Lexical variation in Philippine English:
The case of deontic MUST and HAVE TO[1]

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This paper investigates the synchronic nature of lexical variation in the deontic modality system of Philippine English (PhE). Focusing on MUST and HAVE TO, grammatical and frequency analyses of spoken and written texts in PhE support the claim that modal auxiliaries are experiencing a decline in usage due to the rise of their corresponding quasi-modal forms (see Collins et al., 2014; Enriquez, 2012). Statistical analysis of internal (grammatical) and external (discourse-related) factors, however, suggests that the latter also significantly affects the variation in forms. Subsequently, two external, contact-induced influences were predicted to affect the variation phenomenon: the semantic mapping of Filipino overt politeness marking on English past-tense modals, and the lack of an intermediate semantic equivalent of HAVE TO in Filipino. Theoretical analysis of these factors suggests that the modality system of Filipino may be influencing the decline in usage of MUST and increase in viability of HAVE TO in expressing deontic meaning in PhE.

Key words: Philippine English, World Englishes, modality, deontic modality, language variation and change

Introduction

As a grammatical category, modality is closely related to tense and aspect and usually realized in the verb complex (Enriquez, 2012). The grammaticality of items that express modality can be determined by the degree to which they have syntactic restrictions, or the extent to which they can be classified as a group of closed items (Palmer, 2001). Modality, however, is not only a feature of grammar, but also a discursive and sociolinguistic phenomenon: how speakers express their beliefs, opinions, attitudes, and even sense of authority or obligation may vary and/or change according to the context of discourse or social interaction wherein they participate. Based on these ideas, this paper explores a relatively undocumented account of deontic modality in Philippine English (henceforth PhE) that involves a seemingly competitive semantic and/or pragmatic relationship between MUST, a central modal, and HAVE TO, a quasi-modal. Central modals are traditionally viewed as having verbal or auxiliary functions in grammar (henceforth modal auxiliaries), while quasi-modals are periphrastics characterized by to-infinitive structures – complex lexical units that are currently subject to increasing grammaticalization,

i.e. the continual movement towards structure (Hopper, 1987; Krug, 2000; Westney, 1995). By drawing from existing corpus data and adopting a synchronic, quantitative analysis grounded in grammatical theory, this paper hopes to provide a broad-based theoretical-analytical approach with which the literature on PhE modality can be further developed.

1. Deontic modality: an overview

Much debate over the past few decades has revolved around establishing what constitutes the modality system. Nuyts (2006) traditionally categorized modal elements into three semantic dimensions: *dynamic, deontic,* and *epistemic.* Other scholars (e.g. Hoffman, 1976; Lyons, 1977; Coates, 1983; Coates & Leech, 1980; Depraetere & Reed, 2006; Depraetere & Verhulst, 2008; Tagliamonte & Smith, 2006) preferred collapsing various types of deontic and dynamic modality

into one major category, i.e. *nonepistemic* or root (oftentimes loosely referred to as 'deontic') modality. While these terminologies are crucial as to how modality is fundamentally conceptualized, their theoretical nuances are beyond the scope of this paper.

What is probably more important than the epistemic-deontic distinction is the orientation of modal meaning, i.e. how modal meaning is positioned semantically and/or pragmatically with respect to the source of modality. One way of looking at how modality is projected or positioned through text is through *pragmatic inferencing* (Papafragou, 1998), which involves the classification of modal meaning in terms of the semantic and/or (mainly) pragmatic orientation of the meaning's source. Prototypical orientations of epistemic modality are **subjective**, or what Nuyts (2001) referred to as *speaker-oriented*, wherein the modal element reflects the thoughts, opinion or desire of the speaker of the utterance, as seen in the following example from the Philippine component **(ICE-PHI)** of the International Corpus of English (2009):

(1) A: John's a banker

B: Argh what a boring job

A: He <u>must</u> be he <u>must</u> be a boring person
[S1A-077#63-66:1]

In 1, the subjective nature of epistemic modal MUST is clearly evident: Speaker A agrees with Speaker B's general view that banking jobs are boring by using *must* in the affirmative to orient or express his personal opinion that because John is a banker, he is a boring person.

Meanwhile, cases of deontic modality tend to express obligation or necessity, which may be classified as **objective**, i.e. *agent/participant-oriented*, or subjective. Objective interpretations arise when authority stems from a source beyond the speaker's control or dominion (Westney, 1995; Tagliamonte & Smith, 2006). Subjective ones, however, arise when the speaker acts as the *enabling condition*, which positions them to give directives, admonitions and imperatives, make prohibitions and optatives, or grant permission to

someone (de Haan, 2006) – in other words, when authority is self-imposed or exercised on others (Coates, 1983). This is illustrated with an example from Larkin (1976):

(2) a. My girl must be home by ten.

b. My girl has to be home by ten.

(cited in Westney, 1995, p. 3)

2a–b connote a sense of authority which obliges the participant to carry out the action, although the source of this authority may differ between them: the use of MUST in 2a, allows the speaker to identify with the prohibition, which implies speaker authority (Westney, 1995); the use of HAVE TO in 2b, however, suggests a sense of authority coming from an external circumstance or situation. In a way, MUST and HAVE TO in 2a–b demonstrate different degrees of deontic necessity (or obligation) with dissimilar subjective orientations. Larkin (1976) exemplifies this notion by claiming that the speaker in 2a, which contains MUST, identifies himself in some way with the source of the compulsion, which may not necessarily be expressed by HAVE TO in 2b, where the speaker is likely to adopt a neutral stance towards the proposal.

With regard to the occurrence and usage patterns of modal auxiliaries and quasi-modals, 2a–b exemplify the predominant view among TMA and modality scholars and reference grammarians that traditionally, modal auxiliaries are inherently subjective, and quasi-modals objective. But in a corpus-based study of *nonepistemic* (including root/deontic) cases of MUST and HAVE TO in British English, Depraetere and Verhulst (2008) showed that there is no strict correlation between the modals forms and their pragmatic orientations. By looking at whether the source of modal meaning is discourse-internal or discourse-external (as opposed to whether the modal is inherently subjective or objective in meaning), they argued that modal auxiliaries and quasi-modals such as MUST and HAVE TO could be used interchangeably to express either objective or subjective contexts. It will be clear from the

analysis of deontic MUST and HAVE TO using data from ICE-PHI that the interchangeability of and variation in deontic forms is also observed in PhE, albeit to a different degree.

In summary, modal forms like MUST and HAVE TO that have the potential to convey deontic meaning carry either a subjective or objective position (henceforth **pragmatic orientation**). More importantly, modality in general, as a system, is inherently tied to contextual and conventionalized inferences and even on the negotiation of ongoing discourse (Westney, 1995), and so should ideally be identified through extensive pragmatic inferencing.

2. Deontic modality in PhE

PhE is a thriving variety of English that is currently experiencing nativization processes and potentially transitioning into a phase of endonormative stabilization (Borlongan, 2011). This is evident from the increasing standardization of its grammatical features, which include contact-induced morphosyntactic influences in the tense, mood, and aspect (TMA) system; use of modals; word order; incongruences between pronouns and their antecedents, and in subject-predicate relations; and intransitivization of transitive verbs (Bautista, 2000; Enriquez, 2012; Gonzalez, 1985; Gonzalez & Alberca, 1978). The apparent 'markedness' of PhE in relation to the predominant American and British varieties of English (henceforth **AmE** and **BrE**) thus warrants a more in-depth investigation of its grammatical features, which includes the domain of linguistic modality.

Perhaps the most relevant contributions to the literature on the modality system of PhE are studies on the TMA system of PhE grammar (Bautista, 2000, 2004a, 2009), language-contact perspectives on TMA and modality (Enriquez, 2012), as well as genre- and corpus-based studies on modality, e.g. Gustilo's (2011) synchronic analysis of modal auxiliaries in Philippine newspapers, Collins (2009) and Collins, Borlongan & Yao's (2014) diachronic analyses of PhE modals and quasi-modals. In their comparative analysis of

modals and quasi-modals, Collins et al. (2014) observed that:

> "(i)n general, [Philippine English] does not closely follow either British English or American English, with distinctive patterns identified both at the macro level of the overall rates of change for the modals and quasi-modals considered as two sets, and at the micro level of frequency changes of the individual items…" (p. 1)

The modal pair MUST and HAVE TO best exemplifies PhE's apparent divergence from the predominant English varieties. Situating the variation phenomenon within the paradigm of World Englishes, Collins et al. (2014) observed that MUST is experiencing a more substantial loss of epistemic meaning and gain in deontic meaning amid a 50% increase in the use of HAVE TO in its objective deontic sense, suggesting increased grammaticalization of modal auxiliaries and semantic overlap with quasi-modals. Enriquez (2012) also observed a similar trend and ultimately ascribed the phenomenon to contact-induced influences on morphosyntax. She claimed that HAVE TO, which has a general affinity for objective (i.e. weaker) deontic meaning, also tends to convey subjective (i.e. stronger) deontic meaning, albeit with less illocutionary force.

Indeed, the case for variability involving the two deontic forms is empirically strong, and this is due to several reasons: first, modal auxiliaries are generally susceptible to diachronic change, and the overall frequency of usage of their corresponding quasi-modals is viable enough for formulating significant generalizations (Collins et al., 2014). Second, MUST and HAVE TO appear to have a close-knit paradigmatic relationship in terms of semantic relatedness (Collins, 2009) and pragmatic orientation, as seen in 2a–b. Third, quasi-modals have the ability to fulfill suppletive syntactic roles for modal auxiliaries. For instance, in example 3b, HAVE TO is used instead of MUST in light of past tense marking of obligation (in relation to an already completive event).

(3) a. He <u>must / has to</u> attend a meeting (today).
   b. He *<u>musted / had to</u> attend a meeting (yesterday).

Generally, the current literature on MUST and HAVE TO details and underscores the notion of *competition* between two closely related modal forms for the expression of deontic meaning, where one is experiencing increased frequency of usage at the expense of the other (Bybee, Perkins & Pagliuca, 1994; Leech, 2003; Krug, 2000). This notion, however, runs the risk of overgeneralizing usage patterns of the deontic forms, both within the level of grammar and of discourse. Hence, it is from here that I embark on a more in-depth analysis of this multifaceted linguistic development. I do this by problematizing the notion of related competing forms, and analyzing the variation phenomenon in terms of the semantic, pragmatic, lexicogrammatical, as well as discourse-related features of the modal forms. This paper therefore aims to answer two main research questions:

1. *What are the internal (grammatical) factors that contribute to the preference of one modal form to the other?*
2. *Do external factors also play a role in this phenomenon?*

These questions are foregrounded on the assumption that there are internal and external factors, as well as interactions among them, that contribute to the lexical variation in forms within the deontic modality system of PhE. These also imply that certain grammatical or discourse-related contexts encourage or restrict variation in such forms.

Now that the issues regarding deontic modality have been contextualized and problematized, I proceed to the introduction of the corpus data and the methodology employed in the grammatical and frequency analyses of the variation phenomenon.

3. Data and method

The research data was taken from the Philippine component (**ICE-PHI**) of the International Corpus of English. Both its Spoken and Written Components (henceforth **SC** and **WC**) were analyzed in this paper. All tokens of MUST and HAVE TO were located and identified using WordSmith Tools' concordance function (Scott, 2008). Each token was then classified as either epistemic or deontic; those that encoded epistemic meanings were manually filtered out. Meanwhile, all tokens of deontic MUST and HAVE TO were scrutinized further to exclude the following cognate forms that were invariable in either or both modal elements: *Perfective, past and future tense forms*

Perfective forms of MUST, as in example 4 below, are excluded because they encode only epistemic readings (Jankowski, 2004). Also, past and future tense forms of HAVE TO are excluded, since MUST lacks past and future tense forms due to its morphosyntactic restrictions on tense expression, e.g. **I musted*, and **I shall must*. In fact, HAVE TO performs the suppletive role of encoding the simple past or future tense expressions of MUST (Depraetere & Verhulst, 2008; Tagliamonte & Smith, 2006), as seen in examples 5 and 6:

(4) Facing the west, the Tabon men must have marvelled at the sight of the awesome sunset at the horizon of the South China Sea. [W1B-007#117:2]
(5) Yeah I did that too when I had to take the test [S1A-053#220:1]
(6) Unfortunately, I will have to pay a penalty on my airfare. [W1B-013#149:3]

Non-finite forms

Tokens of non-finite HAVE TO are inevitably excluded from the analysis because there is no related or cognate non-finite form for MUST (Westney, 1995; Depraetere and Verhulst, 2008).

(7) And it's really fun to have to be in a coed school because we're used to having an all-girl school in Saint Scho (Scholastica's) right [S1A-075#28:1]

Structurally ambiguous constructions

Jankowski (2004) identified some HAVE TO constructions as having possible ambiguity between obligation and possession, evident from the examples below:[2]

(8) Let's take a look at what the Net <u>has to</u> offer.
　　　　　　　　[W2B-040#37:1]
(9) That's already a sign that you <u>have to</u> give yourself a break　　[S1A-099#204:1]

The following are also excluded from the analysis: lexicalized or formulaic expressions, e.g. *I must admit/say/confess*, and *I/you have to admit/say/confess*, interrogatives, and repeated utterances. Overall, the distributional analysis of HAVE TO and MUST is limited to present declarative forms (affirmative or otherwise), since they straightforwardly express deontic modality in the propositional content of an utterance.

Table 1 provides a summary of the frequency distribution of deontic MUST and HAVE TO in SC and WC. HAVE TO is the most frequently used modal form in spoken discourse (670 occurrences), and MUST and in written texts (263 occurrences). MUST is primarily deontic, with 490 out of the total 605 occurrences (81.0%). It is also interesting to note that despite using different sets of corpora, the distribution of HAVE TO mirrors Collins' (2009) findings, i.e. the percentage frequency distribution of deontic and epistemic MUST in this paper is strikingly TO mirrors Collins' (2009) findings, i.e. the percentage frequency distribution of deontic and epistemic MUST in this paper is

Table 1. Frequency distributions of deontic and epistemic modal forms

	ICE-PHI component	Frequency		
		MUST	HAVE TO	Total
DEONTIC	SC	227	670	*897*
	WC	263	195	*458*
	Subtotal	*490*	*865*	*1,355*
EPISTEMIC	SC	69	10	*79*
	WC	46	2	*48*
	Subtotal	*115*	*12*	*127*
	Total	605	877	***1,482***

Table 2. Percentage distributions of deontic and epistemic MUST

Corpus Design	Deontic MUST (%)	Epistemic MUST (%)
Collins et al. (2014): Phil-Brown corpus (670,000 words) + ICE-PHI (W2A, W2C, W2E, W2F)	81.0	18.0
ICE-PHI (SC+ WC)	81.0	19.0

strikingly similar to that of Collins' (2009) (see Table 2). Overall, the frequency distributions of deontic MUST and HAVE TOin ICE-PHI suggest that in PhE, HAVE TO is potentially overtaking MUST for the expression of deontic meaning.

4. Internal factors

A comprehensive quantitative analysis of modality involves both the grammatical structure responsible for organizing the propositional content of the modalized clause and the speaker-relatedness of this propositional content (Verstraete, 2001). The frequency usage of competing deontic forms and the internal and external factors that give rise to variation in these forms must be identified, measured, and analyzed (Jankowski, 2004). Features in the grammar, in particular, may influence the choice a speaker makes between similar forms that express deontic modality (Tagliamonte, 2004); this especially applies to MUST and HAVE TO because of their high degree of semantic relatedness (Collins, 2009). Also, assigning grammatical and pragmatic correlates provides a systematic and more objective operationalization for the identification and analysis of deontic forms (cf. Tagliamonte and Smith, 2006). Hence, in pursuit of a more holistic quantitative analysis, the variation phenomenon was scrutinized based on the grammatical nature of modalized sentence constructions involving deontic MUST and HAVE TO, focusing on four variables which include (1) morphosyntactic nature of the subject (subject reference and

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[2] There may be different kinds of structural ambiguity involved in the semantic interpretation of modalized sentences. For example, in 9, [that you … a break] may be construed as a bound relative clause that is preceded by the subject complement of the sentence, resulting in a semantic reading of possession:
OBLIGATION:
That's already [a sign] [that you [have to] give yourself a break]
POSSESSION:
That's already [a sign]$_j$ [that$_j$ you have t$_j$ [to give yourself a break]]

definiteness), (2) lexical aspect of the verb, and (3) pragmatic orientation of the modal form.

4.1 Subject reference and definiteness

The first two variables are *subject reference* i.e., the type of grammatical subject, and *definiteness* (of the subject). The subject reference of a clause is restricted by the morphosyntax. Meanwhile, definiteness (i.e. whether the subject *is definite* or *generic*) is primarily encoded in the subject's phi-features, e.g. person, and/ or number, but may also be influenced by the context in which the clause is uttered. Semantically, second–person definite subjects
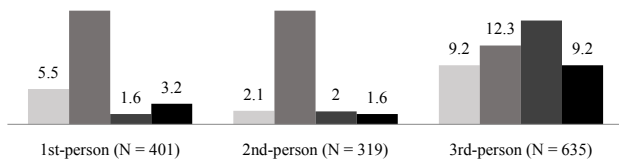

Figure 1. Percentage distributions according to subject reference
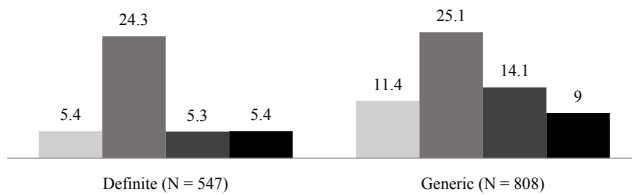(N_{SC} = 897; N_{WC} = 458; N_{TOTAL} = 1355)

Figure 2. Percentage distributions according to definiteness
(N_{SC} = 897; N_{WC} = 458; N_{TOTAL} = 1355)

should encode the strongest deontic readings, while third–person generic subjects should encode the weakest ones (Coates, 1983). With respect to deontic modality in English, two collocational relationships are predicted: MUST with second-person definite subjects, and HAVE TO with third-person generic subjects. But based on the combined data from SC and WC, the distributions of deontic HAVE TO and MUST according to subject reference diverge from Coates' (1983) prediction (as mentioned above). As seen in Figure 1, there is a fairly even distribution of HAVE TO, with it being slightly more preferred in first– and third–person subject contexts. MUST highly favors and occurs most frequently with third–person subjects. A further examination that accounted for register (SC or WC) suggests that HAVE TO favors first– and second–

person subjects in speech at 19.3% and 17.8% respectively, while MUST favors third–person subjects in writing at 16.2%. Here the distribution of MUST corroborates Enriquez's (2012) observation, i.e. that the prototypical [second–person subject + MUST] pattern in other varieties of English (e.g. AmE, BrE) does not hold in PhE.

Meanwhile, similar distributional trends in both definite and generic subject contexts indicate a competitive environment for both deontic forms (see Figure 2). HAVE TO occurs more frequently with definite and generic subject contexts (29.7% and 34.1%, respectively), which provide further evidence to the observation by Collins et al. (2009) about the modal form's increasing pervasiveness in the semantic territory of its modal counterpart. Further examining subject definiteness, with respect to register, makes the distribution patterns even more clear-cut: HAVE TO appears more frequently in both definite and generic subject contexts in speech (24.3% and 25.1%), and MUST in generic contexts in speech (11.4%) and especially in writing (14.1%). Finally, taking subject reference into account, a pattern involving lexis, the grammatical structure, and context (i.e. register) surfaces from the current analysis: HAVE TO is preferred with first- and second-person definite subjects in speech, and deontic MUST with third-person generic subjects in writing.

To summarize the current findings, the frequency distributions of deontic MUST and HAVE TO in PhE suggest that Coates' (1983) and Tagliamonte and Smith's (2006) observations on the correlations between modality and type of grammatical subject may not hold in other varieties of English. In PhE, HAVE TO appears to dominate all types of subject reference, except in third-person written contexts where MUST appears to collocate very strongly with third-person nouns and pronouns. MUST, however, occurs rather infrequently with first– and second–person subjects, at a combined 11.2% of the total deontic tokens– which is a rather peculiar trend, given that these are the subject contexts where

MUST is traditionally and relatively more robust in AmE and BrE. It is thus tempting to claim at this point that deontic HAVE TO or MUST in PhE collocate with the grammatical subject in varying degrees of strength depending on register, thus producing frequency usage patterns not observed in other varieties of English (AmE especially). In order to examine the variation phenomenon even further, I now turn to the domain of lexicogrammar, paying particular attention to the lexical aspect of matrix verbs in modalized sentence constructions.

4.2 Verb type

Coates (1983) observed that the strength of deontic meaning increases with *non-stative* verbs and decreases with *stative* verbs (e.g. existential, cognitive, emotion, or possession verbs). MUST is inherently subjective and encodes the strongest degree of obligation among all modal forms, so it is expected to collocate more strongly with non-stative verbs. HAVE TO is inherently objective and connotes a weaker illocutionary force (Enriquez, 2012), and so should appear more often with stative verbs. Data from both SC and WC, however, show that non-stative verbs occur with HAVE TO more than MUST (642 vs. 330 occurrences). A more in-depth examination of deontic modality in terms of register shows that in speech, non-stative verbs occur more with HAVE TO than MUST (35.8% vs. 11.0%). Meanwhile, stative verbs slightly prefer HAVE TO (223 occurrences, or 16.4% of the total tokens), which support Coates' (1983) claim on the tendency for HAVE TO to appear with non-stative verbs.

In summary, the frequency distribution patterns of deontic MUST and HAVE TO have been described and explained with respect to certain features in the grammar patterns of PhE. Distributional analyses were enhanced by accounting for variation according to register. Insofar as the observed frequency distributions can be individually ascertained, MUST and HAVE TO indubitably participate in a linguistic interplay that involves variation in the forms, as well as competition with each other for the expression of deontic meaning.

4.3 Pragmatic orientation: subjective vs. objective

Concepts of subjectivity and objectivity are important to the study of deontic and even epistemic modality (see Coates, 1983; Perkins, 1983; Palmer, 1990; Westney, 1995), and are best analyzed from a pragmatic perspective. Systematic approaches to pragmatic inferencing draw from general observations on the relationship between
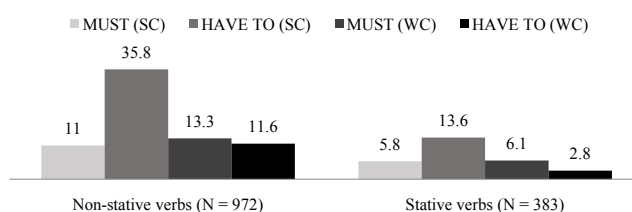

Figure 3. Percentage distribution according to verb type
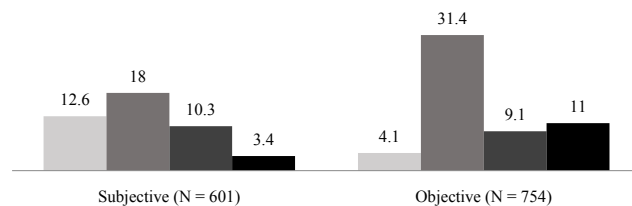(N_{SC} = 897; N_{WC} = 458; N_{TOTAL} =1355)

Figure 4. Percentage distribution according to pragmatic orientation
(N_{SC} = 897; N_{WC} = 458; N_{TOTAL} =1355)

deontic forms and their sources of meaning: modal auxiliaries are mostly associated with *speaker based* authority or perspective, and quasi-modals usually with externally based, and/or objectively valid orientation. With respect to MUST and HAVE TO, subjective orientations are generally encoded by the former, and objective interpretations by the latter (cf. Coates, 1983; de Haan, 2006; Palmer, 1990; Tagliamonte & Smith, 2006; Westney, 1995).

Data from SC and WC, however, does not show a strict correlation between modal form and pragmatic orientation. There appears to be two competing environments for the use of MUST and HAVE TO: subjective contexts in speech,

and objective contexts in writing. As shown in Figure 4, HAVE TO is the much-preferred choice with objective contexts in SC (31.4%). It is not, however, the obvious choice in WC, where HAVE TO and MUST show roughly similar percentage distributions at 11.0% and 9.1%, respectively. Even with subjective contexts in SC, HAVE TO is the preferred form (18.0% versus 12.6%). While these percentage distributions do not necessarily challenge the prototypical nature of MUST as a subjective deontic modal, they nevertheless reaffirm Collins et al.'s (2014) observation that HAVE TO could be making inroads into the semantic territory of MUST.

5. External factors

I now turn to the external correlates of linguistic variation in deontic modality in PhE. There are obviously many discourse-related and even sociolinguistic dimensions to language use, but the current analysis will be narrowed down to register and generic (i.e. text type) conventions.[3] Figures 5 and 6 illustrate the distributions of MUST and HAVE TO in speech and in writing according to text type, which comprises variety, style, and register (Westney, 1995). The data suggests a correlation between frequency of occurrence and text type. Within SC, deontic HAVE TO is preferred in private dialogues (S1A, 315 occurrences), public dialogues (S2A, 188 occurrences), and unscripted monologues (S1B, 139 occurrences). Meanwhile, deontic MUST occurs most frequently in scripted monologues (S2B, 87 occurrences), and in most types of written texts.[4]

But why is MUST preferred in scripted monologues, and HAVE TO in private dialogues? Why is MUST the preferred modal element in writing? Patterns of usage in both deontic forms require some explanation beyond the domain of grammar. From Tagliamonte and Smith's (2006) point of view, developments (i.e. variations or changes) in linguistic modality system must be rooted in changes external to the system, such as style, genre, or register. Indeed, each

text type in ICE-PHI appears to exhibit its own discourse-specific characteristics, which could be influencing the use of deontic forms in PhE. Such characteristics will be further explained; however, dueto space constraints, only a number of salient text types shall be exemplified below.
Scripted monologues (S2B)

As mentioned earlier, MUST is the preferred modal form in the written register. Since scripted monologues are fundamentally written texts delivered through speech, it is not surprising that MUST is the preferred form in S2B. The following excerpts from SC illustrate this:

- Senate or congressional speeches
  (10) Clearly Mr President the intent of the framers of our Constitution is that the placement or stationing of such foreign forces and installation in the country must be made with some degree of permanency
  [S2B-029#29:1:A]
- Religious sermons
  (11) Life in the family must be centered on God
  [S2B-037#32:1:A]

As seen in examples 10-11, public speakers appear to reflect their own will or interest in the proposition of an utterance, which indicates subjective speaker orientation. Scripted monologues therefore are characterized by the subjective nature of their pragmatic orientation, which is attributable to deontic MUST and thus renders the form appropriate for use in such text type.

The above observation also provides an adequate explanation for the frequency of MUST in S1B and S2A – text types that are generally characterized by subjective orientation and imposition of speaker authority:

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[3] I prefer the term text type to genre, since the former more accurately reflects the variety and style of language use across a wide range of spoken or written texts.
[4] There are eight classifications of written texts in the ICE: student writing (W1A), letters (W1B), academic writing (W2A), popular writing (W2B), reportage (W2C), instructional writing (W2D), persuasive writing (W2E), and creative writing (W2F).

- Classroom monologues
  (12) Simple ideas must have an uh antecedents in simple impressions
      [S1B-008#42:1:A]
- Extemporaneous debates
  (13) We emphasize if Your Honors please that firstly the complaint or resolution must be verified and secondly that it must be filed by at least one-third of all the members of the House
      [S2A-061#48:1:A]

In SC, instances of HAVE TO are primarily objective in nature, i.e. HAVETO tends to relate deontic authority to an external circumstance, e.g. a bodily need or condition, or a general rule or parameter, as seen below:
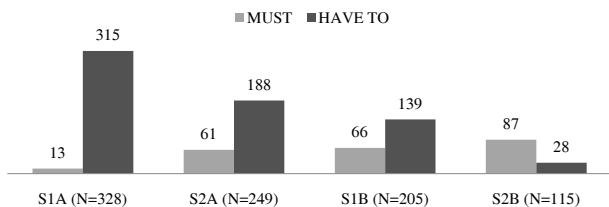

Figure 5. SC: frequency distributions according to text type (N_{SC} = 897)
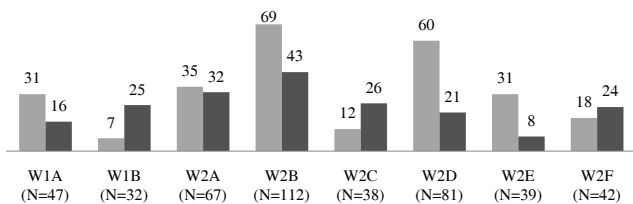

Figure 6. WC: frequency distributions according to text type (N_{WC} = 458)

(14) They are the ones that are really responsible for articulating language and because these speech organs have to move uh – ther – there is the tongue blade there is the teeth and so on
     [S1B-017#80:1:A]

Instructional and persuasive writing (W2D and W2E)

These texts provide the most typical examples of deontic MUST with subjective orientation, as their main communicative purpose is to impose deontic obligation or necessity:

- Advice/Tips
  (15) "Brides must be queens and not mannequins," Reyes says.
      [W2D-011#125:3]

- Editorials/commentaries
  (16) When you are the president, you _must_ know you cannot meddle in the affairs of a constitutionally mandated body.
      [W2E-001#98:3]

Furthermore, MUST occurs in passives, which are typical of 'rules and regulations' examples (Coates, 1983, p. 38), such as official directives and application forms:

- Official directives
  (17) A valid passport must also be presented.
      [W2D-002#49:1]
- Application forms
  (18) This form must be secured and submitted together with the Application for Admission form.
      [W2D-002#59:1]

The above examples, which are common in official notices or written or broadcast announcement, are largely associated with subjective orientation because they are seen to contextualize the will of the initiator of the text (Westney, 1995).

Reportage (W2C)

HAVE TO occurs more frequently in reportage. The most plausible explanation is style, and the nature of objectivity that is required in delivering a report. Since HAVE TO is inherently objective, using it to express deontic meaning in a written report would stylistically be more appropriate. The following examples are corpus data taken from newspaper articles.

- Broadsheets
  (19) Then the contract has to be approved by the management committee comprised of top Napocor officials and group managers.   [W2C-001#51:2]
  (20) Santiago said a good Christian voter must know who may be acceptable and why.   [W2C-018#61:2]
  (21) He also warned that "the next cycle of rains could trigger another massive flooding and so we must do something about the problem now."
      [W2C-005#53:3]

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The above examples illustrate the fact that reports are presented neutrally. Even the use of MUST, which is inherently subjective in usage, is written from a rather objective perspective. In fact, in reportage, both HAVE TO and MUST have a 100% association with objective orientation. MUST in reportage largely achieves an objective interpretation due to the standard of accuracy required in presenting external sources, which is most appropriately done – at least, in stylistic terms – through indirect and direct quotations, seen from examples 22 and 23. Essentially, internal features in the grammar do not affect the assignment of objectivity in the use of MUST; the distributional effects are mainly due to stylistic influences. In fact, Westney (1995) emphasized the commonplaceness of objective-oriented modals in public written style, and in journalism in particular: taking that objectivity is the generic approach, not to mention the ethical norm, adopting appropriate lexical choices in reporting avoids the unnecessary imposition of the speaker's (i.e. the writer of the report) own personal will or interest in the subject matter.

6. Analyzing internal and external variables and their interactions

Investigating frequency distributions based on absolute and percentage frequency distributions, and one internal or external factor at a time, may be illuminating, but these factors do not occur in isolation, at least within a clause. The data was therefore further analyzed using the statistical software package RBRUL (Johnson, 2009), in order to determine the validity of the absolute and percentage frequency distribution analyses of MUST and HAVE TO in the earlier sections. The internal and external factors identified in the earlier sections were coded and assigned as predictor variables: *subject reference* (SUBJ), *definiteness* (DEF), *verb type* (VERB), *pragmatic orientation* (PRAG), and *register* (REG). The response variable was *deontic form*

(with the variants MUST or HAVE TO), since the main aim of the analysis is to describe and explain frequency usage patterns of the two modal forms based on the individual and interactional effects of the assigned predictor variables.

6.1 Internal variable interactions

In this round of statistical analysis, the external factor, register, was excluded in order to see how the internal variables interact with one another and influence the frequency counts and distributions of deontic MUST and HAVE TO. Two logistic regression analyses were carried out: a one-level analysis and a stepwise analysis. Both modeled individual fixed effects and pairwise interactions among predictor variables. It was found out that there is no significant difference between the one-level

Table 3. Internal predictor variable effects on the frequency distribution of HAVE TO

Deviance		1362.089		
Degrees of freedom (d.f.)		7		
Grand mean		0.638		
Predictor variable	**Logodds**	**Tokens (N)**	**Proportion of application value (HAVE TO)**	**Centered factor weight**(c.f.w.)
PRAG				
Objective	0.908	754	0.763	**0.712**
Subjective	-0.908	601	0.483	0.288
SUBJ				
Second–person	1.045	319	0.840	**0.74**
First–person	0.384	401	0.761	**0.595**
Third–person	-1.428	635	0.460	0.193
DEF				
Definite	0.407	547	0.735	**0.6**
Generic	-0.407	808	0.573	0.4
VERB				
Non-stative	0.164	979	0.660	**0.541**
Stative	-0.164	376	0.582	0.459
DEF:VERB				
Definite:Non-stative	0.139	419	0.771	**0.535**
Generic:Stative	0.139	248	0.565	**0.535**
Definite:Stative	-0.139	128	0.617	0.465
Generic:Non-stative	-0.139	560	0.577	0.465

Table 4. Cross-variety comparison of macro-interactional effects

Predictor variable	**PhE**	**AmE**	**BrE**
SUBJ			
First–person	HAVE TO	HAVE TO	HAVE TO
Second–person	**HAVE TO**	MUST	MUST
Third–person	**MUST**	HAVE TO	HAVE TO
DEF			
Definite	**HAVE TO**	MUST	MUST
Generic	**MUST**	HAVE TO	HAVE TO
VERB			
Non-stative	MUST	MUST	MUST
Stative	HAVE TO	HAVE TO	HAVE TO
PRAG			
Subjective	MUST	MUST	MUST
Objective	HAVE TO	HAVE TO	HAVE TO

and best stepwise regression model (x^2 = 5.964, p = 0.0507). For the purpose of illustrating the internal predictor variable effects on the frequency distribution of the modal forms, results obtained from the one-level analysis of pairwise interactions are used. Table 3 provides a summary of the findings; the centered factor weight (c.f.w.) of each significant variable effect is bolded.

The model, which uses HAVE TO as the application value, shows that HAVE TO is preferred in objective contexts (*c.f.w.* = 0.712), and MUST in subjective contexts (0.288). Furthermore, HAVE TO collocates more strongly with second– and first–person subjects (0.74, 0.595), and non-stative verbs (0.541); MUST with third–person subjects (0.193) and stative verbs (0.459). Moreover, it appears that HAVE TO is preferred in second– and first–person definite contexts; MUST in third–person generic contexts. Finally, the pairwise interaction between definiteness and verb type is significant: HAVE TO tends to occur with definite subjects + non-stative verbs (0.535), and generic subjects + stative verbs (0.535). The regression analysis therefore corroborates the absolute and percentage frequency distribution analyses of deontic MUST and HAVE TO (i.e. analyses which excluded register/text type).

Table 4 cross-compares the above findings with the general distribution of deontic MUST and HAVE TO in AmE and BrE as described in the current literature (cf. Coates, 1983; Depraetere & Verhulst, 2008; Smith, 2003; Tagliamonte & Smith, 2006; Westney, 1995). Overall, the distribution of deontic modal forms in PhE appears to be markedly different from AmE and BrE in terms of the person and definiteness of the subject: MUST is preferred in third–person (generic) contexts, and HAVE TO in first– and second–person (definite) contexts. In terms of the overall macro-interactions among the internal predictor variables, HAVETO is mainly preferred in objective contexts and tends to occur with first– and second–person definite subjects and stative verbs. MUST appears more frequently in subjective contexts, with third-person generic subjects and non-stative verbs. It must be noted, however, as in the earlier section, that register appears to influence the frequency distributions of the deontic modal forms. In this light, I now provide a more comprehensive model that includes register as an external factor.

6.2 Internal and external variable interactions

The same statistical procedure was carried out for this analysis. It was found out that there is no significant difference between the best one-level and stepwise regression models (x^2 = 9.197, *p* = 0.163), so the best one-level model was chosen. Table 5 summarizes the predictor variable effects (both individual and pairwise) on the frequency distribution of the modal forms. Due to space constraints, the table shows only the significant predictor variable effects on the distribution of HAVE TO, the designated application value.

Based on the results, a similar trend is observed: deontic HAVE TO is preferred in objective contexts, and tends to occur with first– and second–person definite subjects and stative verbs; deontic MUST in subjective contexts, with third-person generic subjects and non-stative verbs. The more interesting variations, however, are observed from the variable interactions involving register. Overall, HAVE TO is the preferred deontic form in speech (*c.f.w.* = 0.685), and MUST in writing (0.385). Pairwise, HAVE TO tends to occur with objective contexts in speech (0.529) and subjective contexts in writing (0.529); it also collocates more strongly with second–person definite subjects and stative verbs in speech, and with first– and third–person generic subjects and non-stative verbs in writing.

The statistical analyses presented in this section corroborate the absolute and percentage frequency distribution analysis of deontic MUST and HAVE TO in PhE. There is strong evidence for competition for usage in the expression of deontic meaning. Furthermore, despite the synchronic

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nature of the study, the above findings emphasize what Labov (1972) refers to as the "historicity" of variation in forms, where one form is on the way in (in this case, HAVE TO) and the other on the way out (MUST). But the notion of competition is not as clear-cut as it seems; there are strong tendencies for the deontic forms to occur in specific contexts (i.e. HAVE TO in objective contexts and in speech, MUST in subjective ones and in writing), and with certain lexical forms (e.g. MUST and HAVE TO with non-stative and stative verbs, respectively). Some variables and their interactions are more significant than others.

Table 5. *Significant* internal and external predictor variable effects on the distribution of HAVE TO

Deviance		1255.198		
Degrees of freedom (d.f.)		21		
Grand mean		0.638		
Predictor variable	**Logodds**	**Tokens (N)**	**Proportion of application value (HAVE TO)**	**Centered factor weight (c.f.w.)**
REG				
Spoken	0.778	897	0.747	0.685
PRAG				
Objective	0.843	754	0.763	0.699
SUBJ				
First–person (1p)	0.776	319	0.761	0.685
Second–person (2p)	0.400	401	0.840	0.599
DEF				
Definite	0.375	547	0.735	0.593
VERB				
Non-stative	0.33	979	0.660	0.582
REG:PRAG				
Spoken:Objective	0.117	482	0.884	0.529
Written:Subjective	0.117	186	0.247	0.529
REG:SUBJ				
Spoken:2p	0.364	270	0.893	0.59
Written:3p	0.198	344	0.363	0.549
Written:1p	0.166	65	0.662	0.541
REG:DEF				
Spoken:Definite	0.055	402	0.818	0.514
Written:Generic	0.055	313	0.390	0.514
REG:VERB				
Spoken:Stative	0.175	261	0.705	0.544
Written:Non-stative	0.175	343	0.466	0.544
PRAG:SUBJ				
Subjective:2p	0.411	156	0.776	0.601
Objective:3p	0.228	393	0.626	0.557
Objective:1p	0.183	198	0.919	0.546
PRAG:DEF				
Objective:Definite	0.049	309	0.845	0.512
Subjective:Generic	0.049	363	0.410	0.512
PRAG:VERB				
Objective:Stative	0.033	185	0.730	0.508
Subjective:Non-stative	0.033	410	0.502	0.508
SUBJ:DEF				
1p:Definite	0.486	203	0.916	0.619
3p:Generic	0.252	380	0.397	0.563
2p:Generic	0.234	230	0.839	0.558
SUBJ:VERB				
2p:Non-stative	0.501	215	0.893	0.623
1p:Stative	0.382	96	0.792	0.594
3p:Stative	0.119	176	0.381	0.53
DEF:VERB				
Definite:Non-stative	0.163	419	0.771	0.541
Generic:Stative	0.163	248	0.565	0.541

For instance, register (i.e. spoken or written text) and text type (e.g. monologues, reportage, etc.) may override grammatical constraints and dictate the usage patterns of deontic forms. There are even explicit morphosyntactic features that restrict the distribution of these forms, e.g. the suppletive role of HAVE TO in past tense affirmative contexts, as explicated in 3a–b.

The overall findings echo Depraetere and Verhulst's (2008) claim that "usage distinctions between must and have to are less clear-cut that reference grammars usually suggest" (p. 23). In other words, despite the presence of competing forms, there is no strict one-to-one correspondence between form and function; for example, MUST and HAVE TO can provide objective and subjective interpretations, respectively, and even occur with various types of subject nouns/pronouns and verbs, depending on the source of obligation or the context in which the utterance is performed.

7. Contact-induced influences on PhE grammar

The previous sections revealed that the deontic modality system in PhE exhibits substantial degree of lexical variation in frequency usage patterns, in that the use of semantically and pragmatically related deontic modal forms by Philippine speakers of English is becoming more distinct and different from those who subscribe to the predominant varieties of English. In this section, I entertain the idea of such variation partly being influenced by two contact-linguistic factors: (1) the semantic mapping of Filipino overt politeness marking on English past-tense modal forms, which restricts the use of MUST in expressing deontic meaning, and (2) the lack of an intermediate semantic equivalent of HAVE TO in Filipino, which forces Filipino-English bilingual speakers to use HAVE TO in encoding objective interpretations, hence increasing its viability

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[5] Filipino – the national language – potentially has the greatest scope of contact-induced influence on PhE. It must be noted that the grammar and lexis of Filipino is technically and essentially Tagalog-based, so the grammatical structure and analysis of Filipino that is exemplified in this paper draws extensively from existing studies on Tagalog grammar.

in (spoken) discourse.[5] To ascertain whether these features play a part in the semantic and/or pragmatic nature of deontic MUST and HAVE TO in PhE, I take the works done by Bautista (2004a) and Enriquez (2012) as reference points for my analysis of (1). For (2), I consulted Filipino-English bilinguals regarding the translational equivalents of the deontic forms. It must be noted, however, that PhE is also exposed to millions of speakers who speak other regional languages (e.g. Cebuano, Ilonggo, and Ilocano), which may also influence the variation phenomenon. For this paper, restricting the analysis to Filipino only aims to ensure correspondence with the nature and composition of the corpus data being used, because much of the scholarly discourse on, not to mention linguistic data from, ICE-PHI geographically center on Metropolitan Manila, where majority of the population are Filipino-English bilinguals.[6]

7.1 HAVE TO: morphosyntactic realization of politeness

Enriquez (2012) observed that in PhE, modals in present tense form have seen a fall in frequency usage thanks to speakers' preference for their past tense counterparts (which sound more polite). Based on Gricean notions of politeness, this morphosyntactic perspective on PhE offers a prime example of "(functional) simplification" (Bautista, 2004a, p. 126) – a notable feature of Filipino where notions of formality, politeness or uncertainty are overtly marked by aspectual markers (e.g. contemplative), or adverbial forms, as shown in 22a–b:

(22) A. Pipiliin   ko   ito.
    choose[CONTEMP]   I   this
    'I <u>will</u> choose this.'
    B. Pipiliin   ko   siguro   ito.
    choose[CONTEMP]   I   maybe/probably this
    'I <u>would</u> (probably) choose this.'
    [cited in Enriquez, 2012, p. 131-132]

In light of 'functional simplification' and increased language contact, the overtness of politeness markers in Filipino should force PhE modals to carry weaker assertions or powers of

obligation (Enriquez, 2012). MUST, however, lacks a modal-past form to express this conditional meaning. This is where HAVE TO performs a suppletive politeness function: syntactically, both modal elements can occur in the same sentential position; semantically and pragmatically, HAVE TO weakens the stronger force of obligation carried by MUST and can divert deontic authority from the speaker to an external circumstance or state of affairs. Hence, it seems perfectly reasonable to assume that in social contexts or generic conventions where speakers are not in roles of authority (e.g. S1A, S1B, S2A, W2B and W2C), HAVE TO would be the preferred form for the expression of deontic meaning.

7.2 Filipino modal verbs of deontic obligation/ necessity

Another contact-induced influence is semantic in nature. In this section, MUST and HAVE TO are compared with dapat and kailangan, the modal equivalents for the English modal MUST in Filipino (Asarina & Holt, 2005; Kroeger, 1993).[7] (HAVE TO does not have a direct translational equivalent in Filipino.)

Strictly within the syntax-semantic interface, these modal verbs are only deontic in nature; in Filipino other overt lexical markers realize epistemic modality, e.g. *siguro* ('maybe/ probably'), e.g. 26b. *Kailangan* involves some kind of necessity or need that is internal to the speaker, while *dapat* ascribes necessity or sense of appropriateness to an external source (Schachter & Otanes, 1972). Put simply, *kailangan* is

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[6] I would like to thank the reviewers for pointing out why Filipino was the only language considered for possible contact-induced effects on lexical variation in deontic modality.

[7] Argument structure and ordering source in Filipino (Tagalog) affect the distribution of kailangan and dapat. The use of modal adverbs varies according to syntactic structure, namely subject control, transparent clauses, opaque clauses and raising. For this paper, however, only sentences that manifest subject control shall be analyzed, and this is due to three main reasons: control structure is semantically closest to English SVO structure, is considered unmarked and even most productive, i.e. it is the most typical form found in Filipino-translated English sentences (cf. Asarina & Holt, 2005 for a more in-depth discussion on the syntax-semantics interface approach to Tagalog modality).

used to refer to an obligation/necessity to an external circumstance, universal truth or natural condition, while *dapat* is used to connote speaker authority (Asarina & Holt, 2005). The examples in Table 6 illustrate these differences.

Table 6. Distributions of HAVE TO and MUST according to equivalent Filipino translations

	Frequency				
	Dapat		*Kailangan*		
	HAVE TO	MUST	HAVE TO	MUST	Total
First-person	1	7	14	8	30
Second-person	2	7	13	8	30
Third-person	2	6	13	9	30
Total	5	20	40	25	*90*

Table 7. Distributions of *kailangan* and *dapat* according to equivalent English translations

	Frequency					
	MUST	HAVE TO	NEED TO	SHOULD	OUGHT TO	Total
Kailangan	3	5	37	0	0	*45*
Dapat	17	8	15	4	1	*45*
Total	20	13	52	4	1	*90*

(23) <u>Kailangan</u> umulan bukas para ako
  gumawa ng mainit na salabat
  <u>must</u> rain tomorrow for ANG-I
  make LI hot LI ginger tea
  'It must rain tomorrow for me to
  make hot ginger tea.'

(24) ?? <u>Dapat</u> umulan bukas para ako
  gumawa ng mainit na salabat
    must rain tomorrow for ANG-I
  make LI hot LI ginger tea
  'It <u>must</u> rain tomorrow for me to make
  hot ginger tea.'

  (cited in Asarina & Holt, 2005, p. 12)

Example 24 is unusual in that the speaker would normally have no authority over a natural phenomenon such as weather, thus reflecting the semantic difference between *kailangan* and *dapat*.

It must be noted that the pragmatic functions of *dapat* and *kailangan* respectively parallel those of MUST and HAVE TO in PhE. They are therefore examinable by means of translating modalized sentences from one language to the other, vice-versa. Thirty (30) bilingual speakers were consulted and asked to provide English-to-Filipino and Filipino-to-English translations that were designed to account for nuances in subject reference, one of the most significant factors in the distribution of the modal forms. Fifteen (15) speakers were tasked to translate six modalized

English SVO constructions (three with HAVE TO and three with MUST) into Filipino. The remaining 15 respondents translated modalized subject control Filipino constructions (three with *kailangan* and three with *dapat*) to English.

Kailangan is the preferred translational equivalent of HAVE TO and MUST, with a total of 65 occurrences. Looking at the frequency distributions according to subject reference, it was found that speakers prefer translating HAVE TO to *kailangan* (40 occurrences, versus *dapat* with 25 occurrences). MUST, however, is translatable to either *kailangan* or *dapat* (25 versus 20 occurrences). The results reflect some considerable semantic correspondence between English and Filipino modal forms. Filipino-to-English translations, however, reflect the complexity of the semantic dimension of the PhE modality system, as illustrated in Table 7. Tokens of NEED TO, SHOULD, and OUGHT TO in the data suggest a wider range of deontic meaning

Figure 7. Decreasing strength of obligation

and greater variation in deontic forms. The high frequency of NEED TO in the data (as the main translation equivalent of kailangan, with 37 occurrences) especially demands attention, since the actual status of NEED TO as a modal verb has been subjected to debate and disagreement. Some argue that it is a central modal (Krug, 2000), while others view it as a marginal modal (Westney, 1995) or even having a quasi-modal status (Perkins, 1983). Nonetheless, I take Westney's view on the issue. Westney claimed that NEED TO:

> …points primarily to the internal logic of the discussion rather than to the necessity of the action, which *must* or *have got to* would suggest; it follows that *need to* can be seen as making a much weaker demand. *Have to* would differ slightly in its effect, as it would focus on an existing requirement than on one arising within a context. (p. 112)

Perkins makes the definition of NEED TO even more specific: "It indicates a compulsion which comes from within" (p. 63), which may be caused by either external circumstances or natural conditions. As an encoder of weak obligation, NEED TO also appears to be the preferred translational equivalent of *dapat* (15 occurrences), although its distribution is not as diverse. For example, only *kailangan* can encode the basic sense of necessity in existential constructions by functioning as the object of the sentence:

(25) Kailangan/Dapat mo   bilhin
    ang   kotse
    must   NG-you OBJ.ANG-buy
    ANG car
    'You <u>must/have to/need to</u> buy the car.'

(26) May kailangan/*dapat ang bata
    exists-there SUBJ.ANG-need ANG child
    'I have a <u>need</u> for something / There is
    something that I <u>need</u>?

What are the implications of these observations on the distribution of HAVE TO and MUST? At least for PhE, it seems reasonable enough to include NEED TO in the cline of deontic obligation, it being the weakest encoder of authority. We might imagine this cline to be arranged in terms of decreasing deontic authority, as illustrated in Figure 7.

Because Filipino does not have an intermediate 'HAVE TO' equivalent, it seems more plausible to translate *kailangan* (which encodes a weak deontic meaning) to NEED TO. This is supported by the apparent semantic relatedness deontic HAVE TO and NEED TO (in comparison with MUST and NEED TO):

(27) I mean you have to you you need to look
    your best   [S1A-075#80:1:A]

Conversely, HAVE TO tends to be directly translated to *kailangan* in Filipino (especially in the more objective readings) for the very same reason. MUST, however, is easily translated to *dapat* because of their semantic equivalence in translation. It is therefore plausible that the Filipino modality system has been exerting some influence on PhE speakers in their preference for HAVE TO to MUST, especially in the expression of weaker or more objective deontic meaning.

In summary, the theoretical-analytical and quantitative analyses in this section provide considerable evidence, based on plausible contact-induced influences from Filipino, that HAVE TO and MUST in PhE are variable, corresponding lexical forms that are currently experiencing increasing competition for the expression of deontic meaning.

8. Conclusion

A combination of frequency distribution, statistical and theoretical analyses suggests that MUST and HAVE TO engage in competition for the expression of deontic meaning, but this notion of competition is not as clear-cut as it seems: there are strong semantic and/or pragmatic tendencies, morphosyntactic and lexicogrammatical features, as well as genre-specific conventions, that interact with one another and influence the distribution of the forms across different contexts of usage. The findings further suggest that there is no strict one-to-one correspondence between form and function; both modal forms can provide either objective or subjective orientations of obligation/necessity and occur with various types of subjects NPs, pronouns, and verbs. The variation phenomenon is also significantly attributable to pragmatic orientation and genre-specific conventions, particularly of style, variety and register. Register and text type may override grammatical constraints and dictate the usage patterns of deontic forms. Finally, contact-induced influences from Filipino were also predicted to influence the frequency usage patterns of MUST and HAVE TO: (1) the semantic mapping of Filipino overt politeness marking on English past-tense modal forms, which restricts the use of MUST in expressing deontic meaning, and (2) the lack of an intermediate semantic equivalent of HAVE TO in Filipino, which is predicted to facilitate its use in encoding objective interpretations, hence increasing its viability in (spoken) discourse.

The nature of the data used in this paper, however, is not thoroughly representative of the Philippine English-speaking population. Borlongan (2012) observed that both spoken and written components of the ICE-PHI somewhat reflect an acrolectal variety of PhE that is highly skewed in terms of age and language proficiency; the language is also notably urban and indicative of socio-economic stratification. Even Taglish now serves as the *lingua franca* of highly urbanized areas, mainly of the affluent, the college-educated, and the elite (Bautista, 2004b). If the main objective is to achieve a more holistic perspective on the variation in forms in the modality system, then social variables such as sex and gender, age, socio-economic status, etc., should also be examined. Quantitatively accounting for all of these factors, however, would require wider and more thorough empirical research outside the domain of the current corpus data.

This paper has nonetheless attempted to highlight the relevance of features at the level of both grammar and discourse to the empirical analysis of variation and change in World English varieties such as PhE. The findings suggest that in order to achieve a thorough description of grammaticalization of modal forms, different levels of linguistic analysis and domains of language use must be taken into account. Furthermore, the analysis of competing deontic forms MUST and HAVE TO opens more potential areas for future research. First, the case of epistemic modality in PhE has been ignored; future research ideally has to incorporate cases of epistemic meaning, especially with regard to the distribution of MUST. Second, other modal pairs with substantial degrees of semantic relatedness may be investigated using a similar quantitative approach. Third, future research may be done according to the relationship between the modality systems and morphosyntactic contact-induced influences on Taglish, the code-switching variety, and even across World Englishes. Based on the distributional and theoretical analyses presented in this paper, the use of HAVE TO in PhE somehow mirrors the use of MUST in Singapore English (SgE) which Bao (2010) argued results from the lack of a deontic-to-epistemic grammaticalization path in Chinese, the substrate language. If we are to view the variation in deontic forms in PhE in parallel, from a contact-linguistic perspective, Filipino (and perhaps even Taglish) might also lack a similar grammaticalization path, since there is much variation in theexpression of deontic and epistemic modalities in PhE. More interestingly, there are apparent similarities in the percentage frequency distributions of deontic and epistemic MUST in PhE and SgE, which provide greater cross-linguistic evidence for substrate influence on the modality systems of World Englishes. Future directions and developments in the study of PhE modality can definitely be aligned along these theoretical issues.

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