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Subjective and intersubjective modality: a quantitative approach to Spanish modal verbs

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ABSTRACT

This paper presents a semantic analysis of the Spanish modal verbs *deber* 'must' and *tener que* 'have to', based on their deontic uses in parliamentary debates. These verbs have previously been described in terms of weak vs. strong necessity or internal vs. external obligation, frequently without the support of empirical data. In contrast, we argue that the notion of (inter)subjectivity is crucial for a proper understanding of these verbs. Our quantitative analysis, in which we examined *deber* and *tener que* according to five variables related to the semantic notion of (inter)subjectivity (tense, polarity, grammatical person, diathesis, source of the necessity), shows statistically significant differences between the verbs. *Deber* is more frequent in the conditional tense, in negated utterances as well as in passive/impersonal clauses, in the third person and when the source of the necessity is not the speaker. *Tener que* usually occurs in the present tense and in affirmative and active clauses, is equally frequent in first and third person and usually appears when the source of the necessity is the speaker. Based on these results, we conclude that *tener que* is used to convey a subjective attitude whereas *deber* is used to indicate intersubjectivity.

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1 Introduction

Modality constitutes a large field within linguistic research, associated with notions such as possibility and necessity, permission and prohibition, speaker-orientation and (inter)subjectivity.¹ Many verbal actions are modal in nature; for instance, speakers can impose an obligation, estimate the probability of a future event or forbid someone to do something. Whereas epistemic modality, i.e. the degree of probability of the state of affairs (Nuyts 2005: 10), has received a substantial amount of attention during the past few decades, much work still remains to be done in other domains of modality, not least in the deontic domain. Deontic modality, i.e. moral desirability (Nuyts 2005: 9), has not always been considered an independent modal category, which may explain why it 'has received little specific attention in the literature' (Nuyts, Byloo & Diepeveen 2010: 17). While recent publications have begun to fill this gap for Germanic languages, e.g. Dutch (Nuyts et al. 2010; Nuyts & Byloo 2015) and

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English (van Linden 2012; Verhulst et al. 2013), there is still work to be done on deontic modality in other languages, including Spanish. Moreover, in Spanish, researchers have generally put more emphasis on the syntactic structures of modal expressions, focusing less on detailed semantic analyses, and previous studies have typically contained discussions of a few, often constructed, examples; rarely have larger corpora been investigated using quantitative methods, although a number of recent studies such as Bauman (2013), Blas Arroyo & González Martínez (2014), Garachana Camarero (2017) and Rosemeyer (2017) have contributed to the understanding of the diachronic development of particular verbs. When it comes to the description of *deber* 'must' and *tener que* 'have to', two of the most frequent modal verbs in Spanish (Bauman 2013), there has been a tendency in previous research to use labels such as *weak vs. strong necessity* or *internal vs. external obligation* in order to explain their differences, frequently without the support of empirical data and an explicit motivation for these labels. These two verbs, although generally considered as near synonyms related to the domain of necessity and obligation (Olbertz 1998; Bauman 2013), have different meanings and functions which deserve to be explained and discussed through a systematic study of a large data set.

In this paper, we describe the use of *deber*² and *tener que* in Modern Peninsular Spanish. We will argue that the notion of (inter)subjectivity is crucial for a proper understanding of the semantics of these verbs. Through a quantitative analysis, we study the behaviour of the two verbs with respect to five variables related to (inter)subjectivity, namely, tense, polarity, grammatical person, diathesis and the source of the necessity. Our results show considerable differences between the verbs, pointing towards a subjective use of *tener que* and an intersubjective use of *deber*.

This paper proceeds as follows. In Section 2, we give a theoretical background to our study, after which first the aims and research questions are stated (Section 3) and then the method is described (Section 4). In Section 5, we present the results, which are discussed in Section 6. Finally, in Section 7, concluding remarks are made.

2. Background

2.1. Previous studies of *deber* and *tener que*

In the modality research on Spanish, modal verbs have mainly been studied within the larger domain of verbal periphrases, and their syntactic behaviour generally has been the main focus.³ Meanwhile, considerably less attention has been paid to their semantic and pragmatic properties (Cornillie 2007: 5; Thegel 2017), which have often been discussed based on a few intuition-based examples only. As far as the verbs *deber* and *tener que* are concerned, many researchers view them as near synonyms (Olbertz 1998; Bauman 2013), yet with slightly different meanings.

While *deber* has been described as an expression of moral obligation which tends to be used to reflect societal norms, *tener que* has usually been associated with necessities

²*Deber* can be combined both with infinitive (*Debes respetar la ley* 'You should respect the law') and with the preposition *de* followed by an infinitive (*Debes de respetar la ley*). In our data, we only found cases of the first variant, which means that when we refer to *deber* in our data, we refer to *deber* + infinitive and not the prepositional variant.

³Some aspects that have been investigated are for instance word order, negation, and combinations with other verbal periphrases (cf. Gómez Torrego 1988; Gómez Torrego 1999; Vázquez Laslop 1999a).

stemming from an external authority or the general circumstances (Sirbu-Dumitrescu 1988: 141; Fernández de Castro 1999: 186; RAE 2009: 2144). Moreover, previous researchers have frequently proposed that there is a difference between these two verbs in terms of modal strength, regarding *tener que* as an expression of a stronger necessity than that associated with *deber*.

While these descriptions constitute a step towards an increased understanding of the differences between *deber* and *tener que*, it proves hard to verify their accuracy empirically. Previous studies have mainly based their semantic analysis of the two verbs on a limited number of examples, often not even specifying their source. In fact, many studies (e.g. Gómez Torrego 1988; Müller 2001; Müller 2005) show a preference for using an intuition-based methodology and constructed examples where two almost identical sentences are presented to prove the semantic difference between the verbs. For example, Müller (2005) illustrates what he regards as a difference in modal strength using the example in (1):

- (1) Siento **deber/tener que* molestarle a usted.
'I am sorry that I *should/have to bother you'. (Müller 2005: 143).

According to Müller (2005), the main reason why *deber* cannot be used in this example is the clash between 'the volitional semantic feature' expressed by the verb *Siento* 'I am sorry' and the low obligation level transmitted through *deber*. The high level of obligation expressed by *tener que* signals that 'there is no other way out than bothering you', while using *deber* indicates that there are other alternatives (Müller 2005: 144). However, what Müller (2005) analyses as a difference in modal strength, could also be explained by two other parameters: different manifestations of (inter)subjectivity and different modal categories.⁴ In the present study, we focus on the first parameter, i.e. the interaction between modality and (inter)subjectivity, leaving the discussion of modal categorization to future studies.

As described above, previous studies have mainly associated *tener que* with external necessity while *deber* is related to moral necessity, stemming from internal factors. This semantic difference has also been illustrated by minimal pairs, as in the example in (2), from Fernández de Castro (1999):

- (2) *Tiene que/debe* ir a la cárcel.
'S/he has to/must go to prison.' (Fernández de Castro 1999: 186).

Fernández de Castro (1999: 186) argues that *tener que* in (2) indicates a speaker-imposed necessity or obligation, whereas *deber* refers to a more abstract or general modal source, an authority that cannot be questioned. By using *deber*, the speaker signals that the state of affairs (SoA), the person in question going to jail, is 'necessary and convenient for everyone'

⁴In (1), *tener que*, according to our view, expresses a dynamic meaning, which indicates a necessity caused by the circumstances. *Deber*, however, is very rarely used to express dynamic modality, as found in corpus studies by Olbertz & Gasparini Bastos (2013) and Thegel (2017), but instead occurs almost exclusively in deontic contexts, as an expression of moral or volitional necessity. The dynamic category has frequently been neglected in studies of Spanish modality, especially dynamic necessity, as in Müller (2001, 2005). The difference between dynamic and deontic necessity is an important issue when discussing the semantics of *deber* and *tener que* but due to spatial limitations, we cannot develop this matter further here. For definitions of dynamic and deontic modality, see Nuyts (2005), and Thegel (2017: Chapter 3).

(Fernández de Castro 1999: 186, our translation). In contrast, *tener que* expresses the necessity of an action which is in conflict with the will of the subject. Even though these ideas are certainly interesting, it is difficult to verify the author's proposal, given the lack of a broader context in which the example occurs. By using substitution tests, i.e. constructed examples which are identical except for the verb selected, as in the examples above, it is not possible to understand which contexts of use (or contextual factors) trigger the selection of one specific modal verb, and to identify whether there are important semantic or pragmatic reasons for the choice between *deber* and *tener que*. Besides, there is always a risk of forcing the verbs into sentences which sound, in fact, fairly unnatural and probably are very infrequent in use. An example that illustrates this is (3), from Gómez Torrego (1999):

- (3) Me gustaría *tener que*/**deber* ayudaros.
'I wish that I had to/*should help you.' (Gómez Torrego 1999: 3349).

Gómez Torrego (1999) uses this example to illustrate the syntactic difference between the two modal verbs, i.e. the inability to add a subordinated predicate (in this case, *ayudaros* 'help you') to a sentence with *deber*. Nonetheless, even when syntactically possible, the sentence with *tener que* is not likely to occur in actual language use, as it is pragmatically odd.⁵

Even though some previous studies discuss authentic examples, these have typically been taken from a limited sample of data (cf. Sirbu-Dumitrescu 1988; RAE 2009). Usually, no statistical analysis is carried out and often not even an explicit reference to frequencies (of use) is given. This makes it hard to assess the representativeness of the examples presented. Considering these problematic aspects, in order to reach a better understanding of their differences, *deber* and *tener que* need to be studied empirically, in the form of an analysis of a large corpus of naturally-occurring examples. In this paper, we therefore examine the semantic relations between *deber* and *tener que*, using thorough statistical analyses of a large sample of data, and discuss how our findings can be linked to previous descriptions.

There are some important exceptions from the tendencies to investigate *deber* and *tener que* using only a small number of examples, such as Bauman (2013), Blas Arroyo & González (2014), Garachana Camarero (2017), Rosemeyer (2017) and Thegel (2017). However, their aims are rather different from those of the present paper: the first four concentrate on the diachronic evolution of *tener que* and *deber*, mainly including historical data, and the larger part of Thegel (2017) focuses on a qualitative analysis of *deber* and *tener que*. In contrast, the present study has a quantitative focus as it analyzes the semantic behaviour of *deber* and *tener que* in the twenty-first century using a multivariate analysis.

2.2. The notion of (inter)subjectivity and its relation to modality

The notion of *subjectivity* has been important to linguistic research for the last few decades, thoroughly discussed in pioneer works such as Lyons (1977), Traugott (1989)

⁵In (3), there is a conflict between the wish to do something and being forced to do something. When being forced, the subject is obliged to carry out the action in question against his or her will, which makes the meaning/situation 'being forced to want something' quite unnatural and unlikely.

and Stein & Wright (1995). While linguists tend to agree on the definition of subjectivity as ‘the expression of self and the representation of a speaker’s [...] perspective or point of view in discourse’ (Finegan 1995: 1), the concept of *intersubjectivity* has been highly debated, with a number of different definitions proposed by different authors. For example, Nuyts (2012) presents a framework of intersubjectivity, especially designed for modality, as a reaction to previous divisions of *subjective* and *objective modality* (e.g. Lyons 1977; Coates 1983). He argues that *objectivity* is not a proper term to use in the description of modal categories since these categories refer to *attitudes*, either the speaker’s or someone else’s. Besides, he also stresses the fact that many accounts on the objective dimension of modality lack empirical evidence on how objectivity is coded linguistically (Nuyts 2012: 55). Nuyts bases his definition of (inter)subjectivity on the notion of *responsibility for the modal qualification*, stating that a subjective expression indicates that the speaker⁶ alone is responsible, whereas an intersubjective expression signals that the attitude in question is shared between the speaker and a larger group of people (Nuyts 2012: 58). To give two examples, subjectivity is encoded in the sentence *I think they left already*, where *I think* expresses the speaker’s epistemic attitude, whereas *It is unacceptable that they left already* expresses an intersubjective attitude, referring to an attitude presented as the common ground, i.e. a general idea or norm. The dimension of (inter)subjectivity is hence important in situations where the speaker wishes to stress or negotiate his/her position in relation to the interlocutor(s). For instance, markers of subjectivity are useful when the speaker is not sure about the position of others or when his/her view is in conflict with others involved in the discourse. On the other hand, when emphasis is put on the mutual agreement between speaker and listener, or when the speaker wants to state that his/her position, contra the listener’s belief, is supported by others, intersubjective elements can be used (Nuyts 2012: 58).

In contrast to Nuyts’ semantic dimension, closely related to the area of modality, Traugott (2010) and Narrog (2012) use a broader definition of intersubjectivity, relating it to the speaker’s attention to (the self-image of) the addressee, thus labelling a wide range of linguistic expressions, for example, modal markers, discourse markers and expressions of politeness, as intersubjective markers. Their framework has mainly been used in studies of the diachronic processes in which expressions gain a subjective meaning (related to the speaker’s own attitude) or an intersubjective meaning (directed towards the addressee and his/her attitude or belief), referring to these mechanisms as *(inter)subjectification*. Traugott (2010) and Narrog (2012) argue for a unidirectional approach, where linguistic elements generally follow the same diachronic evolution path from non-subjective (or event-related in Narrog’s terminology), to subjective and, later, to intersubjective meanings.

The analysis made in this paper is based on Nuyts’ (2012) definition; we will show how (inter)subjectivity is linked to the modal verbs *deber* and *tener que* and how it functions as a vehicle for position taking in the political debates studied. However, we do not view the model of Nuyts (2012) as incompatible with the one by Traugott (2010) and Narrog (2012). Instead, Nuyts’ (2012) model should be considered a narrower framework, specialized on the relation between (inter)subjectivity and modality, which fits into the broader definition of Traugott and Narrog of (inter)subjectivity as an interactive dimension that includes many

⁶In fact, Nuyts (2012: 57) uses the term *assessor* to refer to the person responsible for the modal qualification, who usually, but not necessarily, is the same as the speaker. Here, we refer to subjectivity as being related to the speaker.

linguistic areas. Last but not the least; we have an objection to Nuyts (2012) perspective that (inter)subjectivity and modality are two separate dimensions that are expressed through different (linguistic) means. According to Nuyts (2012: 59), (inter)subjectivity is not expressed through the modal marker itself, 'but to the syntactic pattern in which the latter appears (and as such it is indirectly due to the modal marker, since it triggers these syntactic conditions)'. In contrast, we argue that (inter)subjectivity, defined as a way of marking who is responsible for the modal qualification uttered, is also reflected in the choice of the modal verb, as we will show in this paper. As Narrog (2012: 51) puts it, the (inter)subjectivity (in his words, *speech act orientation*) of 'a specific linguistic expression is rarely totally "imprinted" on a linguistic form, but is usually result of an interplay between form and actual use (i.e. context)' and therefore, every modal marker 'is perhaps typically associated with a certain degree of speech act orientation'. Narrog (2005: 685–688) offers examples of how contextual markers indicate a high or low speaker-orientation (in other words, a high or low level of subjectivity) for instance, the use of first person and the present tense vs. the third person and the past tense. In [section 6](#), we will analyze what the linguistic context says about the semantics of *deber* and *tener que*. Thus, we will show how the variables chosen for our study can be seen as a way of operationalizing the semantic dimension of (inter)subjectivity described in Nuyts (2012).

3. Aims & research questions

Our aims are to describe the use of *deber* and *tener que* in Modern Peninsular Spanish in terms of five variables (tense, polarity, grammatical person, diathesis, and the source of the necessity) that can be linked to (inter)subjectivity, and to investigate what this may reveal about their semantics. The following three research question are asked:

- (1) Do *deber* and *tener que* behave differently with respect to tense, polarity, grammatical person, diathesis, and the source of the necessity?
- (2) Are these five variables significant in determining the choice of one verb over the other? If yes, which of them is the most important for the verb choice?
- (3) What do these differences in the verbs' behaviours tell us about the semantics and uses of *deber* and *tener que*?

The first two questions are empirical in nature and will be answered in a quantitative study. The third question will be addressed in the discussion, when interpreting the results and relating them to previous studies of modality.

4. Method

4.1. Data

A total of 560 sentences were analyzed, 280 with *deber* and 280 with *tener que*. In all sentences, the modal verb expressed deontic modality and the subject was either in first or in third person. The 560 cases were randomly chosen from the corpus of 860 cases of deontic modality (573 with *deber* and 287 with *tener que*) collected for the first author's doctoral dissertation (Thegel 2017). The data in the corpus was extracted from the official written records (see euparl.es) of 613 interventions in EU parliamentary debates (179,396

tokens) from 28 Spanish MPs (16 men, 12 women belonging to different political parties) between 2010–2011. No significant effects of the speaker's gender or political orientation on the use of *deber* or *tener que* were found in the larger corpus (see Thegel 2017: 24) and such properties of the speaker have therefore not been included in the current study.

Since we have chosen to take our data from a specific genre, rather than a compilation of several different genres, a general comment on the particularities of the data is warranted. The parliamentary discourse, a subgenre within political discourse, has been attributed certain linguistic features, such as high level of formality (Blas Arroyo 2010), high frequency of vague and ambiguous expressions and a monologic style (Sánchez García 2012). Moreover, there is a high frequency of expressions that refer to attitudes and values (Ilie 2010; van Dijk 1997), by which the politicians strive to argue for the best solutions to the everyday problems of the citizens they represent. These values and attitudes are commonly expressed through modal elements that are used by the speakers to formulate recommendations, obligations or possibilities. Parliamentary debates are therefore suitable for the study of modality. In addition, in these debates, a tension between different positions can be found, leading to conflict and confrontation. However, at the same time, the Members of Parliament have a common objective, i.e. to create a constructive environment and make consensus-based decisions whenever possible. The presence of conflict and collaboration give rise both to subjective and intersubjective attitudes, which will be analysed and discussed in the following sections.

The genre chosen influences the absolute frequencies of the two modal verbs. Whereas *tener que* has been shown to be several times as frequent as *deber* in oral data of Peninsular Spanish in the twentieth century (Bauman 2013), in the corpus from which our data is taken (see Thegel 2017 for more information), *deber* was twice as frequent as *tener que*. The genre also has implications for (certain distributions in) the data, the variables chosen and, subsequently, has affected the parameters considered relevant and our way of coding them (for more information, see section 4.2). Nevertheless, we will argue that these parameters can be linked to the notion of (inter)subjectivity (section 6), and that the general conclusions about the verbs drawn in this paper can be extended to other genres as well. We will return to this question in section 7.

4.2. Coding and analysis

In the present study, we investigate five different factors (independent variables) that may be linked to how *deber* vs. *tener que* are used: tense, polarity, grammatical person, diathesis, and the source of the necessity. All the chosen variables are thought to be related to aspects of (inter)subjectivity. Whereas grammatical person, tense and source of the necessity have been previously linked to (lack of) speaker-orientation or subjectivity (Narrog 2005; Narrog 2012; Nuyts 2012), diathesis and negative polarity have been associated with intersubjectivity (Vázquez Laslop 1999b; Verhagen 2005). In section 6, where we discuss the quantitative results and typical examples, we return to the relationship between these variables and (inter) subjectivity. All variables except polarity were analysed in the first author's doctoral dissertation (Thegel 2017), where the focus was on in-depth qualitative analysis. In the present study, we extend the previous study by not only investigating the variables separately but also including them in a multivariate analysis, thus focusing on the quantitative analysis.

All 560 included cases were coded for verb (*deber* vs. *tener que*) as well as the five independent variables (tense, polarity, grammatical person, diathesis, and source of the

necessity). The variables and the categories that were used for coding the data are shown in Table 1.

As shown in Table 1, all cases were classified as belonging to one out of two categories (binary coding). For tense, we based the distinction of conditional vs. other tense on the results by Thegel (2017), who found significant differences between the verbs in the use of conditional tense (conditional tense was more frequently used with *deber* than *tener que*), but not for the other tenses. Additionally, the data showed relatively little variation with respect to tense. The majority of the cases of the other tenses were in the present tense. No other tense accounts for more than 5% of the cases.⁷ This is not surprising given the genre investigated, as the politicians tend to focus on present and future situations, while references to the past are rather infrequent. For polarity, all occurrences were classified as either affirmative or negative.⁸ Regarding grammatical person, we made a distinction between first and third person. Due to the genre's high level of formality, no examples of modal verbs conjugated in the second person (*tu* 'you, singular and informal' and *vosotros* 'you, plural and informal) were found.⁹ When determining the two categories of diathesis, a division was established between active clauses vs. impersonal clauses or constructions. Two different constructions, namely so-called periphrastic passive clauses such as *La propuesta debe ser presentada cuanto antes* and cases of the construction with impersonal *se*¹⁰ as in *La propuesta se debe presentar cuanto antes* which both can be translated to 'The suggestion must be presented as soon of possible', were classified as impersonals. Finally, for the source of the necessity, the coding as *speaker as source* or *other source* was based on the presence of an explicit reference to a source other than the speaker, be it a shared norm or a legislative statement. If an explicit source other than the speaker was absent, the case was coded as having the speaker as source.¹¹

Table 1. The variables and their categories.

Variable	Categories
Tense	Conditional tense vs. other
Polarity	Affirmative vs. negated
Grammatical person	1 st vs. 3 rd
Diathesis	Active vs. impersonal
Source of the necessity	Speaker vs. other

Note. *Se*-forms are included in impersonals.

⁷After present tense and conditional, the most common tenses were future tense (*tener que*: 4.6% and *deber*: 4.3%) and past tense (*tener que*: 3.2% and *deber*: 2.1%). There were only six cases in the data that were in another tense than present tense, conditional, future tense and imperfect/past tense (sp. *imperfecto de indicativo*).

⁸Three cases were found in interrogative contexts. However, since the modality itself was not questioned but rather something else, the occurrences were classified as affirmative. For instance, in the sentence *¿Quién debe asumir la responsabilidad?* 'Who should take responsibility' the existence of the necessity is not questioned, rather the speaker is asking about the agent, who is to carry out the necessary action.

⁹Included in the category third person were also 5 cases of *usted(es)*, 4 cases with *tener que* (1.4%) and 1 case with *deber* (0.4%); these cases are, although grammatically third person, referentially second person.

¹⁰The marker *se* is used as the agent of the clause, making the real person or entity behind the action in question invisible. Impersonal *se* can be classified both as middle voice or reflexive passive. See Maldonado (1999) for an overview of different definitions and usages of this construction.

¹¹An anonymous reviewer pointed out that sources other than the speaker can also be implicit, and that such sources would not be covered by the criterion used in our study. While this certainly might be the case, it is difficult to operationalize the concept 'implicit source' and to create a strict definition for determining implicit sources that can be applied systematically in a quantitative study. For the sake of transparency, we decided to code only explicit references to another source (regulations, other speakers, etc.) as 'other'. For a detailed discussion of implicit sources and intersubjective references with a qualitative analysis, see Thegel (2017: Chapter 8).

All statistical analyses were carried out using IBM SPSS. In the first part of our analysis, we performed Chi-square analyses for each of the five binary-coded independent variables to check if the different categories were significantly associated with the use of a specific verb and determine which variables to include in the multivariate analyses. After these preliminary analyses, we carried out a multivariate analysis in the form of a logistic regression analysis on the use of *deber* vs. *tener que*. In this analysis, only the independent variables which had shown a significant difference between the verbs were included as predictors. The aim of the second part of the analysis was to test if there were effects of each of the different variables on the use of the verb when the other variables were simultaneously taken into account. Finally, as part of interpreting and discussing the quantitative results, we complemented the quantitative part of the study with a qualitative analysis in order to gain a more detailed picture of the patterns found and relate these to the semantics of the verbs.

5. Results

5.1. Preliminary analyses: five variables and their individual associations with *deber* and *tener que*

In this section, we report the results from the analysis of the five variables separately.¹² Table 2 shows the results for tense. There was a significant difference between the verbs in the use of tense ($\chi^2(1, N = 560) = 41.850, p < .001$); *deber* was more frequent in conditional tense than *tener que*.

Table 3 shows the results for polarity. Although most sentences were affirmative, negation was significantly more frequent with *deber* than with *tener que* ($\chi^2(1, N = 560) = 23.178, p < .001$); in fact, with only five cases or less than 2% found in the data, *tener que* almost never occurred in a negated sentence.

In Table 4, results for grammatical person are given. There was a significant difference between the verbs in the use of person ($\chi^2(1, N = 560) = 27.759, p < .001$); *tener que* was more commonly used with first person than *deber*. In fact, the use of the two different categories was almost equally frequent for *tener que*, whereas *deber* was mostly used with the third person.

Table 2. Tense.

	Deber		Tener que		Total	
	%	N	%	N	%	N
Conditional	18.9	53	2.1	6	10.5	59
Other	81.1	227	97.9	274	89.5	501
Total	100.0	280	100.0	280	100.0	560

Table 3. Polarity.

	Deber		Tener que		Total	
	%	N	%	N	%	N
Affirmative	87.9	246	98.2	275	93.0	521
Negated	12.1	34	1.8	5	7.0	39
Total	100.0	280	100.0	280	100.0	560

¹²Since we carry out five separate Chi-square analyses, one for each variable, we only consider effects significant when the p-value is below $\alpha = .05/5 = .01$.

Table 4. Grammatical person.

	Deber		Tener que		Total	
	%	N	%	N	%	N
1 st person	25.7	72	47.1	132	36.4	204
3 rd person	74.3	208	52.9	148	63.6	356
Total	100.0	280	100.0	280	100.0	560

As shown in Table 5, there was a significant difference in diathesis ($\chi^2(1, N = 560) = 13.078$, $p < .001$); *deber* was twice as frequent in impersonal constructions than *tener que*, although both verbs were mainly used in active clauses.

Finally, Table 6 shows the results for the source of the necessity. There was a significant difference in the source of the necessity ($\chi^2(1, N = 560) = 17.857$, $p < .001$); although uses in which the source was the speaker was most frequent for both verbs, the percentage of cases with another source was significantly higher for *deber*.

To summarize, all five investigated variables (tense, polarity, grammatical person, diathesis, and the source of the necessity) showed differences between the two verbs. When investigating each variable separately, *deber* was more often used in the conditional tense, in third person, in impersonal constructions, in negated sentences, and when the source of the necessity was not the speaker. In the next section, we move on to show that this is also the case when the effect of each of the all five variables is investigated simultaneously, i.e. when they are entered together in a multivariate analysis.

5.2. Multivariate analysis

Since they all showed significant differences between the two verbs, the five investigated variables (tense, polarity, grammatical person, diathesis, and the source of the necessity) were included as predictors in our multivariate analysis, carried out in the form of a logistic regression analysis. The resulting model, shown in Table 7, which includes the main effects of each of the five predictors,¹³ was statistically significant ($\chi^2(5, N = 560) = 110.970$, $p < .001$); together, the five variables explained a significant part (24%) of the variation in

Table 5. Diathesis.

	Deber		Tener que		Total	
	%	N	%	N	%	N
Active	78.9	221	90.0	252	84.5	473
Impersonal	21.1	59	10.0	28	15.5	87
Total	100.0	280	100.0	280	100.0	560

Table 6. Source of the necessity.

	Deber		Tener que		Total	
	%	N	%	N	%	N
Speaker	72.9	204	87.1	244	80.0	448
Other	27.1	76	12.9	36	20.0	112
Total	100.0	280	100.0	280	100.0	560

¹³Adding interaction effects between the predictors did not significantly increase the model fit (i.e. the r^2 -value did not change significantly when interactions were added to the model).

Table 7. Summary of logistic regression model: *deber* vs. *tener que*.

Predictor	β	SE	z (Wald)	p
Intercept/Constant	5.43	.73	54.67	< .001***
Tense: other vs. conditional	-2.33	.45	26.65	< .001***
Polarity: affirmative vs. negated	-2.05	.51	16.16	< .001***
Grammatical person: 1 st vs. 3 rd	-.76	.21	13.20	< .001***
Diathesis: active vs. impersonal	-.61	.27	4.98	.026*
Source of the necessity: speaker vs. other	-.69	.24	8.27	.004**
Model evaluation				
r^2 (Nagelkerke)	.24			

Note. * = $p < .05$, ** = $p < .01$, *** = $p < .001$. The second value of each predictor is the reference level for that predictor. The model shows how the proportion of *deber* changes (relative to *tener que*) when the level of the predictor is changed from the reference level to the other level.

the use of *deber* and *tener que* (as seen by the r^2 -value in Table 7). All five predictors contributed significantly to the model as seen by their statistically significant β -values (Table 7); they thus affect the choice of verb independently. Testing the model against our data, it was found to correctly predict the verb in 67.5% of all cases, while being more accurate for *tener que* (78.6%) than *deber* (56.4%).

When looking closer at the model presented in Table 7, it becomes clear that the five predictors are not equally important in explaining the choice between *deber* and *tener que*, as can be seen by the differences in sizes of the variables' coefficients (β -values). The predictors with the most impact are tense and polarity. If another tense than conditional is used, this decreases the probability that *deber* will be used compared to *tener que*; the conditional tense is a strong predictor of *deber* (cf. Table 2). If the utterance is affirmative, it is also less likely that *deber* than *tener que* is used compared to in negated utterances; in negated utterances, almost only cases of *deber* are found. Similarly, but less strongly, it is more likely that *deber* than *tener que* is used, as compared with if third person is used, if it is an impersonal construction, or if the source of the necessity is someone else than the speaker; the probability of *deber* being used decreases if the utterance is in first person, is active, or if the source of the necessity is the speaker.

6. Discussion

As shown in our multivariate analysis (Section 5.2), all five investigated variables play a significant role in predicting the choice of verb; the verbs behave differently with respect to these variables. However, not all variables are equally influential: some variables are more important for predicting the likelihood of one verb over the other. In this discussion, seeking to answer our third research question, we draw conclusions based on the verbs' distributions across the different categories of the variables and carry out a detailed analysis of typical examples in order to gain further insight about the semantics of *deber* and *tener que*.

6.1. Tense

Our multivariate analysis showed tense to be the strongest predictor for the choice between *deber* and *tener que*. Previous studies have also considered the interaction between modal markers and tense to be an important issue. For instance, Narrog

(2005) links tense to speaker-orientation and suggest that a modal marker used in the present tense expresses a highly speaker-oriented attitude, while other tenses, for example past tense, indicate a lower degree of speaker-orientation, as the speaker distances him/herself from the modal attitude in question. In our data, however, past tense is infrequent both for *deber* and *tener que*. Instead, the conditional tense is of interest here, as it strongly favours the use of *deber* over *tener que* (53 cases of 59). While 18.9% of the samples of *deber* occur in the conditional tense, for *tener que* this is only the case in 2.1%. We may wonder what in the semantics of the conditional tense harmonizes so well with the semantics of *deber*. To be able to answer that question, one first has to take a look at the possible functions of the conditional tense in Spanish.

According to Azzopardi (2013), the conditional tense has six functions, two of which can be classified as temporal and four as modal.¹⁴ Two of the modal usages tend to be related to the epistemic-evidential¹⁵ domain. The *reportive conditional* indicates that the transmitted information comes from another source than the speaker (*Según la prensa, el presidente estaría enfermo* 'According to the press, the president is [literally "would be"] sick') and the *inferential conditional* or *conjecture conditional* expresses a guess or conclusion,¹⁶ to which the speaker has arrived based on one or several premises (*La mujer era joven, tendría unos 20 años* 'The woman was young, she was probably [literally "would be"] in her twenties'). Another modal function is generally associated with politeness in contexts of deontic modality (Vatrican 2011; Vatrican 2013), in which the conditional tense is used as a mitigating strategy when making requests (*¿Me podrías dejar las llaves del coche?*).¹⁷ Given the fact that, in our data, *deber* is used to convey deontic necessity, it seems reasonable that the relatively high frequency of this verb in the conditional tense is related to politeness. Nevertheless, in an in-depth analysis of our data, in which all the cases of the conditional tense were studied carefully,¹⁸ it was found that the conditional tense, when used with *deber*, rather shows affinity to the epistemic-evidential functions described above.¹⁹ Two different functions of the conditional tense were identified and classified as evidential usages, based on the model of Bermúdez (2006), according to which evidentiality is related to access to the information source, manner of access and distance to the source. The first function found in our data, related to the access to the source, strengthens the idea of a norm based on shared knowledge, hence, shared access, and the second constitutes an inferential usage, related to the manner of access to the information,

¹⁴For a more detailed description of the functions related to the conditional tense, see also RAE (2009) and Vatrican (2014).

¹⁵Epistemic modality and evidentiality are frequently seen as two related but separate dimensions (Cornillie 2009). While epistemic modality has been defined as an estimation, usually by the speaker, 'of the chances that the state of affairs expressed in the clause applies in the real world or not' (Nuyts 2005), evidentiality has been defined as 'the kinds of evidence a person has for making factual claims' (Anderson 1986: 273).

¹⁶In Spanish, the *inferential conditional* or *conjecture conditional* is only used in past time situations, while it has a more extensive use in other Romance languages. See Bourova & Dendale (2013) for a description of French and Pietrandrea (2005) for a study of the conditional function in Italian.

¹⁷This function not only exists in Spanish but has been found in many languages throughout the world (Palmer 1986; Fleischman 1989).

¹⁸The results of this analysis are further developed in Thegel (2016; 2017).

¹⁹We want to stress here that the high number of epistemic-evidential uses found in our data are probably related to the nature of our corpus, given that they are used to strengthen the argumentation in the political debates. Certainly, *deber* can occur in the conditional tense to indicate a politeness strategy but we have not found any cases of this in our corpus.

which indicates a conclusion presented by the speaker. These usages are exemplified in (4) and (5), respectively.²⁰

(4) Por cierto, no entiendo que se sienten en este hemiciclo y defiendan un enfoque intergubernamental. Dejen ese paso al Consejo; ustedes *deberían* defender una Unión Europea con sus políticas, sus prioridades, sus responsabilidades, y con un presupuesto suficiente. (S. Garriga Polledo, 8 June 2011)

'I certainly do not understand how they can sit in this hemicycle and defend an intergovernmental approach. Leave that step to the Council; you *should* defend a European Union, with its policies, priorities, responsibilities, and an adequate budget.'

(5) En una Europa sin fronteras, la lucha contra la violencia de género tampoco *debería* tener fronteras y los Estados miembros deberían esforzarse a la hora de armonizar sus legislaciones para que la lucha contra el maltrato hacia las mujeres superase los obstáculos legislativos [...]. (T. Jiménez-Becerril Barrio, 24 February 2010)

'In a Europe without borders, the fight against gender violence *should* also be without borders and the Member States should work hard to harmonise their legislation so that the fight against ill-treatment of women overcomes the legislative obstacles in its way [...].'

In (4), the speaker is displeased with the fact that certain Members of Parliament, according to his view, are being disloyal to the European Parliament and the people they represent. The modal verb *deber* refers to a norm in all its tenses, but when used here in the conditional tense it indicates that the norm has been violated, that the previous agreement, made between the speaker and the interlocutor, has been broken. In this manner, the conditional form performs an evidential function related to shared access of information; the speaker refers to a code of conduct, which is known and supposed to be followed.

The extract presented in (5), exemplifies another evidential function, namely that of an inference presented by the speaker. It resembles the inferential use associated with epistemic modality in that it expresses a logical conclusion based on certain premises. However, while the epistemic inferential use expresses an uncertain conclusion or guess, 'based on what is known, it is reasonable to believe that X', the evidential conditional in the present deontic context strengthens the modal effect. It can be defined as *reasonableness*, pointing to the most appropriate way of acting according to the conditions given. The speaker in (5) concludes that since Europe is without borders, the fight against gender violence should also be without borders; this recommendation is presented as a logical consequence. In this manner, the evidential function can be seen as an argumentative strategy to make the necessity sound more reasonable.

According to our analysis, both these two different evidential functions can be viewed in terms of intersubjectivity. The speaker orients himself towards the addressee, referring to shared agreements and shared knowledge. *Deber* is used almost exclusively in these

²⁰Most examples from our data have official English translations which can be found on the webpage of the European Parliament, europarl.eu. Examples without an official translation have been translated by the authors. For all examples, we specify the speaker, and the date in brackets. A full list of the speakers, dates and names of the specific debate from which the examples were extracted can be found in [Appendix](#).

contexts, thus indicating a strong tendency towards being used to express an intersubjective function. More signs in favour of this interpretation will be shown in the following sections.

6.2. Polarity

The second strongest predictor, according to the multivariate analysis, is polarity. In fact, negation is more than six times as frequent with *deber* (12.1%) than with *tener que* (1.8%). To understand why *deber* is more often used in negated utterances, we have to look at the role of negation in language. It is evident that negation is a complex phenomenon which has been analyzed in various ways, but here, we will limit the discussion to two different perspectives on negation.

The first perspective concerns the pragmatic and discourse-related function of negation, which is clearly related to the notion of intersubjectivity. Many researchers support the idea that a negated utterance presupposes an affirmative utterance, i.e. when saying *This is not right*, the speaker is arguing against the point of view *This is right*. For example, according to Givón (1978: 108), when a speaker reports a negative event, s/he is taking into consideration the listener's presupposition of the affirmative action, assuming a contrasting perspective. Another scholar arguing in favour of this link between negative and affirmative utterances (or ideas) is Nølke (2006: 139), who describes sentential negation as the 'canonical example' of polyphony, i.e. the presence of several voices or points of view in discourse.

Verhagen (2005) puts forward a cognitive perspective that modifies the view presented by Givón (1978). On the one hand, he claims that it is impossible to say 'that, in general, negative sentences are presuppositional in the sense that they somehow presuppose the presence of their affirmative counterpart in their context' (Verhagen 2005: 34). However, he states that the negation evokes two mental representations²¹ (*X* and *not X*): the speaker is asking the addressee to entertain two different cognitive representations, one negated view and another affirmative view, and to adopt the former and abandon the latter. Verhagen (2005: 32) regards the negation as a tool for cognitive coordination, and thus as a device which can be used in an intersubjective strategy in argumentation.

If we apply the perspective that negation in one way or the other relates to an affirmative view (explicit or assumed) to the analysis of *deber* and *tener que*, a negated use of these verbs could be interpreted as a counterargument to another perspective in the political debates. When analyzing our data, we notice that, indeed, negation seems to have this function when used with *deber*, as illustrated in (6):

- (6) [...] es importante recordar que hay muchos procesos en marcha que son útiles, que están funcionando y que, en ningún caso, *deberíamos caer* en la tentación – cosa que algunos parecen querer – de volver a historias pasadas, a tiempos pasados [...], porque ya sabemos qué consecuencias tiene esto. (R. Romeva i Rueda, 10 March 2010)

²¹If a negated utterance evokes the mental representations of *X* and *not X*, one might wonder if an affirmative utterance has the same effect. According to Verhagen (2005: 31) this is not the case, which he illustrates with the use of the connective *on the contrary*. A speaker would be able to say 'Mary is not happy, on the contrary, she is sad'. However, the utterance 'Mary is happy, on the contrary, she is not sad', would be regarded as incoherent, as the mental representation of *not X* has not been evoked by its positive counterpart. As interesting as this argumentation might be; nevertheless, in this paper, we will not develop a theoretical discussion of the relation between negated and affirmative utterances, but rather focus on the patterns found in our data.

'[...] it is important to remember that there are many processes under way that are useful, that are working and that we *should* not, under any circumstances, be tempted – as some seem to want – to return to past events, to times gone by [...], because we know the consequences of that.'

In (6), the speaker tells his audience to look forward, instead of returning to past events, something that he believes will have negative consequences. He is urging them not to feel tempted to look backwards and makes an explicit reference to the opposite attitude by saying *cosa que algunos parecen querer* 'as some seem to want'. Thus, he is creating a picture of two different scenarios and asking the audience to abandon one of them, which, according to Verhagen (2005: 32), can be seen as an intersubjective strategy. It is clear from the context that the speaker regards the affirmative view as marginalized as he refers to *algunos* 'some', whereas he describes the action *not to be tempted* as the attitude represented by the larger part of the group, in other words, the intersubjective attitude (Nuyts 2012: 58). Moreover, the speaker asks the audience to *recordar que hay muchos procesos en marcha que son útiles* 'remember that there are many processes under way that are working', presenting this piece of information as a plain fact, not as a personal opinion. If the addressees are supposed to remember this, it means that they have spoken of it before, and that it can be regarded as common ground.

As shown above (Section 5.1), in negated contexts, *deber* is six times as frequent as *tener que*, but we still found five cases of negated *tener que*. Do they occur in the same type of contexts as negated *deber*, i.e. with a reference to intersubjectivity? A careful examination of these cases reveals that this is not the case. When *tener que* is negated, there are other contextual elements present that favour a subjective interpretation instead of an intersubjective one. We believe that these subjective elements trigger the use of *tener que*, despite the fact that a negation would, in the typical case, favour the use of *deber*. These five cases can thus be seen as exceptions, due to contextual factors.²² An example is offered in (7):

(7) Se ha dicho, por parte de la Presidencia en ejercicio del Consejo y también por parte de la Comisaria, la señora Malmström, que [Bulgaria y Rumanía] cumplen técnica y jurídicamente, y yo uno mi voz a la de ellas. Creo que no *tenemos que* tomar en consideración otros criterios que no sean los exclusivamente técnicos y también jurídicos. (Agustín Díaz de Mera García Consuegra, 7 June 2011)

The Presidency-in-office of the Council and the Commissioner, Mrs Malmström, have both stated that these two countries comply with the technical and legal requirements, and I add my voice to theirs. I believe we *should* not consider any criteria other than the strictly technical and legal.'

In (7), the speaker refers to a statement of two previous speakers (that the countries comply with the requirements asked for) as an argument for the following subjective attitude that no other requirements should be considered: *Creo que no tenemos que tomar*

²²Let us bear in mind that, according to our analysis, (inter)subjectivity is expressed through an interplay between a linguistic element and its context (see Narrog (2012: 51) for a more detailed discussion). Our results show that *tener que* frequently appears in contexts where elements related to subjectivity are expressed (for instance, first person and present tense), but this does not mean that the verb is incompatible with negation.

en consideración otros criterios. In this case, the speaker wants to clarify his own position and not only refer to an attitude of a larger group; therefore, two subjective expressions appear in his utterance: *Creo que* 'I think' and *Yo uno mi voz* 'I add my voice'.

6.3. Grammatical person

The third predictor is grammatical person, where a distinction has been made between first and third person. The statistical analysis revealed that there were significant differences between the verbs, whereas *tener que* is almost equally frequent in first and third person (47.1% vs. 52.9%), *deber* shows a strong preference for third person (74.3%). In the following paragraphs, we discuss which functions can be assigned to first and third person, respectively, and how the distributional differences between the verbs can be interpreted.

When looking at other studies of modality, it becomes clear that a high frequency of first person, both singular and plural, is usually explained in terms of subjectivity. For instance, Narrog (2005) lists first person as an example of *speaker-orientation*, whereas Vázquez Laslop (1999b) defines it as *subjective modality*. Moreover, both Bauman (2013) and Blas Arroyo & Porcar (2014) relate a frequent use of first person with *tener que* to subjectivity in their descriptions of the use of Spanish modal verbs in historical data.

Third person, to our knowledge, has not been analyzed and commented on to the same extent as first person. Nevertheless, Nuyts (2012: 59) relates impersonal modal statements in third person, such as *It is unacceptable that they left already*, to intersubjectivity, meaning that they are used to express a shared view. Similar ideas can be found in Vázquez Laslop, María Eugenia & Hernández Díaz (2010) and Vázquez Laslop (2012) who study modality in legal discourse. They notice that third person is frequently used in impersonal constructions in their data, adding a more objective, abstract and general tone to the discourse. A detailed analysis of our samples confirms that they are in line with previous studies: first person is frequently used with a subjective function, and, especially, third person tends to be used to deliver arguments in a more neutral package, thus reducing the attention on the speaker as the messenger.

In our data, both cases of first person singular and plural were found. The cases of first person singular, for which *tener que* is used almost exclusively, are characterized by a high level of subjectivity. These uses are practically formulaic, following the scheme *Tengo que* 'I have to' + communication verb + complement clause. They occur in contexts where the speaker voices his or her opinion on a topic, frequently a controversial one, knowing that the view might contrast with other perspectives in the Parliament. In (8), a typical example is presented:

- (8) *Tengo que* decirle que esta Presidencia nos ha fallado, fundamentalmente porque, en lugar de apostar por la Europa de los pueblos y de los ciudadanos, como esperábamos, ha seguido apostando por la Europa de los Estados y de los mercados. (R. Romeva i Rueda, 6 July 2010)

'I have to say that this Presidency has failed us, primarily because, instead of embracing a Europe of people and citizens, which we hoped for, it has continued to embrace a Europe of governments and markets. [...]'

The speaker in (8) criticizes the acting of the outgoing Spanish Presidency, considering it to prioritize the governments within the Union instead of its grassroots.

As far as the occurrences in first person plural are concerned, they are not all as clearly subjective as the uses of the singular form. Nonetheless, there are many cases in which the speaker calls on the members of Parliament (including him/herself) to act,²³ adding subjective markers to show his/her personal opinion, as in (9):

- (9) Pero yo creo que *tenemos* hacer un esfuerzo como parlamentarios y en nuestras sociedades para explicar que ayudamos a personas, ayudamos a seres que están en dificultades, y no a uno u otro régimen político. (E. Guerrero Salom, 7 September 2010)

‘Nevertheless, I think we *have to* make an effort as Members and in our societies to explain that we are helping people – human beings – who are in difficulties, rather than a particular political regime.’

While the speaker refers to (or includes) him/herself in the use of first person, third person can usually not be linked to an actual person in our data. Following Vázquez Laslop (1999b: 14), third person can be associated with several kinds of referents, namely, the polite use of third person to *usted(es)* ‘You’, a third party not included in the audience, the marker *se* referring to an impersonal agent, and an inanimate subject. In our corpus, very few cases refer to a person directly (as in *usted/es* or as in a reference to what a third party must/should do), instead third person is generally used to refer to inanimate subjects and, sometimes, to the impersonal pronoun *se*. Since the latter is discussed further in the next section on diathesis (Section 6.4), we only give one example with an inanimate subject here (10):

- (10) El Gobierno griego debe²⁴ recibir el apoyo firme de la Unión en su esfuerzo por recuperar el crecimiento. La cacofonía *debe* cesar y es hora de cumplir los acuerdos del 21 de julio, incluyendo un plan Marshall digno de su nombre. (A. Sánchez Presedo, 14 September 2011)

‘The Greek government should receive a firm support from the Union in its efforts to recover growth. The dissonance *must* stop, and it is time to fulfil the agreements of 21 July, including a Marshall plan worthy of its name.’ (Our translation.)

In (10), the speaker emphasizes the need to support the Greek government, arguing that the European Union must stand unified and fulfil its earlier promise. Instead of referring to the MPs in a direct way, asking them to reach an agreement, the speaker uses the inanimate

²³Since the speaker orients him/herself towards the interlocutors, using first person plural *tenemos que/debemos* ‘we have to/must’, one could argue that these uses are in fact intersubjective. However, it is important to differentiate between the *source* of the necessity and the *modal agent*, the person on which the necessity is imposed; we follow Nuyts’ (2012) definition of intersubjectivity, claiming that it refers to an *attitude* shared by a wider audience. This means that even if the speaker states that *we must do X*, what matters is who stands behind this attitude (that X is necessary), not who needs to carry out the action in question. Therefore, when the speaker expresses a personal opinion of what the members of the Parliament need to do, the utterance should, according to our analysis, be regarded as subjective, not as intersubjective.

²⁴The first occurrence of *deber* in (10) is not the expression under scrutiny, but the second one. The reader might notice that *deber* in the first sentence occurs with an animate subject *El Gobierno*. However, the Greek Government is not the modal agent in this case, but only the recipient of this action as it will receive support from the Union, the real agent. These indirect communicative strategies are far more frequent with *deber* than with *tener que*.

subject *la cacofonia* ‘the dissonance’, which is a more indirect and impersonalized communication strategy. By speaking in more general and abstract terms, in (10) the speaker can be said to include the whole audience, without mentioning anyone in particular. It is difficult for the interlocutors to argue against general values and ideas, which may be a reason why these intersubjective uses are so frequent in our data. As mentioned before, *deber* is dominant in third person, which further supports the claim about its intersubjective status. In the next section, we will see how grammatical person can be related to diathesis.

6.4. Diathesis

The fourth variable studied for the distribution of *deber* and *tener que* is syntactic agentivity or diathesis. The results indicated a statistically significant difference between *deber* and *tener que* according to the binary categories ‘active’ and ‘impersonal’, showing that *deber* is approximately twice as frequent in impersonal constructions (21.1%) as *tener que* (10%). The impersonal constructions can be further divided into constructions of impersonal *se* (sometimes defined as *middle voice*) and periphrastic passive constructions, respectively, which are always conjugated in third person. Both types of constructions usually make the agent invisible,²⁵ either because the agent is unknown or secret or because it is not important to point to an agent responsible for the action in question. In (11), we show an example of impersonal *se* and in (12), the use of periphrastic passive is exemplified.

- (11) La situación de la población romaní es diferente a la de otras minorías nacionales de Europa, razón por la que se *deben* adoptar medidas específicas en favor de la misma. (A. Díaz de Mera García Consuegra, 9 March 2010)

‘The Roma population’s situation is different from that of other national minorities in Europe, which is why we *need to*²⁶ adopt specific measures concerning them.’

- (12) [...] en una sociedad democrática no hay causa que legitime ninguna acción terrorista. Ni causa política, ni no política: el terrorismo *debe* ser rechazado de plano en una sociedad democrática. (L. de Grandes Pascual, 5 July 2011)

‘[...] in a democratic society, there is no cause that makes any action of terrorism legitimate. Neither a political cause, nor a non-political one: terrorism *should* be flatly refused in a democratic society.’ (Our translation.)

In (11), the speaker emphasizes the importance of taking action when it comes to the Roma population in Europe. By using the impersonal marker *se*, he is able to address this need without specifying who is going to carry out the action in question. It can be a reference to the members of Parliament or even to all the organs of the European Union. In (12), the agent concealed by the impersonal construction seems even vaguer; the necessity to refuse terrorism could be imposed on all governments and politicians in every democratic society, but could also be seen as a general norm that every society and

²⁵When using the periphrastic passive, the agent can appear at the end of the clause, for example, as in *Esas decisiones deben ser impulsadas por el Parlamento Europeo* ‘These decisions should be pushed/incited by the European Parliament.’ However, such cases are extremely rare in our data.

²⁶In this case, the translator has chosen a more direct manner of formulating the necessity than in the Spanish original version, where the agent remains invisible. It is not clear, however, to whom the English pronoun ‘we’ refers, only that the speaker includes himself, which must not necessarily be the case in the Spanish use of *se*.

its members – the citizens – should follow. When speaking in general terms, everyone can be included. Therefore, the use of *deber* in impersonal constructions may be interpreted as a sign of intersubjectivity. *Tener que*, on the other hand, is not used to the same extent in impersonal constructions, but is more frequent in active clauses with a specified agent. We have not found any clear connection between subjectivity and active clauses, instead we argue that the low frequency of *tener que* in impersonal clauses is due to its subjective nature, which clashes with the intersubjective function of the impersonal constructions. In the final section of this discussion, we look closer at the two verbs with respects to the source of the necessity.

6.5. Source of the necessity

As far as the source of necessity is concerned, the division made was between speaker as source and another source. Significant differences were found, showing that *tener que* generally occurs when the speaker is the source²⁷ (87.1% of the cases of *tener que*), whereas *deber* is the first choice when there is another source of necessity (27.1% of the cases of *deber* compared to 12.9% for *tener que*).

To relate the category *speaker as source* to subjectivity follows from the definition of subjectivity as the opinions and ideas of the speaker. In fact, a number of earlier studies have presented a similar perspective, making a distinction between speaker vs. norms. For example, van der Auwera & Plungian (1998), Vázquez Laslop (1999b) and Olbertz & Gasparini Bastos (2013) associate the speaker-oriented obligation or necessity to *subjective modality* and the norm-based obligation or necessity to *objective modality*. However, in previous accounts, the difference between speaker and other sources often seem to be regarded as self-evident. Additionally, they seldom present a quantitative analysis based on the variable *source*. In our analysis, on the contrary, we have based the division of *speaker as source* vs. *other source* on the presence of an explicit reference to a source other than the speaker, be it a shared norm or a legislative statement. We now present examples from the two different categories, arguing for different tendencies for *deber* and *tener que*.

The analysis of the variable grammatical person showed that *tener que* is frequent when there is a conflict between the speaker's opinion and another attitude. The same tendency can be seen when the source of the necessity is taken into account. In (13), a prototypical example of the use of *tener que* is presented:

- (13) Respeto todas las palabras. Pero las palabras pronunciadas *tienen que* tener un componente documental, un componente informativo, un componente de conocimiento de causa y, sinceramente, a mí me ha sorprendido mucho ver determinadas afirmaciones que apuntan exactamente hacia lo contrario. (A. Díaz de Mera García Consuegra, 10 February 2010)

'I have great respect for everything that has been said. However, these words *should* have a documental and informative component with full knowledge of the facts, and frankly, I have been very surprised to hear certain statements that suggest otherwise.'

²⁷As explained in Section 4 (Methods), all occurrences without any explicit mention to another source were classified as having the speaker as source.

The speaker in (13) refers to himself twice, beginning with *Respeto* 'I have a great respect' and ending with *a mí me ha sorprendido mucho* 'I have been very surprised'. It is clear that the speaker wants to stress the fact that he does not support the former statement. A conflict between two opposing attitudes can thus be seen. This does not mean that the person (or party) being criticized supports an attitude opposite to *todas las palabras tienen que tener un componente documental* 'these words should have a documental component', i.e. that someone actually defends non-factual statements; it only means that the speaker *presents* the other view as opposite to his own idea about how statements should be, and, in this 'conflict-ridden' situation, uses the verb *tener que*.

When the source is not the speaker but another source is referred to, for example, *el mandato* 'the mandate', as in (14), *deber* is more frequent.

- (14) Señor Presidente, yo creo que en el Parlamento Europeo tenemos que ser muy conscientes y actuar con la responsabilidad del mandato que se nos ha otorgado y este mandato nos dice claramente que *debemos* proteger a las mujeres víctimas de violencia y poner coto a los victimarios, también a escala europea. (R. Romeva i Rueda, 14 December 2010)

'Mr President, I think that we in Parliament need to be very responsible and act within the mandate that we have been given which tells us that, at European level too, we *must* protect women who are victims of violence and put a stop to murderers.'

In (14), the speaker refers to the mandate that the members of Parliament have been given of the citizens they are representing, using it to support the claim that *debemos proteger a las mujeres víctimas de violencia* 'we must protect women who are victims of violence'. When arguing that this view is supported by the majority of the citizens (*y este mandato nos dice claramente*, 'and this mandate clearly tells us'), the speaker makes use of an intersubjective strategy, as he ascribes this statement to a broader group of people (Nuyts 2012: 58). An interesting observation in this extract is that the speaker alternates between different modal verbs depending on the source. First, he expresses a subjective evaluation introduced by *yo creo que*, where *tener que* is used, and later, when focusing on the mandate, i.e. another source, he changes verb to *deber*. This is a clear example of how the two verbs are triggered by different contexts.

7. Concluding remarks

In this paper, we have investigated the meanings and functions of the Spanish modals *deber* and *tener que* in a corpus consisting of 560 instances of the verbs extracted from EU parliamentary debates, analyzing their behaviour with regard to five variables (tense, polarity, grammatical person, diathesis, and the source of the necessity). The results showed statistically significant differences between the verbs for all five variables when they were included together in a multivariate analysis. In addition to the statistical analyses, we discussed specific examples of how *deber* and *tener que* are used with respect to the investigated variables, which allowed us to detect further patterns behind the quantitative results and enabled a more in-depth understanding of the different functions and usages of the verbs. We showed how the parameters in our study can be linked to the theoretical framework of (inter)subjectivity put forward by Nuyts (2012).

The most influential predictors among the five variables analyzed in our study are tense and polarity. *Deber* is more frequent in the conditional tense, where it has two different evidential usages connected to shared knowledge (of e.g. norms) and inferentiality. In contrast, *tener que* is barely used in the conditional tense in our data. As far as polarity is concerned, we found that *deber* is negated more frequently than *tener que*. Negated *deber* is used when the view presented can be regarded as opposite or different to another more marginalized view expressed previously in discourse or, though not explicitly mentioned, presumed to exist by the speaker. In this way, the speaker tells the addressee to reject the view represented in the affirmative utterance, and instead adopt the perspective offered in the negated sentence. The results from both tense and polarity indicate that *deber* is used in intersubjective contexts, referring to a reasonable and recommendable way of acting, i.e. a norm that the addressee is supposed to follow.

Although not as strong predictors as tense and polarity, the other three variables, showed significant differences between the verbs. Grammatical person and diathesis represent different aspects of the grammatical subject and are thus related. We found *tener que* to be almost evenly distributed between first person and third person, whereas *deber* occurs mainly in third person. With regard to diathesis, *tener que* typically appears only in active clauses; *deber* is the first option with passive and impersonal constructions. The high frequency of *deber* in third person proved to be related to the distribution according to diathesis; this verb usually occurs in impersonal contexts, be it inanimate subjects in active clauses, the impersonal marker *se*, or passive clauses, where third person is practically always used. That *deber* typically appears in third person and in utterances where the modal agent is invisible was interpreted as a sign pointing towards intersubjectivity, being a manner of including everyone. The last variable, the source of the necessity, can be considered a straightforward criterion for determining the presence of subjectivity, based on a distinction between speaker-oriented modality (where the speaker is the source) and modality originated in norms (where the source is not the speaker). Our results show that *tener que* primarily is used when the speaker is the source, i.e. 'responsible' for the necessity formulated in the utterance, and that *deber* is the first choice when the necessity is derived from another source than the speaker.

All these results point in the same direction: that *deber* is frequent in intersubjective functions, when the speaker focuses on the addressee and on shared opinions based on agreement, while *tener que* is used when the speaker wants to present his/her own perspective, based on a subjective evaluation. Our findings are compatible with some of the earlier accounts of the differences between *deber* and *tener que* (e.g. Sirbu-Dumitrescu 1988; Fernández de Castro 1999). For example, Fernández de Castro (1999) describes *tener que* as an expression of an obligation which goes against the will of the subject, whereas *deber* usually appears when the necessity refers to what is 'necessary and convenient for everyone' (Fernández de Castro 1999: 186, our translation). There is a clear parallel between the idea of a conflict between source and modal subject and the subjective use of *tener que* in the European Parliament, where this verb frequently occurs when one political view is contrasted with another. In the same manner, Fernández de Castro's description of *deber* can be related to intersubjectivity, which takes the perspective of the addressee into account. Similarly, Sirbu-Dumitrescu (1988) refers to *deber* as an expression of a societal norm, which seems to correlate with uses we have found, although the author does not describe it as an intersubjective function.

Until now, we have focused our discussion on what the different distributions of *deber* and *tener que* mean, concluding that they can be interpreted in terms of intersubjectivity and subjectivity, respectively. However, if this discussion is lifted to a higher level focusing on how the differences in the verbs' functions can be interpreted, we find that they may be explained in terms of grammaticalization. According to recent accounts of grammaticalization (e.g. Traugott 2010; Narrog 2012; Nuyts & Byloo 2015), subjectivity and intersubjectivity are related to different stages of grammaticalization or semantic evolution. Whereas *subjectification*, i.e. the process in which expressions gain meanings related to the speaker's attitude and perspective, is associated with the rise of modal expressions, *intersubjectification*, i.e. the process in which expressions gain meanings oriented towards the addressee's values and beliefs, is considered to occur at a later stage, for expressions that are already subjective.

If the findings that *deber* and *tener que* can be related to an intersubjective and a subjective meaning, respectively, are interpreted in terms of their stages of grammaticalization, it seems likely that *deber* has reached a later stage of grammaticalization than *tener que*. It is important to note that *deber* is an older modal expression than *tener que*; the former existed already in Latin and thus was present in the earliest stages of Spanish (Rosemeyer 2017: 150), whereas few cases of *tener que* were found before the sixteenth century (Blas Arroyo & González Martínez 2014). Moreover, if these verbs follow a common development path, it is possible that the more recent expression *tener que* will gain intersubjective meanings in the future. Even though this hypothesis needs to be verified in a study including diachronic data, our findings support it. For example, *deber* has a broader use in comparison to *tener que*; it is relatively frequent in passive/impersonal clauses, in negated sentences and in the conditional tense; contexts in which *tener que* has proven to be more restricted, but also occurs in active and affirmative clauses, and in other tenses. These findings are highly compatible with studies of grammaticalization, which have shown that 'newborn' expressions tend to be limited to certain contexts, and with time, they gain broader usage (Hopper & Traugott 2006; Bybee 2010). A future study including historical data would be needed to investigate this issue further. Much work remains to be done within the field of modality, not least for Spanish.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix: List of speakers, dates, and names of the parliamentary debates for the examples

Example	Name	Date	Debate
(4)	Salvador Garriga Polledo	8 June 2011	A new Multiannual Financial Framework (MFF) for a competitive, sustainable and inclusive Europe
(5)	Teresa Jiménez-Becerril Barrio	24 February 2010	Beijing +15 – UN Platform for Action for Gender Equality
(6)	Raül Romeva i Rueda	10 March 2010	Cuba
(7)	Agustín Díaz de Mera García Consuegra	7 June 2011	Application of Schengen acquis in Bulgaria and Romania
(8)	Raül Romeva i Rueda	6 July 2010	Balance of the Spanish Presidency
(9)	Enrique Guerrero Salom	7 September 2010	Humanitarian situation after the floods in Pakistan
(10)	Antolín Sánchez Presedo	14 September 2011	The economic crisis and the euro
(11)	Agustín Díaz de Mera García Consuegra	9 March 2010	Second European Roma Summit
(12)	Luis de Grandes Pascual	5 July 2011	Aviation security with a special focus on security scanners – Liquids (LAG) ban on aircrafts
(13)	Agustín Díaz de Mera García Consuegra	10 February 2010	Agreement between the EU and the USA on the processing and transfer of Financial Messaging Data from the European Union to the United States for purposes of the Terrorist Finance Tracking Programme
(14)	Raül Romeva i Rueda	14 December 2010,	European Protection Order