

Modal Verbs and Their Semantic Functions in Business English

SOMEYA Yasumasa

Kansai University

Keywords: Modal Verbs, Semantic Functions of Modals, Business Letter Corpus, Business English, ESP

1. Introduction

In Someya (1999), it was argued that Business English is characterized by a high frequency of modal verbs and that they in fact constitute one of the most important “keywords” of business English lexicon. In discussing the relative proportions of the major part-of-speech categories in his one-million-word corpus of business correspondence, a.k.a. the Business Letter Corpus (hereinafter, BLC)¹, Someya (ibid. p.31) found that when the BLC and his Reference Corpora (hereinafter, RC)² were compared binominally for the 22 POS categories surveyed, the most significant difference was found in the modal category (Difference Coefficient = 0.2854, $Z = 9.2513$). The overall mean proportion of modal verbs to the combined word tokens of the RC was about 1.69% (SD = 0.65). In the BLC, however, the proportion was much larger than in the RC. In fact, the difference coefficient of 0.2854 means that modal verbs are on average about 1.77 times more frequent in the BLC than in the RC. If we focus on the modals with positive “Keyness” scores³, i.e. *will*, *would*, *can*, *shall*, *should*, and *may*, the figure is as high as 2.3 as shown in Table 1.

SOMEYA Yasumasa (2010), “Modal Verbs and Their Semantic Functions in Business English.” Aoyama Journal of Business (Aoyama Keiei Ronshu), No.44, Vol. 3. The Society of Business Administration, School of Business, Aoyama Gakuin University, Japan.

Table 1 Keyness scores of major modals (Someya, 1999)

Keyness Rank	Entry Word	BLC Freq.	%	Norm'ed BLC Freq.	%	Ref. C. Freq.	%	Keyness Score	Times more frequent in BLC
11	will	10,563	0.9668	30,608	0.9668	7,962	0.2515	9,200	3.84
46	would	5,505	0.5038	15,952	0.5038	8,071	0.2549	1,468	1.98
61	can	3,942	0.3608	11,423	0.3608	5,807	0.1834	1,036	1.97
179	shall	640	0.0586	1,854	0.0586	632	0.0200	385	2.93
273	should	1,590	0.1455	4,607	0.1455	2,882	0.0910	206	1.60
295	may	2,129	0.1949	6,169	0.1949	4,223	0.1334	180	1.46
									(M=2.3)
4977	must	629	0.0576	1,823	0.0576	2,572	0.0812	-69	0.71
4995	could	1,361	0.1246	3,944	0.1246	4,976	0.1572	-71	0.79
5022	might	491	0.0449	1,423	0.0449	2,137	0.0675	-75	0.67
TOTAL	--	26,850	--	77,803	--	39,262	--	M=1,362	M=1.77

* BLC Freq.= Row Frequency in the BLC; Norm'ed BLC Freq. = Normalized Frequency in the BLC (normalized to the size of the Reference Corpora which is about three times larger than the BLC); Ref. C. Freq.= Frequency in the Reference Corpora.

This high proportion of modals in the BLC may be accounted for by the fact that business discourse is almost always concerned with future events - both possible and imaginative. It wouldn't make much sense in business to talk about the past and the status quo unless the discourse is aimed at some particular goals to be realized in the not-too-distant future. In English, of course, future events are most likely to be expressed with a modal sentence containing one, or more, of the possibility, predictive, or necessity modals. The politeness feature of modal verbs is also an important factor that contributes to the high frequency of modals in business discourse. In any event, modals are very important lexical items in Business English and they warrant a more detailed analysis and discussion.

In this paper, we will continue our discussion initiated by Someya (1999) as to the place of modal verbs in the business genre of professional discourse. More specifically, we will first try to identify semantic functions of the nine major modal verbs and their distribution in the BLC. We will then carry out detailed qualitative analyses of the semantics of these modal verbs in order to obtain a better understanding of this important lexical category.

2. Semantic Functions of Modals and Their Distribution in the BLC

Modals are often classified into the following three groups according to their primary meanings, i.e. possibility modals (*can, may, might, could*), necessity modals (*ought, should, must*) and predictive modals (*will, would, shall*). Coates (1983), however, provides a more detailed account of form-meaning relationships of major modals in his now classic publication, *The Semantics of the Modal Auxiliaries*. His classification of modal meanings is roughly as follows (Table 2), although he admits that the meaning of a modal can best be understood as a “fuzzy set,” with its core, skirt and peripheral meanings whose boundaries are not necessarily as clear-cut as it may seem.

Table 2 Form-meaning relationships of major modals (Based on Coates 1983)

MUST	strong OBLIGATION > confident INFERENCE
SHOULD	weak OBLIGATION > tentative INFERENCE, HYPOTHESIS > QUASI- SUBJUNCTIVE
OUGHT	weak OBLIGATION > tentative INFERENCE
CAN	root POSSIBILITY > ABILITY, PERMISSION
MAY	epistemic POSSIBILITY > root POSSIBILITY, PERMISSION
MIGHT	epistemic POSSIBILITY > root POSSIBILITY, HYPOTHESIS
COULD	HYPOTHESIS > ABILITY > PERMISSION
WOULD	HYPOTHESIS > VOLITION, PREDICTION
WILL	PREDICTION > VOLITION
SHALL	PREDICTION > VOLITION

Primary (Core) > Secondary (Skirt) > Tertiary (Periphery)

Based on this classification, I have established 13 major meaning groups of modals (including the “OTHERS” category) as shown in Table 3. This revised classification scheme was then used as a guideline to map the distribution of semantic functions of modals in the BLC. *Ought*, however, was not included in this analysis because this modal occurs only 12 times in the one-million-word BLC and is generally considered archaic. I have also excluded so-called quasi-modals (i.e. *need, dare, and have to*) from the current analysis.

2.1 Study Procedure

The procedure of the current analysis is roughly as follows:

First, an exhaustive concordance listing was created from the BLC for each of the nine modals (i.e. *will, would, shall, should, can, could, may, might, must*), using a concordancing program.

Next, a total of 240 samples each was extracted randomly from these concordance listings. The number of samples was determined based on the *Ratio Fluctuation Estimate Method*, or RFEM, proposed by Ogino (1998, pp. 216-222). According to the RFEM, the minimum number of samples required for linguistic research at $p < 0.05$ can be obtained by the following simple formula: $n > 20 \times k - 21$, where n is the number of samples, and k is the number of categories established for the research in question. If we have a total of three categories, for instance, the minimum number of samples (MNS) required is 40. If there are 13 categories, as is the case with the current analysis, then the MNS amounts to 240. Theoretically, the MNS can be obtained for each of the nine modals respectively. *Will*, for instance, has only two possible semantic functions (i.e. VOLITION and SIMPLE FUTURE PREDICTION) and, therefore, the MNS for this item can be as few as 20 (i.e. $20 \times 2 - 21 = 19$), or 40 (i.e. $20 \times 3 - 21 = 39$) if the "OTHERS" category is included. Likewise, the theoretical MNS for *would*, which has five possible semantic functions including the "OTHERS" category, can be 80 (i.e. $20 \times 5 - 21 = 79$). On the other hand, common-sense wisdom is that the more samples we have the more reliable the results would be. All things considered, it was decided to adopt an uniform MNS of 240 for all the nine modals.

Finally, a total of 2,160 concordance lines selected were checked manually for their semantic functions and the results were tabulated as in Table 3. Note that in cases where two or more semantic functions seem to have merged into one modal, the one most prominent in a given context was considered to represent that modal. In this process, the original corpus was referred to whenever necessary.

2.2 Results and Discussion

Table 3 shows that the distribution of semantic functions within a given modal is generally not equiprobable but tends to maximally skew towards its "core" function. For instance, *must* is used to indicate OBLIGATION and/or NECESSITY in 198 instances out of 240 (82.5%), *may* to denote TENTATIVE INFERENCE or CONTINGENCY 204 times (85%), and *could* as HYPOTHESIS MARKER in 199 cases (82.9%). This tendency is also clear, although to a lesser degree, in other modals. The only exception is *will*, where the distribution is about equal between the two functions,

Table 3 Distribution of the major semantic functions of modals in the BLC

	SEMANTIC FUNCTIONS	will	would	can	could	may	might	shall	should	must	TOTAL
F1	OBLIGATION and/or NECESSITY							61		191	259
F2	STRONG SUGGESTION								157		158
F3	CONFIDENT INFERENCE								37	48	77
F4	TENTATIVE INFERENCE; CONTINGENCY					204	22				226
F5	REAL POSSIBILITY			186	9						195
F6	ABILITY			48	10						49
F7	PERMISSION			5		32					37
F8	VOLITION		113	4				152			269
F9	SIMPLE FUTURE PREDICTION	127	2					27			156
F10	HYPOTHESIS MARKER		65		190		171		30		467
F11	POLITENESS MARKER		168		31		47		12		258
F12	DEONTIC SUBJUNCTIVE								2		2
F13	OTHERS		1	1		4 ¹⁾			2 ²⁾	1	7
TOTAL (N)		240	240	240	240	240	240	240	240	240	2160
Relative proportion in the BLC (%)		39.3	20.5	14.7	5.1	7.9	1.8	2.4	5.9	2.3	100

1) In these four instances, *may* is used to express wish and/or prayer, as in “Long *may* our association continue.” ([BZ27:00691]) and “Very best wishes to all of you and *may* the good work you are doing continue most successfully.” ([BZ32:02485])⁴.

2) In these two instances, *should* is used as EMOTIVE MARKER, which is identified as SHOULD^{F13} in later discussion.

VOLITION and SIMPLE FUTURE PREDICTION (i.e. 113 vs 127, or 47.1% vs 52.9%). This table can be translated into a form-function matrix of modals as in Table 4, showing

a “functional probability profile” of each of the nine modals, as well as their interrelationships as observed in the BLC.

Table 4 shows, for instance, that the probability of *shall* being used to denote VOLITION is about 63.3%, and that *shall* is close to *will* in Functions 8 and 9 (F8 and F9), and also to *must* in Function 1 (F1). Similarly, it indicates that *would*, *could*, and *might* are very close in Functions 10 and 11 (F10 and F11), but *would* tends to be used as POLITENESS MARKER with a probability of about 70%, whereas *could* and *might* are more likely to be used as HYPOTHESIS MARKER with a probability of about 79.2% and that of 71.3% respectively.

Table 4 Form-function matrix of major modals in the BLC

Semantic Functions (F1 ~ 13) *	will	shall	would	might	could	can	may	should	must
F1. OBLIGATION / NECCESITY		25.4							79.6
F2. STRONG SUGGSTION								65.5	
F3. CONFIDENT INFERENCE								15.4	20
F4. TENTATIVE INFERENCE				9.2			85		
F5. REAL POSSIBILITY					3.7	77.5			
F6. ABILITY					4.2	20			
F7. PERMISSION						2.1	13.3		
F8. VOLITION	47.1	63.3	1.7						
F9. SIIMPLE FUTURE PREDICTION	52.9	11.3	0.8						
F10. HYPOTHESIS MARKER			27.1	71.3	79.2			12.5	
F11. POLITENESS MARKER			70	19.6	12.9			5	
F12. DEONTIC SUBJUNCTIVE								0.8	
F13. OTHERS			0.4			0.4	1.7	0.8	0.4
TOTAL (%)	100	100	100	100	100	100	100	100	100



* See Table 3 for the definition of each function. In this table, the frequency data given in Table 3 have been translated into percentage figures to show the relative importance of functions across each column.

Having thus identified major semantic functions of modal verbs and their distribution in the BLC, we shall now turn to a more detailed analysis of the semantics of modal verbs as they are used in the business discourse.

3. Semantics of Business Modal Verbs

1) Might

The difference between *might* as TENTATIVE INFERENCE (F4) and *might* as HYPOTHESIS MARKER (F10) can be so fuzzy that they are often not discernable as clearly as one might want. In the current study, therefore, all the instances of *might* that can be paraphrased into either the “*It is possible that NP would VB⁵*” or “*It would be (or would have been) possible for NP to VB*” frames without a significant change in the intended meaning are classified as HYPOTHESIS MARKER following Coates’ definition (in Sawada 1992, p. 184). Thus, *might* in the following sentence (1a) is an example of HYPOTHESIS MARKER, because it can be paraphrased into (1b) without any significant change in the meaning, although it is quite possible to consider it as an instance of TENTATIVE INFERENCE.

- (1a) This **might** prove to be more economical in terms of time and energy expended.
[BZ19:13646]
- (1b) *It is possible that this would* prove to be more economical . . .

Other examples of *might* such as “He felt that you *might* be interested in speaking to our members. . . ([BZ01: 00996])” and “I told him you *might* be able to open some doors for him. ([BZ19:05481])” are interpreted to mean “past INFERENCE” (i.e. past tense form of inferential *may*) and are classified into Function 4 (F4), even though other interpretation is also possible.

The instances of *might* in conditional sentences like the following are the obvious cases of *might* used as POLITENESS MARKER and are therefore classified into Function 11 (F11).

- (2) I wonder if it **might** be possible for you to arrange to have a chilled bottle of champagne waiting in their room when they arrive . . . [BZ19:23927]
- (3) If it is at all possible, **might** I suggest that you juggle your schedule - or perhaps send a trusted deputy to the meeting? [BZ18:01987]

These instances of *might* as POLITENESS MARKER (F11) can be understood to mean “I *politely* say to you that . . .”; hence, the difference between MIGHT^{F10} and MIGHT^{F11} may be expressed in the form of lexical conceptual structure (LCS) as follows:⁶

(4) MIGHT^{F10}: [I tentatively infer (that it is possible) that *P_{hypo}*]*

(5) MIGHT^{F11}: [I tentatively infer and politely SAY to you (that it is possible) that *P_{hypo}*]

* *P_{hypo}* = Hypothetical Proposition (= P+*M_{hypo}*, where *M_{hypo}* = Hypothetical Modal); The abstract verb SAY represents all possible types of “saying” verbs, including ask, request, suggest, etc.

2) Could

Could also presents a certain degree of ambiguity between F10 and F11, but a close analysis of the BLC data indicates that the use of *could* as POLITENESS MARKER is largely confined to conditional sentences for making a polite request in either of the following two syntactic frames:

- COULD you VB? (N=8)
- NP^{sub} *would appreciate it* [or NP^{sub} *would be grateful*; NP^{sub} *would like to know/ask*] if you COULD VB. (N=23)

Could in these frames can be replaced with *would*, but are generally considered to indicate an added sense of politeness by not directly referring to the volition of the person to whom the request is addressed. Thus, the difference between COULD^{F10} and COULD^{F11} can be expressed as follows:

(8) COULD^{F10}: [It is possible that *P_{hypo}*]

(9) COULD^{F11}: [I politely SAY to you that (*or ask if*) it is possible that *P_{hypo}*]

The following are the representative samples of COULD^{F10} and COULD^{F11} taken from the BLC respectively.

(10) This **could** constitute a problem unless we can plan a way around them.

[BZ31:03084]

=> *It is possible that* [this would constitute a problem unless . . .]*P_{hypo}*

(11) Therefore, **could** you kindly visit our Tokyo office on November 4 instead?

[BZ35: 00340]

=> *I politely ask if it is possible that* [you would visit our Tokyo office . . .]*P_{hypo}*

Examples of *could* used to indicate “past POSSIBILITY” and “past ABILITY” (past tense of *can*) are as follows:

- (12) I **could** not use Avis because they had nothing that could handle our luggage at that time of night. [BZ19:16803]
- (13) I am sorry that we **couldn't** meet your needs on this particular job, but I hope you will consider us in the future. [BZ13:02580]

In the above instances, *could* is used as the simple past tense form of *can*, whose lexical conceptual structures in Functions 5 and 6 (F5 and F6) may be represented as follows:

- (14) CAN^{F5}: [It is possible (for NP*) to VB] *NP = Logical Subject of VB
- (15) CAN^{F6}: [NP be able to VB]

The above two sentences (12 and 13), therefore, can be paraphrased as “It *was* not possible for me to use . . .” (12’) and “I *was* not able to meet your needs . . .” (13’) respectively.

3) Must

The use of *must* is perhaps the most clear-cut among other modals. The “core” meaning of *must* seems to be OBLIGATION/NECESSITY, with almost 80% of all the occurrences of *must* being used in this semantic function. The lexical conceptual structure (LCS) of *must* in this semantic function (F1) can be represented as follows:⁷

- (16) MUST^{F1}: [I firmly believe that NP be obliged to VB] or [I firmly believe it is necessary (for NP*) to VB] *NP = Logical Subject of VB

The following quotes from the BLC indicate that *must* can impose OBLIGATION either on the grammatical subject of the sentence or on the agent of the possible action being referred to, depending on the context. In Sentence 18, the speaker/writer is imposing OBLIGATION upon himself by declaring “I hereby apologize . . .,” whereas Sentence 19 can only be interpreted as imposing OBLIGATION on the implicit logical subject of the sentence, i.e. the person who does the act of paying. This sentence, therefore, means “*You must pay now!*”

- (18) I **must** apologize for our mistake. [BZ01:03079]
 => *I firmly believe that I am obliged to apologize for our mistake.*
- (19) We **must** have a payment now! [BZ16:00044]
 => *I firmly believe that you are obliged to pay now!*

Must can also be used to indicate CONFIDENT INFERENCE (F3), and the data suggest that this is the secondary function of this modal. The LCS of *must* in this function is as follows:

- (20) MUST^{F3}: [I confidently infer *P** (or that *P* be certain)] **P* = Proposition

The probability of *must* being used in this LCS is about 20%, as shown in Table 4. An interesting property of *must* used in this secondary semantic function is that the grammatical subject of *must* tends to be either *you* (N=21), *it* (N=12), *there* (N=3), or other *inanimate NPs* (N=11) as shown in the following sample quotes from the BLC, although other grammatical subjects such as 1st- and 3rd-person pronouns are also possible.

- (21) I know you **must** be extremely busy at the moment, but . . . [BZ27: 00895]
 (22) It **must** have been delayed in the mail. [BZ05:00787]
 (23) There **must** be some confusion, though. [BZ31:02843]
 (24) I know the loss **must** be overwhelming to you at the moment . . . [BZ09:03667]

Note that the logical subject of the sentence in its deep structure, or the one who makes the inference, is always “I” as indicated in the above LSC. Thus, the above sample sentences are interpreted as trying to convey the following messages in their main clauses governed by *must*:

- (21') *I confidently infer [you are extremely busy at the moment]^p.*
 (22') *I confidently infer [it has been delayed in the mail]^p.*
 (23') *I confidently infer [there is some confusion]^p.*
 (24') *I confidently infer [the loss is overwhelming to you]^p.*

The data also show that MUST^{F3} is usually used to refer to the existing or past events or states of being. In no instances, it is used to refer to future events or states

of being as far as the BLC data is concerned, although it is logically possible to use MUST^{F3} in clauses with future orientation (Coates in Sawada 1992, pp. 49-51). One interesting consequence of this is that MUST^{F3} is most likely to collocate with “be” or “have+VBN.” For instance, of the 48 instances of MUST^{F3} in the BLC samples, 27 (56.3%) are used in the “*must + be*” frame, and 15 (31.3%) in the “*must have + VBN*” frame. Of the remaining six instances, five are the cases of “*must + know* (2), *think* (1), *feel* (1) and *thrill* (1),” indicating a close association of MUST^{F3} with so-called “epistemic” verbs.

4) Shall

Turning back to *shall*, it was mentioned earlier that this modal is close to *will* in Functions 8 and 9, and to *must* in Function 1. The relationship may be expressed diagrammatically as follows (Figure 1).

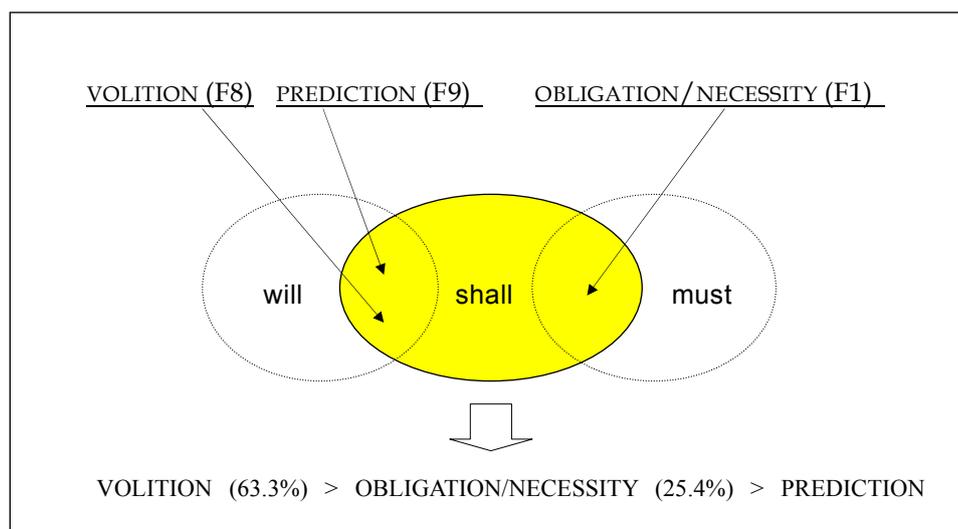


Figure 1 A diagrammatic representation of the semantic relationships between *shall*, *will* and *must*

As this diagram shows, the primary function of *shall* as it is used in the BLC is VOLITION (F8), followed by OBLIGATION/NECESSITY (F1) and SIMPLE FUTURE PREDICTION (F9), with probabilities of it being used in respective functions as indicated in percentage figures. Some of the representative samples of *shall* used in these semantic functions are as follows:

- (25) We **shall** certainly do everything possible to ensure that our present standards of service are maintained. [VOLITION] [BZ23:02544]
- (26) I **shall** be staying at the Cumberland Hotel, Marble Arch, London W1. [SIMPLE FUTURE PREDICTION] [BZ26:00248]
- (27) This Agreement **shall** in all respects be interpreted in accordance with the Laws of England. [OBLIGATION/NECESSITY] [BZ23:04048]

The LCSs of *shall* used in Functions 8 and 9, i.e. VOLITION and SIMPLE FUTURE PREDICTION, can be expressed as in the following:

- (28) SHALL^{F8}: [I intend to VB] = WILL^{F8}
- (29) SHALL^{F9}: [I predict P*] = WILL^{F9} * P= Proposition

Note: SHALL^{F8} (= *volitional shall*) and SHALL^{F9} (= *predictive shall*) are mainly British usage. In non-British contexts, they are sometimes used as the “formal” options of WILL^{F8} (= *volitional will*) and WILL^{F9} (= *predictive will*) respectively.

As noted above, the use of *shall* in these two functions is generally considered British⁸, whereas *will* is used to convey the same meanings in American English.⁹ This observation is partly confirmed by the BLC data as summarized in Table 5, which indicates that *shall* is approximately 21 times *less* common in American English than in British English.

Table 5 Comparative frequencies of *shall* in the three subcorpora of the BLC

BLC Subcorpora	Observed Frequency	Total No. of Word Tokens	N. Freq.
American Samples (AmE: BZ01-21)	69	748,371	9.2
British Samples (BrE: BZ22-27)	312	161,539	193.1
Mixed Samples (MxE: BZ28-37)	259	182,679	141.8
Total	640	1,092,589	344.1

Normalized frequency per 100,000 words. $\chi^2=157.03^{***}$ $p < 0.001$ ($df = 2$)

Of the 69 observed instances of *shall* in the American data, about 74% (N=51) are the cases of “*obligatory shall*”, and the remaining 23% (N=16) and 3% (N=2) are used to indicate VOLITION (= SHALL^{F8}) and SIMPLE FUTURE PREDICTION (= SHALL^{F9})

respectively. As Swan (1995, p. 212) says, *shall* is in fact “not normally used in American English” in the latter two semantic functions. Swan (ibid.) also states that the use of SHALL^{F8} and SHALL^{F9} is “becoming much less common even in British English.” This is clearly reflected in the relative proportion of *shall* to *will* in the BLC (about 1 to 16.5) as we have seen in Table 1. Nevertheless, the fact that *shall* occurred in the BLC about 2.93 times more frequently than it did in the combined Reference Corpora indicates that SHALL^{F8} and SHALL^{F9} are still very much “alive” in British English at least in written business discourse.

A close look at the data further indicates that about 64% (N=200) of all the instances of *shall* in the British samples are the cases of SHALL^{F9}. This is followed by SHALL^{F8} (29%, N=89), and then by SHALL^{F1}, or “obligatory *shall*” (7%, N=23) to be discussed later, by a large margin. One interesting finding in this regard is that over one-thirds of these 200 instances of SHALL^{F9} are used in one of the following set expressions of gratitude:

- *shall be glad to/if* (N=34)
- *shall be pleased to* (N=17)
- *shall be happy to* (N=11)
- other expressions of gratitude* (N=10) (* i.e. *be delighted to/if; be grateful for/if; have the pleasure of, etc.*)

Table 6 shows that the phrase “be glad to/if” is more likely to collocate with *shall* or *should* in British English than it does with *will* or *would*. The probability of the phrase “be happy to” being associated with *shall/should* and *will/would* is exactly 50-50, whereas the phrase “be pleased to” is slightly more likely to co-occur with *will/would* than it does with *shall/should*, although the combination of “*shall/should* + be pleased to” still constitutes about 38.3% of all the instances of this particular expression. Note that over 90% of all the instances of these three phrases in the American samples are headed either by *will* or *would* - showing a marked contrast with the British data.

In the Mixed portion of the BLC (i.e. BZ28 through BZ37), in which Japanese writers are involved in writing the messages contained, about 61% (N=160) of all the instances of *shall* are the cases of SHALL^{F1}. This large number of SHALL^{F1} in this segment of the BLC is largely accounted for by the two subcorpora, BZ34 and BZ35, which include many contractual documents. Of the remaining 99 instances, 58.6%

Table 6 Comparative frequencies of *shall/should* and *will/would* in the three most typical expressions of gratitude in the British data of the BLC

	shall (%)	should (%)	will (%)	would (%)	'll (%)	'd (%)	total (%)
be glad to/if	34 (52.3)	22 (33.8)	3 (4.6)	5 (7.7)	1 (1.5)	0 (0)	65 (99.9)*
be happy to	11 (30.5)	1 (2.8)	7 (19.4)	5 (13.9)	2 (5.6)	10 (27.8)	36 (100)
be pleased to	17 (28.3)	6 (10)	21 (35)	12 (20)	2 (3.3)	2 (3.3)	60 (99.9)*
TOTAL	62 (38.5)	29 (18)	31 (19.3)	22 (13.7)	5 (3.1)	12 (7.4)	161 (100)

* Due to rounding, the total percentage does not amount to 100.

(N=58) are the cases of *volitional shall* (SHALL^{F8}), and 41.4% (N=41) are those of *predictive shall* (SHALL^{F9}). These data indicate that the Japanese business writers tend to use *shall* in place of *will* to indicate VOLITION and/or SIMPLE FUTURE PREDICTION much more frequently than do their American counterparts, although in other respectsb their English is much closer to American English than to British English (Someya, 1999). This is probably due to the unique pragmatic property of *shall* in that when used in place of *will*, it usually carries the connotation of added formality. As such, *shall* is often used intentionally by the Japanese writers to achieve this particular pragmatic purpose in their written business discourse, as in the following examples:

- (30) I assure you that I **shall** do my best to meet the expectations of your association and the students. [BZ32:01622]
- (31) We **shall** appreciate any assistance you can give in helping us to find those wishing to take part in this interesting project. [BZ32:02573]
- (32) If this is acceptable, we **shall** be pleased to advise you of his detailed schedule upon its finalization. [BZ35:00528]
- (33) Should it appear that your resume and [...] are appropriate for the position available, we **shall** be in contact with you to schedule an interview. [BZ37:00722]

The third, and perhaps the most important, function of *shall* is that it is used to indicate OBLIGATION (= SHALL^{F1}), with an attested probability of it being used in this function of about 25% in written business discourse (See Table 3). The LCS of *shall* in this function can be represented as follows:

(34) SHALL^{F1}: [NP be under legal, contractual, or social/ethical obligation to VB]

As specified above, the use of “obligatory” *shall* is largely confined to legal or semi-legal contexts in English as it is used today. In business discourse, SHALL^{F1} is used most markedly in contractual documents; hence, it is sometimes referred to as “contractual” *shall*. Note that the main difference between SHALL^{F1} and MUST^{F1} is that while the former refers to the objective obligation imposed by laws, rules, regulations, contracts, and the like, the latter refers to the subjective sense of obligation/necessity as perceived by the writer/speaker (hence the LCS of [*I firmly believe that NP be obliged to VB*]) and is typically used in non-legal, non-contractual contexts. This means that while SHALL^{F1} often implies some sort of punishment as a result of non-compliance with the stated obligation, MUST^{F1} does not necessarily have that connotation. This difference between the two is clearly manifested in the following examples:

(35) You **must** make reservations by calling Sharon Inn at extension 236 by Thursday, July 3. [BZ09:08285]

(36) However, this matter **must** be resolved before we can move forward. [BZ13:00145]

(37) The Agent **shall** duly keep an account of all orders obtained by him and **shall** every three months send in a copy of such account to the Principal. [BZ23:04026]

(38) The Contractor **shall** at all time during the continuance of the Contract keep insured the [...] Work in the joint name of the Client and Contractor and at the expense of the Client with some insurance company, the name of which **shall** previously have been submitted to and approved by the Client. [BZ34:00212]

5) Should

Finally, we take a look at *should*. As shown in Tables 3 and 4, this modal is used in six different semantic/grammatical functions, i.e. STRONG SUGGESTION (F2), CONFIDENT INFERENCE (F3), HYPOTHESIS MARKER (F10), POLITENESS MARKER (F11), DEONTIC SUBJUNCTIVE (F12), and EMOTIVE MARKER (F13). As such, *should* is usually considered the most difficult modal by EFL learners. This multilayered relationships among the six different meanings can be expressed diagrammatically as in Figure 2.

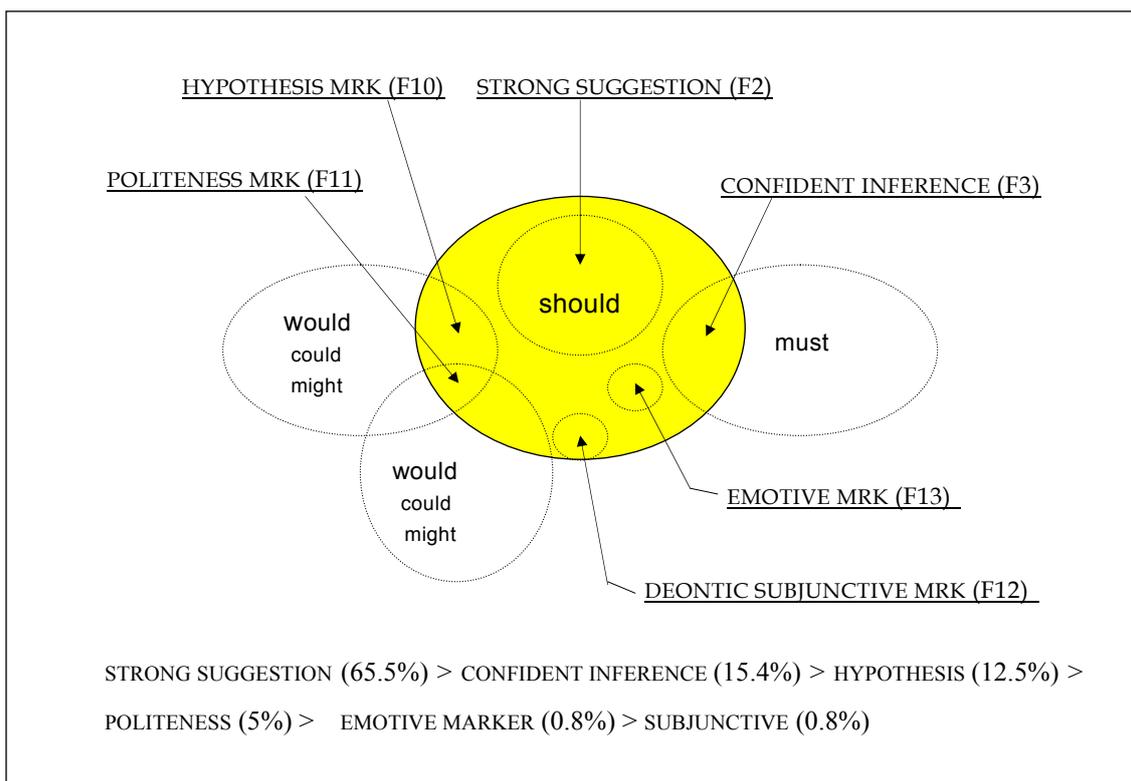


Figure 2 A diagrammatic representation of the six major semantic functions of *should* and its relationships with other modals

As this diagram indicates, the “core” function of *should* is to denote STRONG SUGGESTION (F2), with a probability of it being used in this function at about 65.5%. It is also used to denote CONFIDENT INFERENCE (F3) and as a HYPOTHESIS MARKER (F10), which are the secondary functions of this modal with a probability of it being used in the former function at about 15.4% and that in the latter about 12.5% respectively. The use of *should* as a marker of DEONTIC SUBJUNCTIVE (F12) is negligibly minimum (0.8%), although it still can be found in the BLC, particularly in the British segment of the data. Also infrequent, but nevertheless important from a pedagogical viewpoint, is the use of *should* as EMOTIVE MARKER (F13). This usage of *should* is often cited as problematic by many EFL learners since its meaning is so subtle and context-dependant that to understand it properly without so-called “native instinct” is rather difficult, if not impossible.

6) SHOULD^{F2} (STRONG SUGGESTION)

The LCS of the core function of *should*, which is an independent and unique function of this modal not found in other eight modals, can be represented as

follows:

(39) SHOULD^{F2}: [I strongly suggest (or recommend) that *P*]

Note that as the defining terms “suggest” and “recommend” (to be interpreted as a stronger version of “suggest”) imply, this use of *should* does not carry the connotation of *binding* obligation in any practical way (or, when it implies some sort of obligation, it is always “weak obligation” that is non-binding). The following are some of the representative samples of SHOULD^{F2} as used in the BLC.

(40) Anyone wishing to join one **should** call me on extension 2345 to register their names. [BZ01:01449]

(41) All financial details **should** be finalized as soon as possible. [BZ12:00110]

(42) The order number IMC-2091 **should** be stated on all invoices and correspondence. [BZ33:01051]

(43) These reports **should** contain documentation showing those considerations in the first category were reviewed by the underwriter and judged to be non-critical. [BZ12:02189]

All of the above sentences can be paraphrased into the “I strongly suggest/recommend that *P*” frame without any alteration in the intended meaning. For instance, Sentence (40) can be paraphrased as “*I strongly suggest/recommend that [anyone wishing to join one calls/call me...]^p” and Sentence (42) as “*I strongly suggest/recommend that [the order number IMC-2091 is/be stated on all invoices . . .]^p”.¹⁰**

This use of *should* is the most basic and central one among other possible meanings of this modal. It should be noted, however, that many Japanese learners of English tend to use it in an obligatory context, due most likely to a misconstrued and over-generalized association of *should* with *must* that are only related in Function 3 (*i.e.* CONFIDENT INFERENCE), as evidenced in the following samples taken from the Learner BLC (A version of the BLC compiled from data by Japanese learners of Business English. See Someya (1999) for details).

(44) !Unfortunately, I **should** (=> must [MUST^{F1}]) decline your invitation because I have many previous appointments around the day [*sic*]. [WM98:09005]

- (45) !As we instructed in our interoffice memorandum of November 1, the next year first quarter budget estimate of each division **should** (= > must [MUST^{F1}]) be submitted by November 30 [*sic*]. [WM98:21235]

In Sentence (44) above, the writer meant to write that he was obliged to decline the invitation due to a commitment he had already made; therefore, he should have used MUST^{F1}, or *obligatory must*, instead of *should*. In Sentence (45), the writer is not making a suggestion or recommendation; he is issuing a business instruction that must be followed by all members concerned, which means that either MUST^{F1} or SHALL^{F1} is the only possible choice in this context.

These errors that abound in the Learner BLC suggest an important pedagogical lesson that, in teaching modals, it is necessary to bring home to students the point that *should* in its normal use does not denote the concept of binding obligation, or obligatory necessity, and thus is distinct from *must* or *shall* in all due respects. (Table 4 shows that *should* and *shall* do not have any direct semantic relationship, indicating that they are quite different words despite the apparent similarity in their surface forms).

7) SHOULD^{F3} (CONFIDENT INFERENCE)

Should can also be used to indicate CONFIDENT INFERENCE (F3), and the data suggest that this is the secondary function of this modal with about 15.4% probability of it being used in this function. The LCS of *should* in this secondary function can be expressed as follows:

- (46) SHOULD^{F3}: [I think it is most likely that *P*]

As noted earlier, this usage of *should* is close to MUST^{F3}, and these two modals are sometimes used more or less interchangeably. But the main difference between the two is that while MUST^{F3} implies a strong confidence on the part of the writer/speaker in the certainty of the inference being made (hence the LCS of [I confidently infer *P* (or that *P* be certain)]), SHOULD^{F3} is slightly more tentative in making the inference. Also, while the former usually refers to either existing or past events or states of being as discussed earlier, the latter has a strong future orientation. For instance, of the 37 instances of SHOULD^{F3} in the BLC, 35 (94.6%) cases are those referring to future actions or events as in the following quotes:

- (47) They **should** be in touch soon. [BZ01:00387]
 (48) We start on <date>, and **should** be finished by <date>. [BZ01:01464]
 (49) Therefore you **should** receive payment on April 1. [BZ31:02342]

All of these instances of *should* exhibit the above mentioned features of SHOULD^{F3} and are not replaceable with MUST^{F3}. To do so will simply make these sentences semantically confusing. Note that Coates (*op. cit.*) does not mention this usage of *should*. Instead, he sees TENTATIVE INFERENCE as the secondary function of this modal (See Table 2), citing the following sentence as an instance of *should* used to denote TENTATIVE INFERENCE (Coates in Sawada 1992, p. 78).

- (50) the trip **should** take about sixteen days.

According to Coates, this sentence can be paraphrased as “I think it’s probable that the trip will take about sixteen days.” The adjective *probable*, however, indicates that the write/speaker of this sentence is considering that the probability of the event in question to be realized as stated is *very high*, rather than indicate his “tentativeness” (which by definition means “uncertainty”) in making the statement. The above sentence, therefore, can better be paraphrased as “I think it is *most likely* that [the trip will take about sixteen days.]^p.” Besides, to say that *should* in the above example denotes TENTATIVE INFERENCE makes it difficult to distinguish it from *inferential may* (=MAY^{F4}) and its weaker or hypothetical version, *i.e.* MIGHT^{F4}. All in all, I consider my definition of SHOULD^{F3} with the LCS described in (46) more appropriate than that of Coates’.

8) SHOULD^{F10} (HYPOTHESIS MARKER)

Should is also used as HYPOTHESIS MARKER (F10) and is close to COULD^{F10} and MIGHT^{F10} in its grammatical function, and to WOULD^{F10} in both its grammatical and semantic function. Of particular importance, however, is its close relationship with WOULD^{F10}.

As noted earlier, SHOULD^{F10} is generally considered a British variant of WOULD^{F10} and, as such, is usually replaceable with WOULD^{F10} without any significant change in the intended meaning. Nevertheless, as is also the case with *shall*, it is often used in business writing as a “formal” option to WOULD^{F10}. In such cases, the two modals are not simply interchangeable, although it is not always clear and can only be

inferred from the given context whether a given instance of SHOULD^{F10} is to be interpreted simply as a sign of British English or is used with a particular stylistic meaning.

Although pragmatically rather ambiguous and semantically complicated, a close look at the BLC data indicates that the use of SHOULD^{F10} is quite limited, not only in the number of occurrences but also in its syntactic variety. As seen in Table 3, we have identified 30 cases of *should* used as a pure hypothesis marker out of the 240 samples taken from the BLC. All of these 30 instances are found to occur in one of the following three syntactic frames:

- Pattern 1: [SHOULD NP^{sub} VB + Main Clause] (N=15, 50%)
- Pattern 2: [NP^{sub} SHOULD HV BEN | VBN] (N=9, 30%)
- Pattern 3: [IF NP^{sub} SHOULD VB + Main Clause] (N=6, 20%)

* NP^{sub} = Noun phrase acting as the grammatical subject, HV = have, BEN = been, VBN = Full verb in the past participle form.

Some of the representative samples of SHOULD^{F10} used in the above three syntactic patterns are as follows:

[Pattern 1: SHOULD NP^{sub} VB + Main Clause]

- (51) Additionally, **should** you wish to renew your subscription, you may do so at 50 percent off the current rate. [BZ12:00600] (AmE)
- (52) There will be no official U.S. Government involvement in it, **should** the project come to fruition. [BZ32:01452] (MxE)

[Pattern 2: NP SHOULD HV BEN | VBN]

- (53) The figure **should have been** \$443.40 instead of \$466.40. [BZ02:02086] (AmE)
- (54) I **should have sent** a note to you before I left for China. [BZ31:02233] (MxE)

[Pattern 3: IF NP SHOULD VB + Main Clause]

- (55) **If** the circumstances **should** change earlier than expected, we shall forward a cheque at once. [BZ27:01652] (BrE)
- (56) I shall therefore send them a copy of this letter to you so that they might contact you **if** the need **should** arise. [BZ37:00354] (MxE)

In Pattern 1, *should* is used in place of *if* at the clause-initial position and, as such, it simply functions as a pure conditional marker.¹¹ The following more usual or unmarked versions of the above (51) and (52) show that the use of *if* in these sentences does not make any change in their meanings whatsoever:

- (51') Additionally, **if** you wish to renew your subscription, you may [...].
(52') There will be no [...], **if** the project come to fruition.

This marked construction is usually considered British, but it is also used in other varieties of English, as a formal option of *if-conditional*, or simply to avoid repetition of “if” as a conditional marker when one is used elsewhere in the same document. The LCS of SHOULD^{F10} for Pattern 1, therefore, can be represented simply as follows. Note that the use of SHOULD^{F10} in Pattern 1 is unique to this modal and it is not replaceable with WOULD^{F10}.

- (57) SHOULD^{F10} (Pattern 1) : [IF P^1 then P^2] or [I formally SAY to you that IF P^1 then P^2]
* P^1 = conditional proposition, with SHOULD^{F10} as a conditional marker at the clause-initial position (i.e. “Should NP^{sub} VB+Main Clause”). P^2 = resultive proposition, with a modal verb indicating future-time orientation. The tense of the modal in the resultive clause depends on the intended meaning, although the present tense (i.e. will, may, etc.) will usually suffice.

In the second pattern, SHOULD^{F10} is used to refer to a non-factive proposition - something that did not happen as expected. This usage of SHOULD^{F10} normally carries negative connotation, i.e. regrets, blame, criticism, and other similar sentiments depending on the context. This is done by way of implication embedded in this particular syntactic frame, although it is not necessarily clear exactly what is implicated only from the surface structure of the sentence. The implication is usually, but not always, made clear in the context. In Sentence (52), for instance, it is possible to interpret that the writer is accusing someone of his/her error in calculation. But the context in which this sentence appears shows that it is not the case, as we can see from the following abridged quote of the letter from which this example was taken (Poe, 1994):

Dear Mrs.*****:

[...] As you will see, we made an error in our extension on invoice

763. The figure **should have been** \$443.40 instead of \$466.40. For some reason, the discount to which you were entitled on invoice 877 wasn't given you; this amounts to \$60. And credit for \$888.80 for the returned shipment was not given because our warehouse didn't notify the accounting department that [...] .

I am very sorry about these mistakes, and I can't imagine why they all happened to you. Nor can I explain why you got the runaround when you tried to get the matter settled. [...] Thank you for your patience.

The context clearly shows that the writer is expressing his regrets in saying: "The figure *should have been* \$443.40 instead of \$466.40." This implicature is made explicit by the phrase, "I am very sorry..." at the beginning of the last paragraph.

Similarly, the intended connotation of Sentence 53, which was taken from the following e-mail message, is made clear by reading its entire context (Ryan and Nagatsuna, 1997):

I am awfully sorry for responding to you so late. I was in China for last two weeks and could not receive any email messages. I **should have sent** a note to you before I left for China. Please accept my apologies.

Although a bit too lengthy, the LCS of SHOULD^{F10} for Pattern 2, can thus be expressed as follows. Note that SHOULD^{F10} in this construction is not replaceable with WOULD^{F10} as was also the case with SHOULD^{F10} in Pattern 1.

(58) SHOULD^{F10} (Pattern 2): [*P* was supposed to be true [but in reality it's not true [and I REGRET it]]] *hypo*

*Pattern 2 = "NP_{sub} should HV BEN|VGN," where the entire statement is made as a pure counter-factual hypothesis. The abstract verb REGRET represents negative sentiments, such as regrets, blame, criticism, and so on.

The following rewrite tests show that the above LCS for SHOULD^{F10} in Pattern 2 is more or less accurate.

- (53') The figure was supposed to be \$443.40 instead of \$466.40 [*but in reality it wasn't so [and I REGRET it]*].
- (54') I was supposed to send a note to you before I left for China [*but in reality I didn't so [and I REGRET it]*].

Pattern 3 is the case of SHOULD^{F10} used in a conditional *if-clause*. As such, it introduces a proposition that is either not assumed as true or very unlikely in the opinion of the writer/speaker. Often, but not always, it carries a negative connotation or an element of surprise. This existence of this connotation will become clear by comparing the following two sentences:

- (55) **If** the circumstances **should** change earlier than expected, we shall forward a cheque at once.
- (55') **If** the circumstances **changes** earlier than expected, we shall forward a cheque at once.

Both of these two sentences are grammatically well-formed and convey the same propositional meaning. In the original sentence (55), however, the writer thinks that the proposition stated in the *if-clause* is not likely to occur and, in saying so, implies that he would be rather surprised if it did.¹¹ In (55'), on the other hand, the same proposition is given as an open condition; that is, as something that is quite possible to occur. As such, no element of surprise or other emotional consequences are implied in the statement. Thus, the LCS of SHOULD^{F10} in Pattern 3 may be described as follows:

- (59) SHOULD^{F10} (Pattern 3): [IF *P^{1-hypo}* [although in my opinion *P¹* is not very likely (and I WOULD^{F10} be rather SURPRISED if that happened or was the case), but if *P^{1-hypo}* anyway] then *P²*].

*Pattern 3 = "If NP_{sub} should VB + Main Clause." *P^{1-hypo}* = hypothetical proposition, with SHOULD^{F10} in the *if-clause*. *P²* = resultive proposition, with a modal verb indicating future-time orientation. The tense of the modal in the resultive clause can be either in the present or past forms depending on the intended meaning. The abstract adjective "(be) SURPRISED" represents other emotive adjectives of both positive and negative connotation. The comment in the round parentheses, however, may be totally omitted. In the above LCS, WOULD^{F10} roughly equals SHOULD^{F10} without the emotive content expressed by the abstract adjective SURPRISED.

Again, the following rewrite tests for Sample Sentences (55) and (56) indicate that the above LCS properly captures the rather subtle semantic properties of the modal *should* as used in conditional sentences in Pattern 3:

(55'') [If the circumstances change earlier than expected [*although in my opinion it's not very likely (and I WOULD^{F10} be rather surprised if they did), but if they did anyway, then*] we *SHALL^{F8} forward a cheque at once].

* "we SHALL^{F8} forward..." => "I intend to forward..." (SHALL^{F8} = WILL^{F8})

(56') [I SHALL^{F8} therefore send them a copy of this letter to you so that they MIGHT^{F10} contact you if the need arise [*although in my opinion it's not very likely (...), but if it did anyway, then P = "They *MIGHT^{F10} contact you."*]

* "they MIGHT^{F10} contact you." => "I tentatively infer that it is possible that they would contact you." or "I tentatively infer that it would be possible for them to contact you."

9) SHOULD^{F11} (POLITENESS MARKER)

The fourth usage of *should* is closely related to SHOULD^{F10} in that it is also a type of hypothesis marker with an *if* element embedded in the deep structure if not in the surface structure. But the main function of SHOULD^{F11} is more pragmatic than grammatical. In other words, SHOULD^{F11} is used to make a statement more polite than it would be otherwise, by adding an element of hedging, hesitation, indefiniteness and so on to the propositional contents of the statement being made.

Among the 240 samples surveyed, we have identified 12 instances of SHOULD^{F11}. This constitutes about 4.7% of all the instances of modals used in this function (i.e. 12 out of 258. See Table 3 for details). This clearly shows that SHOULD^{F11} only has a peripheral role as POLITENESS MARKER. A close look at the data further indicates that the use of SHOULD^{F11} is quite limited not only in terms of its absolute frequency but also in its syntactic environment. Some of the representative samples of SHOULD^{F11} as used in the BLC are as follows:

(60) We have both these models in stock and **should be glad** to show them to you if you would care to call at our showroom. [BZ23:00075]

(61) I **should be grateful** if you could introduce me to appropriate persons to discuss the possibilities. [BZ32:02122]

(62) We **should appreciate** any assistance you may give her. [BZ32:01098]

- (63) We **should like** to draw your particular attention to the fact that the [...] disposal unit is not yet complete, although you contracted for completion by the end of March. [BZ36:01631]

As indicated in the above samples, SHOULD^{F11} is mainly used in conjunction with a certain group of emotive verbs or adjectives such as (be) *glad*, (be) *grateful*, *appreciate*, *like (to)* and so on, as was also the case with SHALL^{F9}. Table 7 compares normalized frequencies of SHOULD^{F11} and WOULD^{F11} used with “*appreciate*” and “*like to*” in the entire BLC data.

Table 7 Comparative normalized frequencies of *would* and *should* co-occurring with *appreciate* and *like to* in the three subcorpora of the BLC (per 100,000 tokens)

	AmE	BrE	MxE	Total
should (shall) appreciate	0 (0)	2 (1)	1 (14)	3 (15)
would (will) appreciate	32 (4)	9 (11)	65 (5)	106 (20)
-’d (-’ll) appreciate	3 (1)	0 (0)	1 (0)	4 (1)
Total	35 (5)	11 (12)	67 (19)	113 (36)
should like to	0	25	3	28
would like to	91	59	159	309
-’d like to	13	4	7	24
Total	104	88	169	361

* The above figures are normalized frequencies per 100,000 word tokens, obtained by multiplying actual frequencies in the three BLC subcorpora by 0.133624 (for AmE), 0.619046 (for BrE), and 0.547408 (for MxE) respectively. Fractions of .5 and over are counted as a whole number and the rest cut away for simplicity.

The table shows that in both cases WOULD^{F11} is the primary option in all of the three BLC subcorpora (i.e. British, American and Mixed portions), although “*like to*” (and also “(be) *glad to/if*” -- see Table 6) tends to collocate with SHOULD^{F11} in British English at a probability of about 30% (about 81% in case of “(be) *glad to/if*”). Table 7 also shows that the verb *appreciate* has a strong collocability with either WOULD^{F11} or SHOULD^{F11} rather than with *will* or *shall*, reflecting the formal nature of this verb whose frequency of occurrence and “Keyness” in written business discourse are particularly high.

It is also interesting to note that, as far as the above data show, the reduced forms are less likely than the full forms in a statement meant to be polite, although American writers use the reduced form of *would* in the set phrase “would like to” in about 12.5% of all the cases.

Getting back to the Sample Sentences (60) to (63), it was mentioned that SHOULD^{F11} involves “an *if* element embedded in the deep structure, if not in the surface structure.” The “*if* element” is made explicit in (60) and (61). In other two instances, i.e. (62) and (63), however, it can only be inferred from the context or by logical deduction. A sentence like “I should (or, more commonly, *would*) like to ask you a question” obviously has the *if* part in its deep structure, which might be expressed as something like “if it is/was/were acceptable to you.”¹³ Similarly, (62) can be interpreted as saying, “We should appreciate any assistance you may give her (*if it is/was/were possible for you to so do*).” This connotation becomes clearer when *should* is replaced with *shall*, in which case the writer is simply expressing his or her volition (SHALL^{F8}).

This observation leads us to formulate the following rather simplified LCS for SHOULD^{F11}:

(64) SHOULD^{F11}: [I politely SAY to you that (if P^1/P^{1-hypo} then) P^2].

* The parenthetical *if*-clause can either be stated explicitly or left to infer. It can also be either open or closed condition.

The following rewrite tests show how the above LCS applies to each of the four sample sentences. Note that the “*if* element” is covered in (63’) by the semi-modal WISH TO (see note below).

(60’) [We have both these models in stock and [I *politely say to you* [that we *SHALL^{F9} be glad to show them to you [if you WOULD^{F11} care to call at our showroom]]]].

(61’) [I *politely say to you* [that I SHALL^{F9} be grateful [if you COULD^{F11} introduce me to appropriate persons to discuss the possibilities]]].

(62’) [I *politely say to you* [that we SHALL^{F9} appreciate any assistance you may give her (*and this is, of course, if it is possible for you to so do at all*)]].

(63’) [I *politely say to you* [that we **WISH TO draw your particular attention to the fact that [...]].

* SHALL^{F9} = WILL^{F9} (Being *glad*, *grateful*, or *pleased* are the emotional states caused by some agent external to the affected; therefore, this *shall* can only be SHALL^{F9}.)

** WISH TO = defined here as a semi-modal used to express one's want in a reserved and non-direct manner.

10) SHOULD^{F12} (DEONTIC SUBJUNCTIVE)

The fifth usage of *should* is the case of *should* used as DEONTIC SUBJUNCTIVE MARKER, in which "deontic" is defined as something to do with duty, obligation, necessity, desirability and other similar concepts. Some of the typical examples of the deontic *should*, or SHOULD^{F12}, found in the BLC are as follows:

- (65) However, considering that this is a special and very rare case, we agree that it **should** be regarded as an exception. [BZ19:15383] (AmE)
- (66) I have carefully considered your request that our Company **should** place an advertisement in the United Churches Review. [BZ25:08504] (BrE)
- (67) The suggestion you make that I **should** include a table showing typical state regulations is a really good idea and has contributed a lot in improving the speech before submitting it to the [...] for publication. [BZ28:00543] (MxE)

Of the above three instances, only the first two were in the 240 samples initially taken for the purpose of the current survey. This means that SHOULD^{F12} is rather rare, comprising only about 0.8% of all the sample tokens. A further survey revealed that SHOULD^{F12}, when it occurs, occurs in *that*-clauses in one of the following three syntactic environments:

- [Main clause with a DEONTIC VERB] + [that NP SHOULD^{F12} VB]
- [Main clause with a DEONTIC NOUN] + [that NP SHOULD^{F12} VB]
- [It is + DEONTIC ADJECTIVE] + [that NP SHOULD^{F12} VB]

The "deontic" verbs, nouns and adjectives in the main clause include, but not limited to: [verbs] *advise*, *agree*, *argue*, *ask*, *claim*, *conclude*, *believe*, *decide*, *declare*, *insist*, *order*, *persuade*, *prefer*, *propose*, *recommend*, *remind*, *request*, *require*, *suggest*, *think*; [nouns] *agreement*, *assertion*, *basis*, *conclusion*, *determination*, *idea*, *necessity*, *need*, *notion*, *obligation*, *promise*, *recommendation*, *request*, *suggestion*, *theory*, *view*; [adjectives] *appropriate*, *better*, *critical*, *essential*, *important*, *ironical*, *inevitable*,

legitimate, natural, necessary, right, and understandable - although not all of them are found in the BLC data within the above three syntactic frames.

Sample Sentences (65) to (67) contain in their main clauses such deontic lexical items as *agree, request, and suggestion*, all of which express the idea that something is important, desirable, obligatory or else needs to be done, as follows:¹⁴

(65') we *agree* that it **should** be regarded as . . .

(66') your *request* that our Company **should** place an advertisement in . . .

(67') the *suggestion* that I **should** include a table showing . . .

This usage of *should* is generally considered British (Swan 1995, p. 518). However, Table 8 shows that SHOULD^{F12} is not as prevalent as we might expect even in British English, although when it occurs it tends to occur more in British English than in other varieties of English. In American English, SHOULD^{F12} is not normally used, if not “unusual” as Swan says (*ibid*), and either present subjunctives (i.e. verbs used in their bare forms) or ordinary indicative verbs are used, except when *should* is used to emphasize an added sense of STRONG SUGGESTION or OBLIGATION (= SHOULD^{F2}) as is the case with Sample Sentence (65).

The current survey also found that the present subjunctive in “deontic” sentences - sometimes called the “American subjunctive” because it has been considered characteristic of American English - is as common as SHOULD^{F12} in British English as well and, in some cases, it is much preferred to SHOULD^{F12} depending on the types of deontic lexical items used in the main clause (see *suggest, request (v), and important* in Table 8, for instance).

Table 8 Comparative normalized frequencies of SHOULD^{F12}, present subjunctives and other verb forms in ten “deontic” sentences in the BLC subcorpora (per 500,000 tokens)

Deontic words in main clause	Verb forms in subordinate <i>that</i> -clause	BrE	AmE	MxE	Total
agree	SHOULD ^{F12}	6	3	3	12
	present subjunctive verbs	3	1	5	9
	indicative verbs/modals	46	46	22	114
	others (might, could, would)	3	5		8
suggest	SHOULD ^{F12}	6	1		7
	present subjunctive verbs	43	59	60	162
	indicative verbs/modals	12	8	16	36
	others (might, could, would)	6	1	3	10
decide	SHOULD ^{F12}		4		4
	present subjunctive verbs		4	3	7
	indicative verbs/modals	3	7	5	15
	others (might, could, would)	3	1	3	7
request (v)	SHOULD ^{F12}	3			3
	present subjunctive verbs	105	29	8	142
	indicative verbs/modals			71	71
suggestion	SHOULD ^{F12}	15			15
	present subjunctive verbs	9	5		14
	indicative verbs/modals		4		4
	others (might, could, would)		1	3	4
request (n)	SHOULD ^{F12}	6			6
	present subjunctive verbs	6	15	11	32
	indicative verbs/modals				
	others (might, could, would)		1		1
promise (n)	SHOULD ^{F12}				
	present subjunctive verbs				
	indicative verbs/modals	9	5		14
important	SHOULD ^{F12}				
	present subjunctive verbs	6	8	3	17
	indicative verbs/modals	3	1		4
imperative	SHOULD ^{F12}				
	present subjunctive verbs		3	3	6
	indicative verbs/modals				
essential	SHOULD ^{F12}				
	present subjunctive verbs	3	3	3	6
	indicative verbs/modals				
Total		297	214	222	730

* The above figures are normalized frequencies per 500,000 word tokens, obtained by multiplying actual frequencies in the three BLC subcorpora by 3.095228 (for BrE), 0.668118 (for AmE), and 2.737041 (for MxE) respectively. Fractions of .5 and over are counted as a whole number and the rest cut away for simplicity.

From a semantic viewpoint, SHOULD^{F12} may be considered void as long as it simply functions as a subjunctive marker. But the use of subjunctive, whether it is of British or American types, in deontic sentences has a meaning in itself. It is used to make the statement sounds more formal than otherwise, because in a less formal context ordinary present or past tenses are usually preferred. As such, the LCS of SHOULD^{F12} can be expressed as follows:

(68) SHOULD^{F12}: [I formally SAY to you that P]

In this LCS, the *P* (= proposition) is expressed in the indicative mood, because the subjunctive element is taken over by the adjective, *formally*. The following rewrite tests show that the above LCS properly, if rather simplistically, describes the essential semantic contents of the original messages.

(65'') [However, considering that this is. . . [I *formally* SAY to you [that we agree that it is regarded as an exception]]].

(66'') [I *formally* SAY to you [that I have carefully considered your request that our Company places an advertisement in the United Churches Review]].

(67'') [I *formally* SAY to you [that the suggestion you make that I include a table showing typical state regulations is a really good idea, [and . . .]]].

11) SHOULD^{F13} (EMOTIVE MARKER)

The last usage of *should* is that as EMOTIVE MARKER, i.e. to express such emotion as surprise, disappointment, anger and other similar reactions. This is another unique function of *should* that is not found in other modals. In the 240 samples taken from the BLC, however, we have identified only two instances of SHOULD^{F13}, indicating that SHOULD^{F13} is also rather rare. A quick run of a computer program through the entire research corpora found that it occurs in the following two syntactic environments:

- [Main clause with an EMOTIVE ADJECTIVE] + [that NP^{sub} SHOULD^{F13} VB]
- [It is + EMOTIVE ADJECTIVE] + [that NP^{sub} SHOULD^{F13} VB]

The “emotive” adjectives in the main clause include, but not limited to: *amazed, annoyed, anxious, delighted, disappointed, flattered, gratified, happy, pleased, proud, surprised, upset, fortunate, horrible, impossible, improbable, lucky, natural, pity, strange,*

unfortunate, unlucky, and so on - although not all of them are found in the BLC data within the above two syntactic frames.

The following sample sentences quoted from the BLC contain in their main clauses such emotive lexical items as *upset, unfortunate* and *gratified*, all of which express a particular kind of an emotional reaction of either the writer/speaker himself or someone else to the propositional content of the respective messages:

- (69) He was obviously very *upset* that this **should** occur. [BZ01:03870] (AmE)
- (70) It is very *unfortunate* that there **should** have been any misunderstanding, but we hope you will forgive the delay which has been caused. [BZ23:01561] (BrE)
- (71) I am, of course, also *gratified* that you **should** think my contribution valuable and I will do my best to give the meeting all I've got. [BZ25:01825] (BrE)

The computer search, in which the above-listed 22 adjectives were used as part of the key search strings, also found that a total of 19 instances of SHOULD^{F13} occurred in the BLC, of which about 95% (N=18) were in the British segment of the data. In the LOB, Brown, and TIME Corpora, the total numbers of occurrences of SHOULD^{F13} headed by any one of the above 22 adjectives were 17, 4, and 0 respectively. This is in confirmation of the initial observation that SHOULD^{F13} is rather rare, but it also indicates that SHOULD^{F13} is more British than American. In the TIME Corpus, for instance, either *would* or ordinary indicative verbs are used, as follows:

- (72) I'm not at all *surprised* that 100 or 200 **would** attack an asylum house. [TIME:039631]
- (73) It was only *natural* that most of the new female candidates **would** define themselves as women on a mission. [TIME:037738]
- (74) We are *happy* that our plans for this project **appealed** so much to IBM that it offered to become the sole advertiser for this issue. [TIME:025379]

The only exception is the use of SHOULD^{F13} in the "Why *should* NP VB?" frame, which is very common, for good reason, both in British and American English. A total of 55 instances of this *should* were found in the combined Reference Corpora, of which the following are some of the representative samples:¹⁵

- (75) *Why should* we hire a person with limited experience [...] when, for the same money, we can hire a fully-trained experienced professional? [BZ04:01979]
- (76) *Why should* it come as a surprise, psychologists ask, that children thus passed around have a hard time developing any sense of identity or stability? [TIME:031716]
- (77) *Why should* he be concerned? [BRW:34152]
- (78) As long as it isn't you, *why should* you worry? [LOB:48990]

This *should*, as long as it is used to mark the emotive-judgmental content of the proposition being made, can also be classified as SHOULD^{F13}, although it occurs in a *wh*-clause, rather than a *that*-clause, with or without an explicit emotive lexical item in the surface structure of the clause. Semantically, the clausal LCS of this more or less formulaic structure can be expressed as: [Why P^i (when it doesn't have to be P^i)?], in which the part in parentheses corresponds to the modal *should* in the original structure.

This brings us back to consider the semantics of SHOULD^{F13} as it is used in sentences like Sample Sentences (69) to (70). In Sample (69), for instance, the *that*-complementary clause has a message structure of " $S=P+M$ " where P is the propositional content of the complementary clause S , and M is a modal element that indicates the emotive-judgmental content of the S . The P of (69) is given as a factual statement in the past tense (i.e. this occurred [to him]) and the M is represented by the modal *should* indicating "his" judgment as to the P , that in his opinion, which is also the writer's opinion at the time of writing, "*this shouldn't have occurred.*"

Why "he" thinks this way we don't know only from the given sentence. It may be because he simply wasn't expecting it to occur, or it is something that shouldn't have occurred to anyone to begin with. However, the following excerpt of the business letter from which (69) was taken makes clear the logical and ethical connotative background of the modal *should* as it is used in this particular sentence (Holt, 1988):

Mr. (name) from (company) has lodged a formal complaint with me, stating that you were uncooperative with him when he asked you to rectify a mix-up in his order.

He was obviously very upset that this **should** occur. He says you refused to help him, and that you started shouting at him. [...] Our company is known for its policy of good customer relations, even in the most trying situations. I personally believe that [...]

Similarly, in Sentence (70), the writer is expressing his emotive judgment that “It is very *unfortunate* that there have been misunderstanding” because, in his opinion, “*there shouldn’t have been any*” simply because it’s not something desirable. The emotive judgment can also be made in a positive direction as is the case with Sample (71), where the writer is expressing his gratitude that “you think my contribution valuable” when, in the humble opinion of the writer, he or she is “*not at all obliged to think that way.*”

The observation made so far allows us to formulate the LCS for SHOULD^{F13} as follows:

(79) SHOULD^{F13}: [[Because P^i is/was not expected, desirable or otherwise assumed not likely] I am (or NP_{sub} BE) SURPRISED that P^i]

* The abstract adjective “(be) SURPRISED” represents other emotive adjectives expressing feelings caused by events or states that are contrary to the expectation of the affected. These adjectives may be tentatively classified into the following three groups: [negatively SURPRISED] *annoyed, disappointed, upset, horrible, impossible, improbable, pity, strange, unfortunate, unlucky*; [positively SURPRISED] *amazed, delighted, flattered, gratified, happy, pleased, proud, fortunate, lucky*; [neutrally SURPRISED] *anxious, natural, surprised.*

We have already seen that this LCS can be applied to Sample Sentences (69) to (71), but to recapitulate the point, I will repeat below simplified rewrite versions of these sentences, taking now into consideration the above LCS:

(69’) [He was very upset that it occurred [*because it was not expected to occur*]].

(70’) [I think it is very unfortunate that there have been misunderstanding [*because it is not something desirable (and, therefore, there shouldn’t have been any)*], but we hope [. . .]].

(71’) [I am, of course, also gratified that you think my contribution valuable [*because I didn’t neither expect such an reaction from you, nor assumed it likely that you think that way*], and I will [. . .]].

4. Summary and Conclusion

In this paper, we discussed one of the most important grammatical categories, the modal verb, as a continuation of the discussion initiated in Someya (1999). It was found in the previous study that there were substantial differences among modals in the kinds of syntactic environments in which they occur.

Since these differences are largely due to the different semantic functions of respective modals, we have proceeded in the current paper to a rather lengthy discussion on the semantic functions of the nine major modal verbs and their distribution in the BLC. We have found that each modal had multiple semantic and/or grammatical functions, and that the distribution of these functions within a given modal was generally not equiprobable but tended to maximally skew towards its "core" function (Tables 3 and 4). Also included in the current discussion was an experimental attempt to describe the LCSs of the major modals in more or less non-technical terms. In doing so, a particular attention was given to *should* since this is the most complicated modal with six different functions assigned to it.

Although a lot more need to be done for the current study to be complete, we believe that it has made some contribution in promoting a better and clearer understanding as to the nature and usage of this important lexical category in the business genre of professional discourse, particularly for the Japanese learners of Business English.

Notes

- 1 The BLC consists of approximately one million words of English business messages (Number of messages = 10,522) compiled from 37 business writing textbooks and references published after 1970. The BLC consists of 37 subcorpora, BZ01 to BZ37. See Someya (1999, pp. 14-17) for more details.
- 2 The Reference Corpora (RC) comprises the Brown Corpus (one million words of non-genre specific American English in the 1960s), the LOB Corpus (British counterpart of the Brown Corpus), and the TIME Corpus (one million words of journalistic English taken from the *TIME* magazines published in 1992). Also See Someya (ibid.) for more details.
3. Keyness score (or K-score): A numeric index of the "keyness" of each word in a corpus. The "keyness" of word *x* is calculated by comparing the frequency of that word in the target corpus

with that of the same word in a much larger reference corpus, taking also into consideration the total numbers of running words (tokens) in both corpora. In the current study, Ted Dunning's Log Likelihood test was used to calculate the statistical significance of a given K-score. This test "gives a better estimate of keyness (than does the classic χ^2 test), especially when contrasting long texts or a whole genre against your reference corpus" (Scott, 1998. p. 65). A detailed theoretical description of Dunning's Log Likelihood test can be found in Dunning (1993). In the current study, a word is considered to be "key" either positively or negatively if the *p* value obtained for that word is < 0.000001 . (Someya, *ibid.* p.58)

4. The notation [BZ27:00691] indicates that this particular sample was taken from Line 00691 of BZ27, or Subcorpus No. 27 of the BLC.
5. The POS tag "VB" stands for a "verb in present tense or bare form." Other POS tags include: VBD (verb, past tense), VBG (verb, present participle or gerund), VBN (verb, past participle), MD (modal auxiliary), RB (adverb), and JJ (adjective). For a complete description of POS tags used in the current study, see the University of Pennsylvania (Penn) Treebank Standard Tagset (<http://www.scs.leads.ac.uk/ccalas/tagset/penn.html>).
6. The LCSs of *may* in Functions 4 and 7 can be expressed as follows, where *P* stands for a preposition stated in the indicative mood (i.e. non-hypothetical proposition):
 - (6) mayF4: [I tentatively infer that *P*]
 - (7) mayF7: [NP be permitted to VB]
7. *Must* in this function is similar to the semi-modal, *have to*. The main difference between the two forms is that while in the former the speaker/writer is an active participant in the imposition of obligation upon the grammatical or logical subject of the sentence, the obligation is imposed by a third party or by given circumstances in the latter (Sawada 1999, pp. 120-122). The LCS of *have to*, therefore, can be described as follows:
 - (17) HAVE TO: [I firmly believe that under the given circumstances NP have no choice but to VB]
8. McArthur (1992, p. 664) mentions that the use of *shall* to indicate future time orientation is particularly common in Southern England.
9. This is, of course, except in the interrogative, i.e. "*Shall we/I...?*", in which case *shall* is the only option in both American and British English.
10. In American English, the verbs "calls" and "is" in these two paraphrases are normally used in their bare forms (i.e. "call" and "be"). In British English, the deontic "*should*" is used in that-clauses after verbs and adjectives expressing the idea that something is important, desirable or needs to be done. In a less formal style, however, ordinary present or past tenses are usually preferred.
11. This pattern is usually considered a formal, inverted variation of the "if NP^{sub} should VB" construction. But my position is that we don't need to assume the inversion operation. Otherwise, the teaching of this particular structure will have to become more complicated than is necessary, involving the Chomskian notions of transformation, D-structure, S-structure, global and local movement rules (or more recently, the "Move " rule) and so on. Besides, the inversion

explanation, however complicated it may be, does not provide an adequate answer to the question of why it has to be inverted to begin with.

12. This latter part of the interpretation is simply a logical deduction. If something not expected happens, we usually are surprised, annoyed, embarrassed or even get angry. In some cases, however, it can be a pleasant surprise.
13. In this example, the indicative "is" means that the proposition is put forward as an "open condition," or as something quite possible in the opinion of the writer (or of the animate subject of the sentence). Both the past indicative "was" and the subjunctive "were" mean that the proposition is presented as a hypothetical condition (= closed condition), or something that is either contra-factive or not very likely to occur. (The subjunctive "were" has traditionally been considered a correct option to "was." The distinction between the two, however, has become more or less blurred in English as it is used today, although the subjunctive form is still more common in such frozen phrases as "If I were you," "If it were not for," "Were it not for" and "as it were.")
14. As such, should^{F12} is closely related to should^{F2} (strong suggestion), which we have identified as the core meaning of *should*.
15. BZ=BLC, TIME= Time Corpus, BRW=Brown Corpus, LOB=LOB Corpus. Note that "How *should* NP VB?" is also possible, but no instance of this pattern was found in the research corpora.

References

- Coates, J. (1983). *The Semantics of the Modal Auxiliaries*. Croom Helm, London.
- Dunning, T. (1993). "Accurate Methods for the Statistics of Surprise and Coincidence" in *Computational Linguistics*, Vol. 19, No. 1 (pp. 61-74).
- Francis, W. N. and H. Kuc'era (1964, Rev. 1979). *Brown Corpus Manual: Manual of Information to accompany A Standard Corpus of Present-day Edited American English Corpus, for use with Digital Computer*. Brown University. [Online] <http://www.hd.uib.no.icame/bcm.html#tc>
- Holt, M.T. (1988). *Model Business Letters*. The Japan Times, Tokyo.
- McArthur, T. (1992). *The Oxford Companion to the English Language*. Oxford University Press.
- Oakes, M. O. (1998). *Statistics for Corpus Linguistics*. Edinburgh University Press.
- Poe, R.W. (1994). *The McGraw-Hill Handbook of Business Letters*. McGraw-Hill.
- Quirk, R., S. Greenbaum, G. Leech & J. Svartvik (1985). *A Comprehensive Grammar of the English Language*. Longman.
- Ryan, K. & Nagatsuna, K. (1997). *English Business E-Mail for Business*. Nihon Keizai Shinbun, Inc., Tokyo: Japan.
- Sawada (1992). 澤田治美訳 (ジェニファー・コーツ著) 『英語法助動詞の意味論』 研究社
- Swan, M. (1995). *Practical English Grammar* (2nd ed.). Oxford University Press.

- Scott, M. (1998). *WordSmith Tools Manual (Version 2.0)*. Oxford University Press. [Online] <http://www.liv.ac.uk/~ms2928>.
- Someya, Y. (1999). *A Corpus-based Study of Lexical and Grammatical Features of Written Business English*. Unpublished MA Thesis submitted to the Graduate Department of Language and Information Sciences, the University of Tokyo.
- Someya, Y. (1999b). "The State of Written Business Communication in English in the Japanese Workplace: A questionnaire Survey." A paper presented at the 64th Annual Convention of the U.S. Association for Business Communication, held in Los Angeles, November 4-6, 1999.
- Svartvik, J. (ed.) (1990). *The London-Lund Corpus of Spoken English: Description and Research*. Lund: Lund Studies in English 82. Lund University Press.