Modality and What Should Would Be Acceptable: Syntactic Promiscuity in Spanish and English Double Modal Constructions

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Abstract. A multi-modal construction, also referred to as modal stacking (MS), is a structure in which multiple modal verbs appear in conjunction. This type of structure is well attested in many Romance, Germanic, and Sinitic languages but only appears dialectically in such varieties of English as Scots English and SUSE. This project seeks a greater understanding of the underlying syntax of MS and provides a crosslinguistic comparison of the acceptability of different combinations of modal verbs in both Spanish and English in order to show how these structures can be extended beyond just their English context. This study opens a new avenue to the analysis of MS in English through further restriction of the current proposed syntactic structures and a greater understanding of their modal implications. Furthermore, it provides greater evidence of a strict epistemic-root order in multi-modal constructions completely independent of the language in question.

Keywords. Modality, Modal Stacking, AJT

1. Introduction

1.1 Defining Modality

Although modality is difficult to define, it can be considered “a cover term for a range of semantic notions such as ability, possibility, hypotheticality, obligation, and imperative meaning” (Depraetere & Reed 2006, 269). With such a range of meanings, it is employed to express a variety of pragmatic interpretations from desire to hedging and politeness (Mishoe & Montgomery 1994). Crosslinguistically, simple modality (SM), in which a verb phrase is modified by a single modal, as in (1), (2), and (3) below, is well understood and attested in English and Spanish as well as many other Germanic, Romance, and Sinitic languages (Wurmbrand 1998, Peters 2016, Picallo 1990).
(1) It might be the stark natural beauty, the way towering rock formations rise majestically above the winding Crooked River. (Davies 2008-)

(2) *No acepta el presente, sino donde siente que ha de estar.* (Spanish)
Not accepts the present but where feels that has to.be
‘It does not accept the present but where one feels one must be.’

(3) *Zhangsan keneng bixu yuanyi huijiang Fayu.* (Mandarin)
Zhangsan probably must be.willing can speak French
‘Zhangsan likely (will) need to be willing to be able to speak French.’

Much prior research on the feature exists, of which two points will be particularly considered in this project. The first of these is the epistemic versus root distinction (Depraetere & Reed 2006); whereas epistemic modals deal with the possibility tied to an event’s realization, root modality refers to other influences (obligation, volition, etc.) related to the event’s actualization. The second point is a crosslinguistic hierarchy of modal markers in terms of syntactic configuration on the sentence level (Cinque 2004) which places epistemic modality over tense and tense over root modality. These two particular points get called into question especially when observing double modal constructions (DMs), in which two modals appear adjacent in a sentence, such as in (4) and (5) below.

(4) I might could save up and get us back into the three-bedroom. (Davies 2008-)

(5) *Uno debe de tener que cumplir con esos “requisitos” citados?* (Spanish)
One must have to.comply with those requisites cited?
‘Must one have to comply with those requisites cited?’

While DM constructions like those in (4) and (5) are common in languages like Spanish, they are relatively rare in English when compared to other related languages. However, prior research has noted a certain small set of DM constructions that are identifiable as distinctive to Southern United States English (SUSE) and Scots English (Hasty 2011, Reed & Montgomery 2014). The current theorized syntactic structure underlying these DM sentences was proposed in Hasty (2012).
Therein, he suggests a Modal Phrase (MP) located above TP with the first modal occupying the MP position and the second the TP position. His hierarchy and restriction on which DM constructions are and are not possible in English suggests an inherent distinction on the lexical level between modals that can occupy the MP and those that can occupy the TP.

Hasty (2012) shows how this structure can be used to analyze many of the well-attested English DM constructions, such as the one in (4). All of these well-attested DMs are listed in (6) below. However, although this structure well accounts for the majority of DMs, there remain some unanswered questions regarding the possibilities and structure of modal stacking (MS) in English and Spanish.

(6) List of canonical double modals (CDMs).

\[
\begin{align*}
\text{might could} & \quad \text{might will} & \quad \text{may could} \\
\text{might should} & \quad \text{must can} & \quad \text{may will} \\
\text{might would} & \quad \text{must could} & \quad \text{may should} \\
\text{might can} & \quad \text{may can}
\end{align*}
\]

1.2 Research Questions

The motivation for this project comes from four primary questions regarding MS that have yet gone unanswered. The first of these is the seeming contradiction between the multiple interpretability of modals and the current proposed structure that suggests two distinct and fixed classes of modals. That is, the current model does not account for ambiguity of SMs and, rather, suggests that a given modal can only ever have one interpretation in a DM context. The second question naturally follows from this idea - the possibilities of modal combinations and orderings of DMs. The current structure proposed in Hasty (2012) has only been shown to account for a limited set of all observed DMs in English (which are henceforth referred to as canonical double modals or CDMs), namely those with \textit{might}, \textit{may}, or \textit{must} as the first modal and listed in (6) above. Thirdly, further corpora data reveal natural triple modal (TM) usage in spontaneous speech, though the current model includes only two modal positions.
The final question that motivates this project is that of where modals receive their interpretation (epistemic or root), whether that be on the lexical level (i.e. the information comes already coded in the modal itself) or the syntactic level (i.e. certain positions in the structure of the utterance assign an epistemic interpretation and others a root one). If it be a result of a lexical configuration, one should expect each modal to always appear in a specific syntactic position. Otherwise, this would imply that there is a much broader range of possibility in terms of DM combinations.

These four questions will continually be addressed throughout this paper as I attempt to provide answers to each based on prior research and the results of experimentation, and they are summed up in the list below.

1. How can a syntactic structure of modals account for epistemic/root ambiguity?
2. Which modal combinations and orders are possible?
3. How can the syntactic structure account for TMs?
4. Where do modals receive their interpretation - on the lexical or the syntactic level?

1.3 Proposal

Following a syntactic-related literature, I propose that the interpretation of a modal (whether epistemic or root) is a result solely of syntactic configuration and not of inherent lexical information. Furthermore, I propose a new structure for MS in which different flavors of an epistemic modal phrase (MP-Epi) above TP and different flavors of a root modal phrase (MP-Root) dictate the ordering (and, thus, the interpretation) of modals in a given sentence. Under this model, it follows that the two interpretations of an ambiguous modal would result in two separate structures as expected, one in which the modal occupies an M-Epi head and one in which it occupies an M-Root head. Furthermore, the presence of different flavors of modality and their independence from TP reflects the possibility of DMs and TMs with an intervening tense auxiliary. Lastly, the idea that modal interpretation is a result of syntactic configuration paired with this new structure suggests that any ordering of any two modals is possible.
1.4 Hypothesis

In support of this proposal, I hypothesize that, given the right context, any ordering of two modal verbs can occur. To test this, I seek to identify whether or not repeated double modal constructions (in which the same modal verb appears as both modals of a DM, henceforth referred to as RDMs) and, more generally, the superclass of non-canonically ordered DM sentences, i.e. those in which a modal labeled epistemic in Hasty (2012) appears second or one labeled root appears first (henceforth referred to as NCDMs), are grammatical (examples of each are shown in (7) below). I use both English and Spanish AJT surveys to determine this and to identify the limitations, if any, on possible DM orderings.

(7) a. CDM: I expect that we might could get you one by Friday. (Battistella 1995)

b. NCDM: If we could might get a piece of a car, things would be better.

(Mishoe & Montgomery 1994)

c. RDM: I might might go out for a walk today if I feel like getting out of the house.

1.5 Outline

The remainder of this paper is divided into sections as follows. Section 2 defines some necessary terms and discusses prior research on modality, including the syntactic structure proposed in Hasty (2012) and paying special attention to the research questions raised in Section 1.2 above. In Section 3, I discuss the acceptability judgement tasks (AJTs) used to study this feature. The results of the AJTs and correlations on DM acceptance are laid out in Section 4. Section 5 provides discussion on how the data respond to the research questions. Section 6 continues this discussion, detailing the theoretical implications for how the interpretation of the modal is assigned and proposing a new syntactic structure for MS constructions based on the results. In Section 7, I discuss some of the limitations of this work and propose further questions for future research that build off of the results presented here.
2. Related Work

This section describes previous work done on modality and DMs with particular attention to the research that has either motivated or answered the research questions posed above. First, I discuss the epistemic/root distinction and describe MS before touching briefly on a hierarchy of tense, aspect, and modality.

2.1 Epistemic and Root Modality

As described above, modality refers in general to those terms which add semantic nuance to the verbs they modify, whether that be in the sense of possibility, desire, etc. In order to see the different roles that modals operate under in a given utterance, it is useful to divide their readings into the categories of epistemic and root modality. Again, Depraetere & Reed (2006) provide apt definitions for these two terms: “Epistemic modality reflects the speaker’s judgement of the likelihood that the proposition underlying the utterance is true [...] ranging from weak epistemic possibility [...] to epistemic necessity” (274). In contrast to this, root modality, also referred to as non-epistemic modality, “reflects the speaker’s judgements about factors influencing the actualization of the situation referred to in the utterance” (Depraetere & Reed 2006, 274). (8) and (9) below serve as canonical examples of natural epistemic and root SMs, respectively.

(8) I don’t know when I’ll get off today, so I might eat dinner on my way home.

(9) The doctor just said not to eat anything the morning before I go in, so I can eat dinner tonight.

The modals in both sentences provide semantic nuance to the same core action of eating dinner. In the most natural interpretation, might in (8) is used to express the possibility (epistemic) of carrying out an action to completion (i.e. the possibility of eating dinner), whereas can in (9) reveals the actuality (root) of the subject’s ability to do so (i.e. the ability to eat dinner). If it is assumed that modals simply occupy the head of a single functional projection, there is no issue, as might, in the first, and can, in the second, respectively occupy an otherwise empty position. However, this same line of reasoning comes into question when considering a sentence like (10) in which the modal lends itself to both an epistemic and a root interpretation.
The artist who painted this landscape must practice everyday.

In (10), must can carry either of two different meanings. The first, an epistemic one, is used as a measure of the speaker’s interpretation of the likelihood of the painter’s actions (she must paint everyday; otherwise, how else would her art look so beautiful). The second, a root one, expresses some underlying fact that the painter is actually required to paint everyday (I know her, and she is employed as an artist with the obligation to paint everyday). Assuming that interpretation is structurally-based (rather than that there are two separate lexical entries), it can be seen that while there is typically a single, more natural interpretation to a given SM sentence, this ambiguity lends the sentence to being described by two separate structures - one in which the epistemic interpretation is accounted for and the other in which the root one is. For this reason, simply saying that a single modal only ever occupies the head of a single functional projection does not well reflect differences in modal readings. This idea of SM multiple interpretability has been well attested in past research on epistemic and root modality (Kratzer 1977, Portner 2007, Declerck 2011).

2.2 MODAL STACKING

While SMs are prevalent in all dialects of English, MS is common in and characteristic of much fewer, primarily Scots English and SUSE. In these dialects, it is not uncommon to hear such sentences as (11) below.

(11) If you can tell me how to do this I might can make it work for the future. (Davies 2008-)

In such an instance, a natural question would be to wonder if the double modal simply operates modally as a single lexical item, a theory proposed in Di Paolo (1989). However, this idea has since been largely disfavored (Battistella 1995, Hasty 2012) in view of the analysis in Hasty (2012). Rather than consider the DM construction as an idiomatic phrase, he proposes therein that modals occupy one of two positions - either the head of the higher MP (the first modal) or that of the lower TP (the second modal). According to his proposal, the head of the MP is only ever occupied by an epistemic modal and that of the TP by a root modal. This accounts for all of the most common
and canonical examples of DMs in English, such as the example reproduced as (12) below that he discusses.

(12) Structure of DMs proposed in Hasty (2012).

In the sentence diagrammed above, the most natural interpretation is for *might* to take on an epistemic meaning and *could* to take on a root meaning (this would result in an interpretation along the lines of *it is possible that I am able to perform that action*). However, it is proposed in Hasty (2012) that these canonical examples are the only ones possible and that the MP position is restricted to such typically epistemic modals as *might*, *may*, and *must*. This seemingly contradicts the idea of multiple interpretability, as the modals in DMs are, then, treated as having only one possible meaning. This makes the analysis of such examples as (13) problematic.

(13) But I’m saying, they *would might* deliberately wait until the fire is - was at its greatest when the brush was dry. (Davies 2008-)

In the sentence above, both of the two possible interpretations present an issue for Hasty’s structure. Assuming that *would* is, as Hasty claims, an inherently root modal, then, in this instance, it occupies the TP yet from first position rather than from the second. In the case that *would* takes on an epistemic interpretation and *might* a root one, there is a contradiction of the classes he proposed. This leads to the question, then, of what additional DM combinations are possible. Whereas English corpora primarily include those DMs outlined in Hasty (2011), much prior research has found NCDMs (Di Paolo 1989, Mishoe & Montgomery 1994, Battistella 1995). Furthermore, the data analyzed in those projects have also revealed the presence of TMs in natural speech. Hasty
(2012) argues that those TMs containing the quasi-modal “oughta” should be reinterpreted with this modal being treated, instead, as a verb occupying the head of VP. However, he does not discuss those TMs that do not contain “oughta”, such as those in (14) and (15) below.

(14)  I might will can go tomorrow.  
      (Linguist List 1994)

(15)  Sorry, we don’t carry them anymore, but you know, you may might can get one right over there at Wicks.  
      (Mishoe & Montgomery 1994)

These TM orderings prove particularly problematic for the current structure as they both contain three modals, all of which fall into the two classes proposed in Hasty 2012 (may, might as epistemic; will, can as root). Following the unlikeliness of multiple modals being simply an idiomatic phrase, it is equally unlikely to consider may must as a single epistemic modal phrase.

2.3 Modal Hierarchy

While (14) and (15) (and similar TM constructions) are not accounted for by the current proposed structure, the results of Cinque (2004) provide some insight into the viability of such constructions. Therein, he draws on cross-linguistic evidence to propose a hierarchical ordering of varying types of tense, aspect, mood, and modality that is reproduced below in Figure 1. Most relevant to MS, he proposes that epistemic modals (ModP_{epistemic}) precede tense (TP (Past) and TP (Future)) which, in turn, precedes root modality (ModP_{volitional}, ModP_{obligation}, and ModP_{permission/ability}). This stands in accordance with Hasty’s proposal that epistemic modals occupy a higher position than tense and root modals, but the tense-root distinction in Cinque (2004) allows for greater accountability of TMs. However, it is important to note that, for the purposes of this work, neither ModP_{alethic} nor TP (Anterior) are considered in a syntactic evaluation of MS (though they do pose worthwhile questions for future work on such a structure by challenging this traditional epistemic-tense-root ordering).
Figure 1: Cinque’s (2004, p. 133) hierarchy of tense, aspect, mood, and modality.

\[
\text{MoodP}_{\text{speech act}} > \text{MoodP}_{\text{evaluative}} > \text{MoodP}_{\text{evidential}} > \text{ModP}_{\text{epistemic}} > \text{TP (Past)} \\
\text{TP (Future)} > \text{MoodP}_{\text{irrealis}} > \text{ModP}_{\text{alethic}} > \text{AspP}_{\text{habitual}} > \text{AspP}_{\text{repetitive (I)}} \\
\text{AspP}_{\text{frequentative (I)}} > \text{ModP}_{\text{volitional}} > \text{AspP}_{\text{celerative (I)}} > \text{TP (Anterior)} > \text{AspP}_{\text{terminative}} \\
\text{AspP}_{\text{continuous}} > \text{AspP}_{\text{retrospective}} > \text{AspP}_{\text{proximative}} > \text{AspP}_{\text{durative}} > \text{AspP}_{\text{generic/progressive}} \\
\text{AspP}_{\text{prospective}} > \text{ModP}_{\text{obligation}} > \text{ModP}_{\text{permission/ability}} > \text{AspP}_{\text{completive}} > \text{VoiceP} \\
\text{AspP}_{\text{celerative (II)}} > \text{AspP}_{\text{repetitive (II)}} > \text{AspP}_{\text{frequentative (II)}} > \\
\]

In (14), for example, one can see a typically epistemic modal might and a typically root modal can in the suggested order of epistemic preceding root. However, the presence of will better reflects the ordering set forth in Cinque (2004), as one can interpret this sentence with will marking for tense instead of marking for modality. In this case, Cinque’s epistemic-tense-root ordering is followed. Although the TM in (15) has one too many epistemic modals to be accounted for by Hasty’s structure, it, too, follows with Cinque’s hierarchy; taking might and may to be epistemic modals, they still precede the typically root modal can.

3. Methodology

In order to test the hypothesis described in Section 1.4 and to answer some of the questions posed in Section 1.2, I conducted two Acceptability Judgement Tasks (AJTs), measuring the acceptability of different modal constructions (SMs, DMs, etc.). The structure of these surveys as well as participant information are described below.

3.1 Survey

Two analogous surveys were created using Qualtrics, one in English and one in Spanish, each consisting in three parts. The first part of the surveys was used to collect basic sociolinguistic data about the participants, such as age, level of education, etc. The second part introduced the participants to AJT surveys with two examples each of clearly grammatical and ungrammatical sentences. The participants rated the level of acceptability on a Likert scale from one to five after hearing the recorded utterances played for them twice.
After answering the four examples, participants then completed the third part in a similar fashion, responding on a Likert scale of acceptability to an array of sentences with different numbers and orderings of modals. For English, there were 70 sentences: 14 SMs and 60 DMs (of which 14 were the token RDMs) utterances created from an original list of seven modals (may, must, might, can, could, would, should). Examples of the English AJT sentences can be seen in (16) below, and all of them can be found in Appendix A. Note that here and further on, MDMs (misordered double modals) are taken to be the complement of RDMs in the superclass of NCDMs. That is, MDMs are any non-canonically ordered double modals that do not consist of two of the same modal.

(16) a. **SM**: I still haven’t decided just yet. *I may* attend the party this evening if I’m feeling up to it.
   
   b. **CDM**: I’m not particularly hungry right now. But *I might could* eat dessert if you were willing to buy it for me.
   
   c. **MDM**: Now it’s just a waiting game. *We would must* make huge organizational changes throughout the next few months if the law passes, so there’s no point in doing anything just yet.
   
   d. **RDM**: I wish I could blame my regrets on things I couldn’t control. *I should should* do the right thing every time, I know, but my own selfishness always wins out.

Drawing on fewer modals, there were 40 sentences in the Spanish survey: 10 SMs and 30 DMs (of which 10 were the token RDMs) utterances created from an original list of five modals (deber de, haber de, deber, poder, tener que). Examples of the Spanish AJT sentences can be seen in (17) below, and all of them can be found in Appendix B.

(17) a. **SM**: *No le queda nada en la nevera. Ahora, tiene que comprar comida, pero no quiere moverse del asiento.*
   
   “His fridge is empty. Now, he *has* to buy food, but he doesn’t want to get out of his seat.”
b. **CDM:** *El estado de las calles en nuestro país es horrible. El gobierno debe de poder mejorar la infraestructura con el dinero que recauda con los impuestos.*

“The state of our country’s streets is horrible. The government *must be able* to improve the infrastructure with the money that it gains from taxes.”

c. **MDM:** *Mi primo no es el mejor estudiante. No obstante, él tiene que deber terminar su tarea antes del día de plazo porque su madre requiere que la haga.*

“My cousin is not the best student. However, he *has to should* finish his homework before the due date because his mother requires him to do so.”

d. **RDM:** *Lo que mi hermano menor va a estudiar todavía es un misterio. Sin embargo, él ha de haber de decidir su especialización este año porque ya está por graduarse.*

“What my brother is going to study is still a mystery. However, he *must must* decide his major this year because he’s already getting close to graduating.”

The survey itself was distributed via email and social media to friends, family, and colleagues, both native English and native Spanish speakers. The results of the AJTs were organized using Excel with each AJT score being treated as an individual data point. In total, this resulted in 1826 AJT scores from English and 364 from Spanish. The results of this data were analyzed using JMP Pro 14 and are discussed in further detail in Section 4.

### 3.2 Participants

All of the data collected related to participant numbers and sociolinguistic information can be seen in Figure 2 and Figure 3. These are further discussed in two paragraphs below, one for each survey.
A total of 33 participants took part in the English survey, most of whom were women (22). With regards to how old they were, participants of both surveys chose between six age groups: 18-24, 25-34, 35-44, 45-54, 55-64, 65+. At the time of collection, the majority of the English survey participants were in the 18-24 age group (20), with the rest about evenly divided between 25-34 (3), 35-44 (3), 45-54 (5), and 65+ (2), though none were between 55-64. Exactly a third of them had completed some university education (11), while there were more who held an undergraduate (15) degree than those holding a graduate degree (7). Additionally, those participants who spent most of their time growing up in a Southern state were treated as Southern. Of the 33 participants, 23 were classifiably Southern, 8 non-Southern, and 2 did not provide any information on their birthplace or hometown. This idea of “Southernness” becomes an important point of reference for understanding the results of DM acceptance as will be discussed in Section 4 further below.
For the Spanish survey, there were a total of 10 participants. Similar to the English survey, the vast majority of participants were women (8), and half were between in the age group 18-24 (5), with the others being aged between 25-35 (2) or 45-54 (3). Half of the participants had an undergraduate degree (5) with almost just as many having completed some university education (4) and only one holding a graduate degree (1). As compared to the English survey, however, it is not necessary to draw a distinction on the place of upbringing for the Spanish-speaking participants since double modality is a typical feature of the majority of varieties of Spanish rather than a dialectic characteristic as it is in English.

4. Results

What follows are the results of the conducted AJT surveys. I start by discussing statistically significant differences between the average AJT scores of the various sentence types provided in the survey. Then, I show some findings on the preference of first and second modals in DMs. As an addendum, I provide results of correlations between sociolinguistic data and AJT scores.
4.1 Different Modal Constructions

Four superclasses of sentences are considered with respect to the data collected - example grammatical (ExGs), example ungrammatical (ExUs), SMs, and DMs. I also consider two DM subclasses - CDMs and NCDMs - and two NCDM subclasses - MDMs and RDMs. The means and standard deviations of the AJT scores for each sentence class in both surveys are visualized in Figure 4 and Figure 5 below for English and Spanish, respectively, and discussed in their following paragraphs. These figures each contain three distinct graphs. The first graph of each, in the upper portion of the figures, shows the average AJT scores and standard deviations of all of the overarching sentence classes, i.e. ExGs, ExUs, SMs, and DMs. The bottom left and bottom right graphs show the averages and standard deviations of CDMs versus NCDMs and MDMs versus RDMs, respectively. I ran Student’s t-tests comparing the means of the AJTs for each class and considered any differences with a p-value less than 0.05 to be statistically significant.

**Figure 4:** English AJT results for each sentence class.

As can be seen in Figure 4 above, the English survey results show five classes of sentences with statistically significant differences in their AJT scores. These classes and their p-values with respect to the next lowest-ranking class are as follows: SMs (p = 0.0222 compared to ExGs), ExGs
(p < 0.0001 compared to CDMs), CDMs (p < 0.0001 compared to NCDMs), NCDMs (p = 0.0001 compared to ExUs), and ExUs. Note that there was a statistically significant difference between both MDMs and RDMs when compared to ExUs (p = 0.0005 and p < 0.0001, respectively) but none between the classes of MDMs and RDMs themselves (p = 0.0533).

**FIGURE 5:** Spanish AJT results for each sentence class.

The Spanish results shown in Figure 5 reveal four classes, though not conclusively (most likely due to the low number of responses). For example, there is a significant difference between SMs and CDMs (p < 0.0001) but not between either with ExGs (p = 0.2038 with SMs and p = 0.0955 with CDMs). The same occurs with a significant difference between MDMs and ExUs (p = 0.0042) and not between either with RDMs (p = 0.0747 with MDMs and p = 0.0859 with ExUs). These results are summarized in Figure 6 and discussed in the paragraph below.

**FIGURE 6:** a. English significant differences.   b. Spanish significant differences.
In Figure 6 above, all of the significant differences between the various sentence classes are marked by a checkmark \( \checkmark \) with crosses \( \times \) representing no significant difference. With those for English on the left and those for Spanish on the right, one can see that the only two classes with no difference in English are RDMs and MDMs (which, together, form the superclass of NCDMs). In Spanish, though, there are four different groups: SMs and ExGs, ExGs and CDMs, MDMs and RDMs, and RDMs and ExUs.

4.2 AJT Scores and Sociolinguistic Data

The following four figures show the relationships between the AJT scores and sociolinguistic data. With two figures for each survey, Figures 7 and 9 show the relationships based on superclasses, i.e. ExGs, ExUs, SMs, and DMs, and Figures 8 and 10 show the relationships based on subclasses, i.e. CDMs, NCDMs, MDMs, and RDMs. Each one is explained in turn below, with the English data discussed in Section 4.2 I. and the Spanish data discussed in Section 4.2 II.

4.2 I. English Survey Correlations

As discussed above, Figures 7 and 8 below show the means and standard deviations of the AJT scores for the various sentence classes in the English survey.

**Figure 7**: English AJT results for each sentence superclass, by sociolinguistic data.
Starting with correlations between AJTs and sex, as seen in Figure 7 above, men rated DMs more acceptable than women ($p < 0.0001$), but there were no other significant differences between the AJT scores made by men and women with respect to these four sentence classes.

In age, acceptance of DMs varied greatly. Those aged 65+ rated them highest; next highest were those between the ages of 18-24 ($p < 0.0001$ compared to 65+) and 25-34 ($p = 0.0006$ compared to 65+); followed by 35-44 ($p < 0.0001$ compared to 18-24 and $p = 0.0002$ compared to 25-34); with the 45-54 age group rating them the lowest ($p = 0.0002$ compared to 35-44).

The various levels of education were not as conclusive: those who had completed some university education rated DMs higher than those with an undergraduate degree ($p = 0.0137$), but no statistical difference was found with respect to those holding a graduate degree ($p = 0.1775$ compared to those with some university background and $p = 0.3090$ compared to those with an undergraduate degree).

In light of DMs being common to SUSE, it is particularly interesting to consider the differences between the AJT scores of classified Southerners and non-Southerners. As seen in Figure 7, Southerners rated DMs as significantly more acceptable than non-Southerners ($p < 0.0001$), reflecting the idea that SUSE is the only dialect within the United States that has this feature.

**FIGURE 8:** English AJT results for each sentence subclass, by sociolinguistic data.
Keeping in mind that MDMs and RDMs are the two types of NCDMs, one can see the same patterns that were observed in Figure 7 reflected here in Figure 8. Men rated CDMs ($p = 0.0001$) and NCDMs ($p = 0.0002$) higher than women. This holds for MDMs ($p = 0.0002$), too, but not for RDMs ($p = 0.1918$).

The age group of 65+ rated all four as most acceptable, and those aged 45-54 rated them all as least acceptable compared to the other age groups, but other conclusions do not have as much confidence.

Interestingly, CDMs and MDMs were rated as equally acceptable to all participants in all three levels of education. The three groups only differed on RDMs where those who had completed some university education rated them more acceptable compared to those with undergraduate degrees ($p < 0.0001$) and graduate degrees ($p = 0.0001$), between who, though, there was no statistically significant difference ($p = 0.8633$).

With respect to Southernness, Southerners rated higher than non-Southerners both CDMs ($p = 0.0008$) and NCDMs ($p < 0.0001$). Similar to with men and women, this holds for MDMs ($p = 0.0002$), as well, but not for RDMs ($p = 0.1115$).

4.2 II. SPANISH SURVEY CORRELATIONS

Similar to with the previous section, Figures 9 and 10 below show the means and standard deviations of the AJT scores for the various sentence classes in the Spanish survey.
Due to the lower number of respondents in Spanish, the confidence intervals for the AJT scores, as shown in Figure 9, are much less conclusive. However, some conclusions can still be drawn from the data. With regards to both age and sex, there are no statistically significant differences in DM acceptance.

In education, there is a significant difference between those who had completed some university education, who rated DMs more acceptable, and those with a graduate degree ($p = 0.0201$). However, those with an undergraduate degree have no significant difference relative neither to those with some university education ($p = 0.4019$) nor to those holding a graduate degree ($p = 0.0517$).
With respect to the AJT scores from the Spanish survey given in response to subclasses of MS constructions as shown in Figure 10, one can, again, see only a few correlations. As with the sentence superclasses, there are no statistically significant differences neither in the category of age nor in the category of sex.

Looking at education, a few differences can be observed: those who held a graduate degree considered NCDMs less acceptable compared to those who had completed some university education \((p = 0.0270)\) and those with an undergraduate degree \((p = 0.0481)\), though there is no such difference between these two groups \((p = 0.5783)\). Interestingly, though, the acceptability of MDMs and RDMs are equal among all three groups (a possibly confusing finding which can be explained by Simpson’s Paradox).

5. Discussion

Below, I discuss the implications of the results presented in the previous section. First, I talk about the possible relationship between acceptability and grammaticality. Then, I discuss the implications of the results with respect to the grammaticality of various MS constructions surveyed before covering some implications of those relationships with regards to the structure of DMs.
5.1 ACCEPTABILITY AND GRAMMATICALITY

Before discussing the results presented in Section 4, it is necessary to clarify the important distinction between acceptability and grammaticality. Whereas the AJTs measure acceptability of certain constructions, they do not necessarily prove or disprove grammaticality (nor does the converse hold). Rather, AJTs, along with other data, help to support such a claim. For example, if a certain structure has equally as high acceptability as a clearly grammatical generic sentence, it is more than likely the case that the structure under investigation is grammatical as well. However, a problem arises whenever the acceptability is within the gray area between that of grammatical examples and ungrammatical examples. When this occurs, lower acceptability may be confounded with lower grammaticality though this, in fact, may be due to other factors, such as the lower frequency of usage of a certain structure or a stigma attached to said structure. For the purposes of this paper, while the conclusions drawn from the AJTs are not considered conclusive, in light of prior research showing natural MDM production and corpora data providing further examples, I consider the results to be more than convincing. Having made the reader aware of this possible confusion between the two concepts, the presented results will now be discussed in detail below.

5.2 GRAMMATICALITY OF MS CONSTRUCTIONS

The idea that SMs are on par (and unexpectedly higher), in terms of acceptability, with the ExG sentences reflects the idea that SM constructions are common in all dialects of English. The fact that these are followed by CDMs again confirms the assumption that DMs are only a dialectal feature, i.e. one should not expect them to have the same overall acceptability in a variety of speakers as one would with SMs. Furthermore, these being significantly more acceptable than the ExU sentences, while not proving it, provides evidence in favor of the idea that DMs are dialectically grammatical in English. This can be compared with the higher acceptability rating of CDMs in Spanish which are on par with SMs and ExGs. As DMs are a feature of the language in general, and not just dialectically so, these data show the acceptability (and likely the commonality) of such constructions.
The lack of statistical difference between MDMs and RDMs suggests that the two are either both grammatical or both ungrammatical. Considering the difference between CDM, MDM/RDM (which, together, are NCDMs), and ExU acceptability, however, it is not immediately clear whether or not one can conclude NCDMs to be grammatical. In both Spanish and English, their higher acceptability than the ExU sentences points to possible grammaticality. This, in addition to the presence of such NCDMs in both Spanish and English corpora, suggests that, while such orderings are considerably less common than CDMs, they are still grammatical and natural for native speakers to produce and understand.

With regards to the preference of ordering, the first position-modal of CDMs (i.e. *might*, *may*, and *must*) are among those that have the highest acceptability as overall first-position modals, supporting the claim made in Hasty (2011). However, this stands in contrast to the acceptability of the second-position modal, in which *may* and *could* had the highest AJT scores. This questions the idea that *may* should appear only in first position. A similar result comes from the Spanish data in which the canonical first-position modal *haber de* has high acceptability both as a first-position and as a second-position modal. Despite this, the Spanish data does greater express a difference for certain modals in first position (*deber de, haber de*, and *deber*) and certain ones in second position (*tener que* and *poder*). However, because of the low number of responses on the data, no conclusively significantly different classes have been found between the two.

5.3 DM Structure

Working under the idea that these NCDMs are grammatical, one can see that this, in a sense, stands in accord with the ambiguity of SMs. That is, knowing that a modal is able to take on two separate interpretations, these NCDMs account for the DMs in which the modals take on their less canonical interpretation. For example, the DM phrase *can might*, assuming that epistemic modality precedes root modality, could account for the case in which *can*, a typically root modal, takes on an epistemic meaning and *might*, a typically epistemic modal, takes on a root meaning. The implications of the presence of NCDMs on the syntactic structure of DMs are discussed in the following section.
6. Theoretical Implications

With the data presented here, there is evidence that stands against the classification of modals into two distinct structural classes. Rather, there appear to be at least two modal positions entirely distinct from the TP, leading to a reevaluation of the structure proposed in Hasty (2012). The proposed structure presented in Section 1 and repeated below in (18) additionally supposes that there are flavors of the higher epistemic modal phrase (MP-Epi) and of the lower root modal phrase (MP-Root), accounting for the possibility of multiple modals with epistemic/root interpretations in a given sentence. Furthermore, this restricts the ordering so that epistemic modals will always be above root modals as proposed in Cinque (2004).

(18) Proposed MS structure.

In the following pages, I reanalyze some of the previous examples to show how their structures may be accounted for by the structure in (18) above. Section 6.1 discusses the proposal with reference to SMs, Section 6.2 does so with reference to DMs, and Section 6.3 does so with reference to TMs, specifically focusing on the idea of flavors of modality. Section 6.4 describes the generative ability of the proposed structure, and Section 6.5 provides a summary of the proposal and its advantages.

6.1 Single Modal Structure

As discussed previously, given the right context, I propose that any modal can have either an epistemic or a root interpretation. Because of this, a single modal sentence often lends itself to both
structures: one in which the modal occupies a position above tense and one in which it occupies a position below tense.

(19) a. I might eat dinner (but I don’t know).
    b. I might eat dinner (if I were you).

Looking back at part of example (8) from Section 1, repeated here in two different contexts as (19a) and (19b), the most natural interpretation of the sentence is one which expresses epistemic possibility, as in (19a), a reading that is reflected in the tree of (20a). However, given the context of (19b), one can see that the sentence expresses a root obligation as shown in (20b).


The fact that root modals are preceded by epistemic modals shows an important property of these sentences. In theory, any root-interpretation single modal sentence can be made to have an additional epistemic sense by prepending a second modal. Likewise, any epistemic-interpretation single modal sentence can be made to have an additional root sense by appending a second modal. That is, without modifying the initial interpretation of the modal, any SM sentence can be made into a DM sentence (this will be discussed more in Section 6.2 below). Furthermore, in support of this proposal, since neither epistemic nor root modals occupy the tense-head, it should be possible for there to be epistemic-tense and tense-root orderings. Observe the SMs in (21a) and (22a) below.

(21) a. I might go tomorrow.
    b. I might will go tomorrow.  (adapted from Linguist List 1994)
(22)  a. I can go tomorrow.
   b. I will can go tomorrow. (adapted from Maxfield 1931, p. 19)

   In both (21a) and (22a), the sentences refer to (in their most natural interpretations) the possibility of going and the speaker’s ability (or volition) to go, respectively. In (21b) and (22b), however, one can simply add the tense auxiliary will post-epistemic or pre-root in order to have an SM sentence with explicit tense. This property of SM sentences is reflected by their presence in the literature (see the above citations) and corpora (Davies 2008-). Furthermore, the concept of tense-modal independence (and, specifically, tense-root independence in the context of the proposal made in Hasty (2012)) affirms the idea that one can be added without occupying the head of the other. Lastly, rather than necessarily being classified as MS, the proposed structure accounts for SMs that have explicit tense auxiliaries. Note, however, that this is not to say the epistemic or root will cannot appear in DMs (for it often does) but simply that SMs are compatible with a tense auxiliary will, too.

6.2 Double Modal Structure

   While this structure and the idea of syntactic configuration of modal interpretation (as opposed to lexical encoding) reflects the ambiguity of SMs, it is not yet entirely clear why I here consider MP-Root to be independent from and lower than TP. The primary motivations for this separation are the research presented in Cinque (2004) and certain TMs. For example, take the TM (14) reproduced below as (23).

(23)  I might will can go tomorrow. (Linguist List 1994)

   Depraetere & Reed (2006) cite specific instances in which will takes on a modal interpretation, yet it appears that the more natural reading here is to take all three of these in their most canonical interpretations, i.e. might as epistemic, will as marking for tense, and can as root. In this way, one can see that the epistemic-tense-root hierarchy is maintained without having to worry about the complications of more than two modal positions. However, in the case of some TMs like (15), reproduced here as (24), three modals that clearly do not mark for tense appear in conjunction.
6.3 Flavors of Modality

Some researchers have proposed for other functional projections (namely little $v$) that there may be different flavors of the same projection in order to account for differences in very similar underlying syntactic structures (Arad 1999, McGinnis 2000, van Gelderen 2014). Understanding that both little $v$ and modality are functional projections, I consider the concept of flavors of modality, an idea explored similarly in the context of modality in Anand & Brasoveanu (2010), Kush (2011), and Bochnak & Martinović (2018). Such a consideration allows the structure to account for sentences such as that in (24) in which there are not simply two positions for MP-Epi and MP-Root but rather that there can be multiple MP-Epi and MP-Root in a given utterance. For example, consider (25) below.

(25) The package should might arrive by the end of the day today.

In this example, might is most naturally considered epistemic. Were it root, it would carry the strange interpretation that the speaker is placing some sense of obligation on the package to arrive by the end of the day. Should might take on its canonical epistemic interpretation, this would lead should to be retroactively considered epistemic as well in order to keep with the hierarchical ordering of epistemic-root modality. This interpretation poses no problems, as the epistemic interpretation of should simply states the speaker’s expectation of the likelihood of the package’s arrival. Loosely, that is, the should might DM phrase expresses medium-high value of certainty (if one is considering hedging, this would likely be a way of politely expressing near certainty of the package’s arrival).

This same reasoning appears to be the most likely case for (24) above, in which the combination of two epistemic modals, may might, hedges the certainty of the statement in the original employee-customer context from which this sentence is taken while still expressing the root sense of the modal can. The proposed structure for both of these sentences can be seen in (26) below.
In (26a), both *should* and *might* operate (under their most natural interpretations) as epistemic modals and, thus, both occupy the head of a flavor of M-Epi. Their position above TP reflects the idea that epistemicity precedes tense marking, and the *should might* combination reflects an attitude of near certainty towards a possible event. That is, this sentence can be rephrased to “I expect that the package will possibly arrive today”, with possibly reflecting chance, not ability of actualization. In (26b), *must* and *may*, similarly, both undertake epistemic modal interpretations and occupy heads of two flavors of M-Epi above TP. The modal *can*, on the other hand, operates as a root modal, occupying the head of a flavor of M-Root. Under this interpretation, the sentence may be rephrased as “You maybe have a chance of being able to get one”.

In seeing the presence of TMs, it is a natural question to wonder about quadruple, quintuple, etc. modals in English. Due to the concept of flavors of modality discussed above, it is proposed possible for such MS constructions to be used. However, there have been no such observed cases that I know of (other than the acceptably-rated quadruple modal presented in Herndobler & Sledd (1976)) in the literature or existing corpora data. Considering the Mandarin example (3) from Section 1.1, though, the observed actuality of such MSs in other languages further leads one to at least be open to the possibility of their presence in English. However, in following with a conclusion in Blake (2017), their low frequency, in English or other languages, may very well be due to limitations in processing.
6.4 Over-Generation

Regardless of whether or not the heads of the syntactic positions are occupied, the proposed structure remains the same. This allows for the insertion of modals with epistemic or with root interpretations into a sentence with one and not the other and, furthermore, the insertion of a tense auxiliary (such as will) into those sentences where one is absent. Building on the examples shown in Section 6.1, both of these processes are shown in (27) below through modification to the TM found in Linguist List (1994).

(27) a. I go tomorrow.
   b. I might go tomorrow.
   c. I can go tomorrow.
   d. I will go tomorrow.
   e. I might can go tomorrow. (adapted from Kilpatrick & Barker 2006, p. 28)
   f. I might will go tomorrow. (Linguist List 1994)
   g. I will can go tomorrow. (adapted from Maxfield 1931, p. 19)
   h. I might will can go tomorrow. (Linguist List 1994)

The simple sentence in (27a) does not contain an epistemic modal, a root modal, or a tense auxiliary. However, because the underlying structure is maintained, each can be added in as SMs, as in (27b), (27c), and (27d); as DMs (according to the epistemic-tense-root order), as in (27e), (27f), and (27g); or as TMs, as in the original sentence in (27h). Note that, according to the proposed structure and the multiple interpretability of modals, it very well may be possible for the ordering to be can will might given the right context, but, for the purposes of the example, these three modals were selected with epistemic, tense, and root interpretations (typically a natural interpretation for each) to demonstrate this property with the TM provided. It is also important to note that, in considering will as a tense auxiliary, it is not a modal, and, thus, (27d) is not an SM, (27f) and (27g) are not DMs, and (28h) is not a TM in the technical sense, though the same processes of prepending modals and appending modals can be followed in order to arrive at a
TM (or higher) sentence with multiple epistemic or root modals, respectively (with or without an intervening tense auxiliary).

Before altogether leaving this discussion of tense’s syntactic position, though, it is important to consider the work of Sarkar (1998) in reference to modality and the future tense. In Sarkar (1998), the two primary theoretical standpoints on modality versus futurity are discussed. The first is that tense is purely epistemic; that is, what has been considered here to be a tense auxiliary will would be considered epistemic instead (though the other epistemic and root interpretations of will still remain). The second model proposes that the two co-exist and that will is ambiguous. Sarkar (1998) concludes the article by proposing a third, stating that “semantics for will must account for a simultaneous contribution from the modal as well as the tense system”, a model that remains distinct from the concept of an ambiguous will (Sarkar 1998, p. 115). While the work presented here does not argue in favor of any one of these theoretical models, the syntactic structure still stands in all three. In the case of a purely epistemic will, what has here been considered a tense auxiliary will would, then, occupy the head of a flavor of M-Epi and remain between M-Epi and M-Root as proposed. In the case of ambiguity or simultaneous contribution, the same holds. If will were to occupy the head of TP, it would remain between epistemic and root modals in accordance with the hierarchy in Cinque (2004); otherwise it would be epistemic and, as already described, would still follow all necessary conditions on epistemic-tense-root orderings.

Knowing this property of MS generation, once can see that though this structure is able to account for all MS constructions attested in the literature and corpora, it is also true that it over-generates. That is, the existence of multiple epistemic positions and multiple root positions accounts for certain structures that are rarely (if ever) observed in natural speech. Observe examples (28a) and (28b) below.

(28) a. I may must might will can go tomorrow.

b. I can will might go tomorrow.

The ordering “may must might will can” in (28a) is theoretically possible according to this structure but attested nowhere in the literature or corpora data. Furthermore, even a small DM
phrase with an intervening tense auxiliary such as “can will might” in (28b) is theoretically possible with can undertaking an epistemic interpretation and might a root one, but one would be hard-pressed to find a natural example of it, largely in fact due to the rare usage of each modal in these interpretations (can is typically read as root, and might is typically read as epistemic). In this sense, the proposed structure accounts for MSs that, while theoretically possible, are less than likely to ever be realized.

6.5 SUMMARY OF PROPOSED STRUCTURE

As detailed above, I propose a new structure in which there are different flavors of M-Epi and M-Root above and below TP, respectively. This requires a strict hierarchical ordering of epistemic-tense-root but also allows for any two modals to appear in conjunction with one other, given that both modals can have both epistemic and root interpretations as we have seen. Though the structure over-generates, the proposal nevertheless accounts for those advantages already discussed, namely being able to reflect the multiple interpretability of modals, the existence and acceptability of NCDMs, the existence of TMs (and possibly MSs with more modals), and modal interpretation based on syntactic configuration rather than lexical information.

7. Conclusion

The data reveal that certain NCDMs (if not all) are at least as acceptable as CDMs. This fact reveals that the DM constructions often considered in reference to SUSE are but a subset of those that are acceptable to English speakers (if not natural and spontaneous). Given the right context, it appears as if any DM combination would be deemed acceptable to many SUSE speakers.

In light of the results of the AJT surveys, it is convincing that there are not two distinct lexical classes of modality but, rather, that there are two distinct syntactic positions, both independent of tense, on which modality operates, one epistemic and one root. This accounts for the observation of tense-middle TM constructions (if they can be considered triple modals) as well as those which contain multiple modals which take on the same modal role (epistemic or root) in a sentence.
Furthermore, the two resulting structures of an ambiguous SM sentence better reflect the promiscuity of a modal with respect to epistemic and root interpretations.

With this in mind, the evidence appears to point towards syntactically configured interpretations. Rather than a verb’s modality being encoded on the lexical level - an idea which conflicts with SM sentence ambiguities except in the unlikely case that there are multiple lexical entries - its syntactic position within an utterance assigns it the epistemic or root role it undertakes. However, these results are not without their limitations. The following subsection discusses some of the limitations of this research (particularly with respect to the AJTs) and is followed by a closing remark on future research prospects on MS in Spanish and English.

7.1 LIMITATIONS

The first, and possibly most important distinction when considering the results of AJTs is the idea of acceptability versus grammaticality. All of the results shown and analyzed in this data represent acceptability of given utterances. However, high acceptability (or higher acceptability than baseline ungrammatical sentences) does not necessarily correlate with grammaticality nor does it hold that the inverse of lower acceptability implying ungrammaticality is necessarily true. Rather, these reveal that the given utterance lays somewhere in a gray area in between the two. Pairing this with other data - for example, revealing natural utterances that stand in accord with or against the ones under investigation - can support the claim of grammaticality or ungrammaticality, but, often times, this stands as a result of the seemingly best conclusion given the data collected.

The data presented in this paper do not, by any means, conclusively prove the grammaticality of NCDMs. However, I would say the results point, convincingly at the very least, towards this conclusion. Whereas corpora data reveal such natural utterances and the acceptability of NCDMs are significantly higher than those for baseline ungrammaticality, they are, too, significantly lower than CDMs. One possible explanation is the already stigmatized nature of DMs especially when considering it as a feature of SUSE. Furthermore, corpora data clearly reveals that certain DM combinations are more common than others, possibly resulting in a higher acceptability of the more familiar (CDMs) over the more uncommon (NCDMs).
A secondary limitation to the work presented here is the quantity of responses to each AJT. The English survey had 33 participants and the Spanish had 10. While it is still believed that the results presented here are representative of the larger English-speaking and Spanish-speaking populations, these low numbers limit the confidence with which the claims made above can be asserted.

7.2 Future Work

As mentioned in the previous subsection, it is clear that certain DM constructions are more common than others. Assuming that all combinations are grammatically possible and a result of syntactic configuration (i.e. modals should be able to freely combine), it would be a worthwhile question to consider what would be the underlying reason for this. It is possible that there exists a hierarchy within the flavors of epistemic and root modality that favors specific epistemic-epistemic or root-root modal combinations, as may be suggested by already existing hierarchies on the value (Suhadi 2017) or degree (Song 2009) of modality in certain contexts.

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APPENDICES

Appendix A: English Survey Sentences

Example Grammatical:

1. Sometimes I wonder what my dog’s thinking. He just gives me the funniest of looks.
2. I went to mow the lawn earlier today, but it seems our shed’s been robbed! There’s barely anything left.

Example Ungrammatical:

3. I cooked the slowly food in the oven so it wouldn’t burn. But it out turned all charred anyways.
4. We’re out of almost food for the week. It’s probably because I not did go to the store over the weekend.

Single Modal:

5. My schedule just freed up. Now I can head into work tomorrow and earn a little more money.
6. No, it’s no problem at all. I can make time for us to meet up this afternoon if you think it’ll help.
7. Yes, I see him struggling with his work. Sure, I could offer some help right now, but I just don’t want to.
8. She offered me to come with her to the concert. Hmm… I could cancel my other plans and go with her.
9. I just finished drafting the letter. I would revise it again before I send it off, but I just don’t have time.
10. She’s in a real tough spot, there. That being said, I would forget what she said to you - you know it was in jest.
11. There’s a note on the fridge that says we’re out of food. I should grab some groceries after work today, but I was hoping to just come home and crash.
12. This is her field of expertise. Maybe I should request her help on the project.
13. We say it was accident, no one will know. We must hide the evidence first, though.
14. It’s going to be a hard process. I must relinquish control first, is what I’ve been told, so I’m trying to step back, let things happen.
15. I still haven’t decided just yet. I may attend the party this evening if I’m feeling up to it.
16. They haven’t been doing too hot over the past few years. They may declare bankruptcy this quarter if they don’t make some big changes.
17. I can’t believe how my manager handled the issue! I might announce my resignation soon depending on how things go from here.
18. I went in to participate, and the first thing they did was make me sign a contract. They might record me during the interview, it said - no way I was doing that!

Canonical Double Modal:

19. The previous manager that was hired was completely incompetent! This new one must can direct us towards greater success, at the very least.
20. The problem is actually quite trivial. He must could complete it on time, given his intelligence.
21. She’s not blind - it’s a terrible offer. She must would reject the position without any hesitation if the hiring manager presents her with it.
22. There’s no way they’re making money off of this deal! They must should terminate this contract by the end of the month.
23. It all boils down to one thing. If they may can fulfill their role during their time here, we choose then; else, we move on to the next applicant.
24. I don’t know that I can recommend him for the job. He may could do the work well this time, or so it seems, but then again, maybe not.
25. Be on the watch for them. They may would tell a lie if they knew they could get something out of it.
26. We’ve only been together a week. I may should buy a gift for her this Christmas, but I don’t know what she likes.
27. Maybe we underestimated him. He might can win the gold today and surprise us all.
28. I’m not particularly hungry right now. But I might could eat dessert if you were willing to buy it for me.

29. Try not to let your pride get in the way. I might would say sorry for everything that’s happened sooner rather than later if I were in your place.

30. Don’t be lazy. You might should write a response letter before they start to look elsewhere.

**Misordered Double Modal:**

31. Your son is just trying to appease you. He can could submit his applications for the universities, sure, but it won’t be because he wants to.

32. The peace accords are getting nowhere. The countries can would establish a lasting ceasefire with ease, they’re just not giving it a chance.

33. Of course she recognizes where the issue lies. She can should resolve the disagreement soon, but she’s not giving herself time to think about it.

34. This is just a game to them! They absolutely can must implement the laws before the new year, but they’re busy playing their personal politics.

35. I’ve got nowhere left to go. My parents can may let me stay with them for a while, but they need me to clean up my act before then, they said.

36. Make sure to keep an eye on the thermometer. The chemicals can might experience a reaction with the air around them if they get too hot.

37. Try to start making preparations. However, we could can change them to fit our own needs if we get the go ahead.

38. He hasn’t taken the time to consider all the options. He could would realize the obvious best course of action for him if he did - just give up.

39. I have no clue what he’s planning. He could should submit the working draft by the end of the week depending on his boss’s expectations.

40. I’m not sure on the exact regulations. We could must make immediate notice once it happens, or maybe we simply need proper documentation.
41. They’ve been all on us for following the proper codes. They could may oversee construction themselves once the project begins, who knows.

42. All we can do right now is wait. A solution could might present itself in the future for all we know.

43. We’re suffocating them. They would can show their true potential to us if we just gave them space.

44. There’s no point in worrying about the past anymore. We would could do this or that now if everything had worked out, but no, there’s no point.

45. They’re seeing if the readers think the script is a flop. They would should consider revisions before starting to film if that turns out to be the case.

46. Now it’s just a waiting game. We would must make huge organizational changes throughout the next few months if the law passes, so there’s no point in doing anything just yet.

47. Come on, he’s your brother. He would may expect an invitation from you given it’s his favorite team.

48. She said she’ll always stand by me. But she would might say something different this time if she finds out it was her car I wrecked and not mine.

49. Right now, the paper looks like nothing but blur. But I should can read the paper from this distance perfectly fine given my age.

50. The corporations are just robbing them blind. Those families should could take much greater contracts right now.

51. It’s way too late to be doing this. But I should would wander the grounds a little while longer if I really want to help him find his wallet.

52. It’s unsafe to employ a lunatic for private security. They should must require a background check before hiring.

53. I told them this was going to happen. They should may increase their security protocol soon to avoid another breach like this.
54. The highway’s packed with traffic right now. Considering the options, they should might take the detour within the next five miles to avoid it.

55. We don’t know what’s coming, but we’ve got to prepare just in case. An early frost must may hit the fields this fall, or so it seems the weather is telling us.

56. They’re just a bunch of troublemakers. They must might pull a trick their last day here, knowing their history.

57. I don’t know what they’re looking for. I may must include a cover letter with the application, but they don’t have any specific details.

58. I told you I don’t like horror movies. I’m just saying - I may might cover my eyes for a while if I get too scared.

59. I just don’t remember the last meeting. I might must write a new draft of the column before Thursday, so better safe than sorry.

60. You know, I was talking with her last week. She might may make an appearance at the upcoming battle of the bands.

Repeated Double Modal:

61. The classroom’s holding them back! But we will see they can can accomplish so much more on their own if we teach them at home.

62. No, I’m telling you you’re wrong! I can can run a mile in five minutes, just you watch.

63. Thank goodness for bureaucracy. Organizational reforms could could cause debilitating changes in our company if there weren’t so many forms to fill.

64. Yes, yes, the letter is almost done! I could could wrap it up tonight if I weren’t flying out, but I’ll make sure it’s done tomorrow.

65. Well, sure, that’s a completely different story. I would would take a step back to think things through if she told me that.

66. It’s hard to watch him struggle. I would would give up the matter entirely if I were him, but he’s got more mettle than me, what can I say?
67. I wish I could blame my regrets on things I couldn’t control. I should do the right thing every time, I know, but my own selfishness always wins out.

68. On the one hand, I’m with him. But on the other, he really should rethink things a little more - it’s been his whole life.

69. The department’s been receiving a lot of backlash over the past few days. If they want to save face, they must make a public statement soon.

70. I don’t care what my classmate is telling me. We must turn in the assignment before exams end, or it just doesn’t make sense.

71. You’ve seen the news the past few months! They may reconsider their course of action given the political consequences they’ve already seen.

72. I can feel it in the way the wind’s blowing. The storm may make its way towards us tonight, so we’d better hunker down.

73. It’s tough competition. But I might submit the application anyways, at the very least.

74. Just cut me some slack! Look, I might clean the place tonight, but only if I’m feeling up to it - that’s not a promise.
Appendix B: Spanish Survey Sentences

Example Grammatical:
1. Aprendí a cocinar cuando era muy joven. Entonces, ahora solo como la comida que hago yo.
2. Mi perro no se mueve durante el día. Sin embargo, le encanta despertarme en medio de la noche para que juegue con él.

Example Ungrammatical:
3. Mi sueño es viajar para el mundo. Yo está ahorrando ahora y espero empezar mi aventura el año que viene.
4. Las verduras que se venda en el supermercado siempre son podridos. Quiero que son maduras y frescas o no las voy a comer.

Single Modal:
5. Las clases comienzan la semana que viene, pero mi hermano no ha hecho todo lo necesario. Todavía tiene que pagar la matrícula antes de que empiecen.
6. No le queda nada en la nevera. Ahora, tiene que comprar comida, pero no quiere moverse del asiento.
7. Él es muy inteligente, pero nunca tiene fe en si mismo. Puede aprobar el examen hoy, pero, como siempre, cree que lo va a reprobar.
8. La compañía estableció una sede nueva en Dallas. Puede resultar ser una buena decisión según sus inversionistas, pero no lo sabrá hasta el fin del año.
9. Ahora, es joven, tiene tiempo y tiene la energía de viajar, de conocer el mundo. Él ha de visitar otro país antes de que se gradúe.
10. Todos estos concursos ofrecen los mismos premios. Déjame adivinar; ha de ser un coche lo que le van a dar al ganador.
11. Mañana es el día de plazo del proyecto. Debo hacer la mayoría del trabajo esta noche, pero sé que no voy a poder empezar.
12. Parece que todo en el jardín está muriendo. Debo contratar a una persona para cuidar las plantas cuando voy de vacaciones, pero no tengo suficiente dinero.

13. El río se está volviendo marrón. Debe de ser la fábrica lo que está contaminando el agua.

14. La clase requiere que los estudiantes investiguen la historia del occidente. La biblioteca debe de tener por lo menos un libro sobre China, pero no puedo encontrar ni uno.

**Canonical Double Modal:**

15. Lo único que puede hacer es esperar. Ya lo sabe; el comité ha de tener que aceptar su propuesta esta vez - hizo todas las revisiones y aun añadió a los resultados.

16. No, no lo puedo creer; él sí puede manejar. Él ha de poder manejar el carro durante el viaje; sí tiene licencia pero prefiere dormir en lugar de manejar.

17. Él está tomando muy malas decisiones. Él ha de deber cambiar su modo de vida si no quiere terminar en la cárcel.

18. Su editor le ha estado regañando por no entregar los borradores. El autor debe de tener que entregarlo a tiempo esta vez si no quiere perder el trabajo.

19. El estado de las calles en nuestro país es horrible. El gobierno debe de poder mejorar la infraestructura con el dinero que recauda con los impuestos.

20. Ese país está haciendo amenazas por nuestra presencia militar. Nuestro gobierno debe de haber de trasladar al ejército a otra región si quiere evitar una guerra.

**Misordered Double Modal:**

21. La profesora no se la habría asignado si no creyera que él la completaría. Él tiene que poder terminar la tarea antes del día de plazo; tengo fe en su discernimiento.

22. La compañía siempre cambia sus regulaciones. Un empleado tiene que haber de chequear su correo electrónico cada cinco minutos para que sepa que no está violando ninguna regla nueva.

23. Mi primo no es el mejor estudiante. No obstante, él tiene que deber terminar su tarea antes del día de plazo porque su madre requiere que la haga.
24. Ahora hay una raja en su parabrisas. Ella tiene que deber de comprar uno nuevo si quiere manejar sin peligro.

25. Él no leyó el contrato. La compañía puede tener que acabar la construcción antes de fin de mes aunque sería antes de la fecha determinada, pero él tampoco sabe las condiciones.

26. Para mi amiga, siempre es difícil obtener la autorización para sus vacaciones. Típicamente, ella puede haber de firmar muchos documentos oficiales para la aprobación, pero creo que el proceso ya está cambiando.

27. Mi hermana trabaja en el servicio de atención al cliente. Ella puede deber tener paciencia con sus clientes, pero se ha enojado antes y a su jefe no le importó.

28. Los osos polares están en peligro de extinción. El mundo puede deber de reconocer este problema antes de que sea demasiado tarde, pero nadie quiere hablar del calentamiento global.

29. El examen de manejar no prepara bien a los hijos para la carretera. Debe tener que manejar el carro allí durante su examen para aprobar.

30. Ella se graduó con un título en español el año pasado. Entonces, ella debe poder hablar español con facilidad pero suena tan gringa como otro cualquiera.

31. Parece que ganan una pensión grande por hacer nada. Un empleado debe haber de hacer algo para ganarla, pero la compañía los deja gandulear sin tener que hacer ningún trabajo.

32. El banco no está ganando nada de sus préstamos. La tasa de interés debe deber de ser más alta en el futuro si quiere esperar una ganancia.

33. El fin de año está muy cerca. Él ha de deber de terminar todo su trabajo antes de ese día si quiere ganar el título de mejor empleado.

34. Mi amiga está en el borde de perder la clase. Ella debe de deber estudiar todas las tareas y pruebas anteriores si quiere aprobar el examen final.

Repeated Double Modal:

35. No tiene sentido que la organización no requiera que ella entregue su currículum ni que la entrevisten. No, ella tiene que tener que hacer uno de los dos por lo menos.
36. Le entregué a la compañía mi portátil roto hace un mes. Los técnicos tienen que tener que arreglar mi portátil antes del fin de mes pero no he oído nada.

37. Le traje una copia de la inscripción porque él tiene un título en criptografía. Por supuesto, él puede poder descifrar la cifra en menos de una hora pero ni le dará un vistazo.

38. Yo creo que deben informar de la situación. El periódico puede poder publicar la columna que escribí ayer sobre el evento, pero nadie la considera tan importante.

39. No sé él qué está pensando, pero sé que sabe la respuesta de mi problema. Él ha de haber de decir el mejor curso de acción antes de que la situación evolucione, pero tiene esa sonrisa pícara como si no quisiera decirme nada.

40. Lo que mi hermano menor va a estudiar todavía es un misterio. Sin embargo, él ha de haber de decidir su especialización este año porque ya está por graduarse.

41. Mi amigo no tiene buena solvencia. Por eso, el banco debe deber rechazar su solicitud de préstamo, pero ese banco es conocido por tomar malas decisiones.

42. Mi hermano tiene solo treinta años pero ya está recibiendo su pensión del gobierno. Él debe deber tener un trabajo a su edad, pero ahora, no tiene que preocuparse.

43. No sé por qué decidió quedarse en casa hoy. Ella debe de deber de entrar por la puerta de su oficina hoy, por lo menos, para que sepan que todavía le importa su trabajo.

44. Ella es asombrosamente inteligente. Sin embargo, ella debe de deber de tomar las pruebas estándares si quiere estudiar en la universidad, pero parece que no tiene motivación.