weak degree of strength plus an extra feature (authority of the discourse-internal source or subject-oriented nature of the necessity), the weak root necessity examples precede the intermediate ones in the table.}
Table 5
Criteria for degrees of strength in root necessity.

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Degree of strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-compliance is impossible</td>
<td>Strong, e.g. (32)</td>
</tr>
<tr>
<td>Consequences of non-compliance affect one's health, safety or finances</td>
<td>Strong, e.g. (32)–(35)</td>
</tr>
<tr>
<td>Consequences of non-compliance affect other factors than health or finances, such as work-related or personal issues (e.g. moral principles, appointments)</td>
<td>Weak, e.g. (36)</td>
</tr>
<tr>
<td>+ The source is in a hierarchically superior position with respect to discourse-participants</td>
<td>Intermediate, e.g. (37)</td>
</tr>
<tr>
<td>+ Necessity is subject-oriented</td>
<td>Intermediate, e.g. (38)</td>
</tr>
</tbody>
</table>

Fig. 1. Cline of strength in root necessity.

Alternatively, degree of strength can also be presented as a cline, as in Fig. 1. Note that there are no clear cut-off categorial borderlines between strong, intermediate and weak necessity: assessing the strength of a necessity is obviously a subjective matter because it involves the evaluation of the discourse context.

An important note with respect to the use of strength as a parameter in corpus analysis is that when one specific modal is used in a context of a particular degree of strength, this does not if itself entail that it expresses this degree of strength. A comparative analysis of the strength of root necessity as expressed by different modal verbs is ultimately a comparison between different usage contexts, aimed at discovering whether particular root necessity modals typically occur in contexts with a particular degree of strength. In the next section we will fine-tune our account of strength by looking at the occurrence of linguistic markers that may further reinforce or mitigate the strength of root necessity.

2.2.2.2. Linguistic markers mitigating or reinforcing strength. Table 5 provides the basic guidelines for determining the degree of strength of root necessity examples. Yet we also noted that the three degrees of strength that can be distinguished do not have clear categorial boundaries. In this section we will show that in some cases the degree of strength of the necessity is located in a ‘transient zone’ (e.g. between ‘weak’ and ‘intermediate’ necessity or between ‘intermediate’ and ‘strong’ necessity). We will discuss four ways in which linguistic (contextual) markers can reinforce or diminish the strength of root necessity meaning.

1. Nuyts (2000:340–1) observes that evidential expressions (e.g. evidently, it appears that) may reinforce a root necessity because they suggest that there is evidence for the necessity of actualisation of some situation. This means that, e.g. a weak example like I should get a hair-cut is stronger if an evidential marker is added (It is clear that I should get a hair-cut), but it can still be classified as weak, because it is essentially weaker than an intermediate necessity,\(^{15}\) such as

\[\text{The balance due for your holiday should be paid by you at least six weeks prior to departure.}\]

In the latter example the strength is intermediate because non-fulfilment of the necessity does not have consequences affecting one’s health, safety or finances. In addition, the criterion of ‘authority’ could be said to apply here (cf. Table 5) in the sense that the sentence expresses a contractual arrangement between a travel agency and a traveller. The latter example could also be strengthened by adding an evidential marker (Evidently, the balance due for your holiday should be paid by you at least six weeks prior to departure), but it is still weaker than a strong example, such as

\[\text{The police should urgently undertake more action to get the city riots under control, etc.}\]

(The strength of the necessity in The police should urgently undertake more action to get the city riots under control is strong as non-fulfilment of the necessity may affect people’s safety (cf. Table 5).)

2. Other expressions increasing the strength of root necessity meaning are intensifiers and emphasizers. The former are usually adverbs that convey “to a greater or lesser extent the intensity with which the modal attitude is expressed” (Hoye, 1997:160; cf. Declerck, 1991:230). Typical intensifiers occurring in our sample (especially with should and ought to) are actually, certainly, definitely, obviously, really, of course. An example is given in (39), which expresses some guidelines about how to park a sailing boat. The necessity ‘to lock the canopy’ is strong because not doing so may lead to burglary (cf. Table 5, consequences affecting safety). The adverb always functions as an intensifier as it indicates that no exceptions are to be made at any time: ‘whenever you park the boat, the canopy should be locked’.

\(^{15}\) The strength of the necessity in It is clear that I should get a haircut is still weak because non-fulfilment of the necessity has no consequences affecting one’s health, safety or finances (see Table 5).
(39) Parking with the airbrakes open is very little trouble and is helpful if the wind does swing. The canopy **should always** be locked down. (BNC A0H 183, source: rule, strong + strengthening)

Emphasizers function to “focus … modal values intrasententially” (Hoye, 1997:160). By adding adverbs like *actually, certainly, definitely, obviously, really, of course* speakers give extra weight to the necessity. For example, in (40) the necessity is weak: non-compliance of the necessity would not affect one’s health, safety or finances (cf. Table 5). *Really* has an effect similar to that of *always* in (39) as it puts extra pressure on the necessity by highlighting the need to comply with the necessity. Because of this strengthening the example belongs in the area between weak and intermediate examples.

(40) I tend to think that it **should really** be left outside the development plan process and it should be for individual developers to prove exceptional needs. (BNC KM7 406, source: speaker, weak + strengthening)

3. Simon-Vandenbergen (1998:307) argues that the number of arguments given in support of the necessity strengthen its urgency. For instance, in (41) the speaker makes a plea to tackle traffic problems. The urgency of the necessity is enhanced because the speaker takes trouble to make the necessity explicit and presents a fairly ‘wordy’ argumentation.

(41) This is the kind of thing that we really **ought to** be addressing because this concerns the safety of people in this county, not only the safety of people, but the safety of property as well, and there’s no disagreement about the fact that the enormous development that’s happened over the last few years in an area where you’ve got regular traffic snarl ups mean that you have got a potential disaster there. (BNC J9M 439, source: mixed – circumstances + speaker, strong + strengthening)

4. The epistemic modal adverbs *perhaps* and *maybe* weaken the strength of a root necessity (cf. Hoye, 1997:60–61, 111; Traugott and Dasher, 2002:117; Nuyts, 2005:36), as in example (42). The strength of the necessity expressed by *We ought to wait* is weak, as the consequences of not complying with the necessity do not entail financial or health-related consequences. The epistemic adverb *perhaps* further weakens the necessity by presenting it as a very tentative suggestion.

(42) **Perhaps we ought to** wait until we see what Julian and Jonathan come up with in February. (BNC JA6 64, source: speaker, weak + weakening)

For some authors the linguistic factors discussed in this section suffice to determine the strength of root necessity examples. For instance, Collins (2009:45) classifies *Maybe you should just let them think about what he’s doing first* as weak because of the use of *maybe*. Yet, in our view, strength in root necessity is first and foremost determined by the criteria summarised in Table 5. The presence of evidential and epistemic expressions, emphasizers, etc. can serve to reinforce or weaken the necessity but they do not, in themselves, determine the overall strength of the root necessity.

2.2.3. Findings

Table 6 shows that the majority of examples express weak necessity (73%). *Ought to* has the highest proportion of weak examples (86% of the data with *ought to* is weak), followed by *should* (70%) and *be supposed to* (62%).

The smallest number of weak examples are found with *be supposed to* (62%), which is typically used to express a necessity that originates in an arrangement (e.g. (43)).

(43) **We were supposed to** be doing something with Eric and John, but Eric couldn’t make it, or perhaps didn’t want to. (BNC C9H 205, source: circumstances – arrangement, weak)

The proportion of weak examples with *should* (70%) is smaller than with *ought to* but larger than with *be supposed to*. Weak examples with *should* typically express circumstantial necessity in which a concrete situation necessitates a certain action (e.g. (44)).

---

16 It should be noted that the three degrees of strength (strong, intermediate and weak) are compatible with various types of discourse-internal and discourse-external sources. There is no one-to-one relation between a particular type of source and a particular degree of strength. Verhulst (2012) also zooms in on the concepts of strength and gives examples that illustrate different sources combined with different degrees of modal strength.
Table 6
Degrees of strength in the BNC sample.

<table>
<thead>
<tr>
<th></th>
<th>weak</th>
<th>intermediate</th>
<th>Strong</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>should</td>
<td>281 (70%)</td>
<td>77 (19%)</td>
<td>42 (11%)</td>
<td>400 (100%)</td>
</tr>
<tr>
<td>ought to</td>
<td>342 (86%)</td>
<td>29 (7%)</td>
<td>29 (7%)</td>
<td>400 (100%)</td>
</tr>
<tr>
<td>be supposed to</td>
<td>249 (62%)</td>
<td>102 (26%)</td>
<td>49 (12%)</td>
<td>400 (100%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>872 (73%)</td>
<td>208 (17%)</td>
<td>120 (10%)</td>
<td>1200 (100%)</td>
</tr>
</tbody>
</table>

Table 7
Reinforcement and mitigation of root necessity expressed by should, ought to and be supposed to.

<table>
<thead>
<tr>
<th></th>
<th>Basic degree of strength</th>
<th>Number of examples with reinforcement</th>
<th>Number of examples with mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Should</td>
<td>Weak</td>
<td>17/281</td>
<td>13/281</td>
</tr>
<tr>
<td></td>
<td>Intermediate</td>
<td>4/77</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strong</td>
<td>5/42</td>
<td></td>
</tr>
<tr>
<td>Ought to</td>
<td>Weak</td>
<td>21/342</td>
<td>11/342</td>
</tr>
<tr>
<td></td>
<td>Intermediate</td>
<td>1/29</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strong</td>
<td>1/29</td>
<td></td>
</tr>
<tr>
<td>Be supposed to</td>
<td>Weak</td>
<td>2/249</td>
<td>3/249</td>
</tr>
<tr>
<td></td>
<td>4/102</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1/49</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(44) I know what I want to do and you told me what you are doing, so from that I have a good picture of how I should approach it [i.e. a problem at work]. (BNC JTA 770, source: circumstances, weak)

The largest number of weak examples is found with ought to (86%), which is often used to give advice (e.g. (45)) or to express the speaker’s opinion (e.g. (46)).

(45) The NCVO\(^{17}\) actually says to the business sector as a whole, look, we think globally this is what you ought to be doing. (BNC JNL 88, discourse-internal, weak)

(46) Casements on eternity, these great patient masterpieces ought to calm the mind and nourish the spirit, but . . . it’s rare that I emerge from the National Gallery feeling I have really taken advantage of what’s on offer. (BNC CN4 25, discourse-internal, weak)

There are two main exceptions to the general ‘weakness’ of the data. Firstly, subject-oriented examples with be supposed to have intermediate strength (cf. Section 2.2.2.1). A second exception concerns examples with should in which the source has authority, as in (47) and (48).

(47) If someone in my position [of Prime Minister] is saying I believe this is the best opportunity for lasting peace, . . . you should listen to what I have to say. (BNC HUW 49, source: discourse-internal, intermediate strength)

(48) The League of Nations rejected their offer, claiming that the Board should comprise equal numbers of Poles and Germans with a neutral chairman. (BNC BN2 807, source: rule, strong)

In examples (47) and (48) the source has authority over the addressee. In (47) the PM uses his authority to demand that his listeners pay attention to his speech; in (48) an official institute (League of Nations) refers to a rule that determines the composition of the Board. In addition, in (48) non-fulfillment of the necessity may entail negative consequences (i.e. legal persecution), so that the necessity can be considered strong. By contrast, in example (47) non-fulfilment of the necessity does not entail serious consequences affecting one’s health, safety or finances, so that the necessity can be considered intermediate (cf. Table 5).

\(^{17}\) The ‘National Council for Voluntary Organisation’ (NCVO) is the largest umbrella body for the voluntary and community sector in England.
The linguistic markers discussed above (Section 2.2.2) do not appear to play an important role in mitigating or reinforcing strength. As Table 7 shows, only a small number of data are either reinforced or mitigated.

In sum, the data analysis confirms the frequent observations in the literature that *should, ought to* and *be supposed to* are mostly used to express weak root necessity (cf. Section 2.2.1). Yet the analysis laid bare some subtle differences between these three modals. While *ought to* is predominantly used to express weak root necessity, *be supposed to* can feature in subject-oriented examples in which the strength of the necessity is intermediate. Of the three modals studied here *should* is the most flexible modal verb, as it usually expresses weak necessity meaning but strong and intermediate uses occur, especially in official, authoritative contexts.

3. Conclusion

Source and strength in English expressions of root necessity constitute a complex issue because they are not morphologically marked but contextually determined: to judge the source of the modality accurately and interpret the strength of the root modal correctly, we need to take into account the broader discourse context in which they are used. In this article we have shown the importance of making these notions explicit, by providing precise and plausible definitions that can be applied to corpus data. More explicit definitions of the concepts constitute a prerequisite to successful corpus analysis: they pave the way for a detailed data analysis that manages to pin down the related yet distinctive shades of meaning of the three verbs when they express root necessity.

We have refined the parameter of source by identifying the different discourse-internal and discourse-external sources behind the necessity and we distinguished between subjective, intersubjective and objective sources. Within the category of subjective sources, we further distinguished between three subtypes, depending on the party that is meant to benefit from fulfilment of the necessity. This allowed us to determine that the main difference between *should* and *ought to* is not the source but rather the party that is meant to benefit from fulfilment of the necessity. The majority of data with both *should* and *ought to* are discourse-internal (subjective) but *ought to* especially occurs in examples of subjectivity type B, in which fulfilment of the necessity is mainly beneficial to another party than the speaker himself.

Further, we have redefined strength of root necessity in terms of the likelihood of actualisation of the necessity, which is highly dependent on a number of extra-linguistic factors such as the social relationship between the discourse participants (in terms of superiority or equality) and the severity of the consequences of non-compliance. While the majority of data with *should, ought to* and *be supposed to* expresses weak necessity, intermediate to stronger uses may occur in subject-oriented examples with *be supposed to* and in authoritative contexts with *should*.

Future research could extend the analysis to other root necessity modals and apply both parameters to auxiliaries that are considered to express strong root necessity, such as *must, have (got) to, need to*, etc., in order to develop a more exhaustive framework for the understanding of the field of root necessity meaning in present-day English.

References

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