

A Corpus-Based Analysis Of English Core Modal Verbs And Their Counterparts In Indonesian

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Abstract: This paper examines the core modal verbs in English and their counterparts in Indonesian. It reveals the plausible modality categories dominant among English and Indonesian speakers, identifying the most salient modality categories. The English core modal verbs being investigated are equivalent to can, could, will, would, shall, should, may, might, and must, which have been selected due to their wide use in formal and non-formal contexts. The analysis indicates the frequency of modal verb usage in English and Indonesian sentence constructions. It provides a contrastive analysis using quantitative and qualitative approaches. Data was collected from several corpora: ARCHER and COCA for English language data and MCP and Wortschatz for Indonesian language data. Data was analysed quantitatively by applying the normalised frequency method and qualitatively by employing the translational identity method. The analysis shows that core modal verbs expressing volition and prediction are most frequently found in English, with the modal verb will being the most frequently used modal verb and its preterite form occupies the third position. As with English, Indonesian also considers the expression of volition and prediction salient because it most frequently uses the modality expression akan. The modal verbs can and could are also used intensively by English speakers, showing that speakers consider the concepts of possibility and permission prominent, as well as prediction and volition. The contrastive analysis shows that, among English and Indonesian speakers, prediction and volition are important notional states in terms of modality expression.

Index Terms: corpus, corpus-based analysis, English, Indonesian, modal verbs

1. INTRODUCTION

Modality is prominent in everyday language as human expressions are not limited to truth. Using modality, the truth of a proposition can be quantified, as in the following examples.

- (1) John walks to school.
- (2) John must walk to school.

Sentence (1) shows the habitual activity of John (i.e. indicates that he walks to school either every day or most of the time). It is a true statement, and there is no quantification. Meanwhile, in sentence (2), the meaning is 'it is necessary for John to walk to school'. The proposition is not necessarily true at the moment of speaking; it may be that 'John goes to school by bus instead of walking'. Modality deals with proposition and the actual moment, and can thus relate external values or norms: be they obligations or necessities in relation to certain acts or events. In other words, modality is associated with a proposition's subjectivity or factuality (Lyons 1974, Palmer 1986, Collins 2009). In English, modality is manifested not in the form of inflection or mood (Depraetere and Reed via Aarts and McMahon 2006, Collins 2009). Modal verbs such as may and must, adverbs such as possibly and certainly, and clause constructions such as it is possible that.... are commonly used by English speakers to indicate modality. Of all modal expressions, core or central modal verbs, borrowing the term from Quirk et al. (1985), are the most commonly used by language speakers owing to their short and efficient forms (consisting of only one unit or word). Along with core modal verbs, there are quasi-modal verbs, periphrastic units with the capability to substitute core modal verbs, e.g. be going to for will, have to for must, etc. Owing to their popular use and their ability to be in various languages, this study focuses solely on core

modal verbs. Being a universal concept, modality is found in various languages, including Indonesian, though its manifestation is slightly different. Alwi et al. (2006), show that English core modals can be classified as adverbs. Arka (2011), meanwhile, proposes that modality in Indonesian is expressed through modal verbs as well as adverbs. Note the following examples.

- (3) Saya akan belajar giat.
I will study hard
'I will study hard'
- (4) Saya akan pergi sekarang!
I will go now
'I will go now'

The linguistic unit akan in the above sentences express modality of volition and can thus be classified as a counterparts of the modal verb will in English. However, referring to Alwi et al., the modal verb akan can also be classified as an adverb, a fact untrue for will—as the counterpart of akan—which can solely be classified as a modal verb (or, generally, auxiliary). The classification of adverb in Indonesian grammar is still debatable because there is no agreement on labelling linguistic units, e.g. akan, harus, mesti, etc. Spat (1989) and Alwi et al. (2006) classified them into adverbs, while van Ophuijsen (1983) is more specific by grouping them into adverbial modalitas (modality adverbs). Another perspective proposed by Omar (1982) who thought those linguistic units as parts of modal verbs. It is in line with Arka's statement of the category of akan above. Unfortunately, Arka did not give further explanation about which goes to modal auxiliaries and which goes to adverb. This sort of theoretical issue is unavoidable because Indonesian is obviously different from English. Indonesian doesn't have auxiliary category as in English. As English is now widely taught in Indonesia, it is necessary to introduce the learners in Indonesia to the actual English, including the modality expression to equip them with sufficient knowledge on how to use English in real context. It thus causes the need to revisit this issue in a more focused study. Nevertheless, further discussion of the formal

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categories of modal verbs in English and Indonesian will not be provided in this article. This article focuses on the frequency of core modal verb use in English as compared to counterpart linguistic units in the Indonesian language. Baker (2010a) states that frequency is the indicator of markedness, showing the more important thing among others. In language teaching, the more important linguistic unit—indicated by its frequency—should be taught earlier and repeatedly because frequency shows priority (Leech, n.d.; Biber & Reppen, 2002). This enables a more effective language teaching and learning. This study attempts to compare modality in English and Indonesian by comparing these languages' modal verbs—and the equivalent units in Indonesian—and showing English and Indonesian language similarities and/or differences in using modal verbs or equivalent units. It asks: which core modal verbs are used the most and the least, and does such usage bear implications for the societies using the language? English and Indonesian have been selected for study for several reasons, despite these languages coming from different language families (i.e. Indo-European and Austronesian). Despite these languages' different families, both have the similar realization of modality, which they express using lexical aspects and not inflection. It would be improper to compare modality expressions from two or more languages with different realizations. Furthermore, English and Indonesian languages share a common syntactic property: word order. Both languages depend on strict word order, known as SVO, to mark grammatical functions. It is interesting then to figure out more on modality realization, especially for Indonesians who are learning English (as foreign language). This description enables the learners to learn more authentic English in terms of using modal verbs and the teachers and lecturers to get fundamental basis in the teaching of modal verbs. To obtain comprehensive results regarding these languages' modal verb use, this study has used a corpus-based analysis. Using a corpus approach, language researchers are able to identify certain linguistic units or expressions by collecting raw data for further analysis using statistic, e.g. normalized frequency, methods. This allows language researchers to attain reliable results, as corpora represent real language use in society. As stated by McEnery and Wilson (2001), one strength of corpus data is its empirical nature, which makes linguistic analysis more objective. To ensure a comprehensive study, it is important to trace previous studies relevant to this research as ample as possible. Several previous research projects have analysed modal verbs using enormous perspectives, such as semantic analysis (Perkins, 1982; de Hann, 2012), diachronic analysis (Baker, 2010b), discourse analysis (Bonyadi, 2011; Embong et al., 2015; Adepujo, 2016, Hardjanto, 2016), construction grammar analysis (Sag et al., 2018), and the implementation in teaching (Iranmanesh & Mutallebikia, 2015). In addition, some studies have also analysed modal verbs using a corpus-based approach. These, however, have been limited to the English language or world Englishes, i.e. Krug (2000), Kennedy (in Reppen et al. 2002), Biber (2004), Rajalahti (2006), Xiaotang & Jing (2007), Maocheng (2008), Millar (2009), Leech (2009), and Collins (2009, 2014). Several previous studies have contrasted modal verbs in English and Indonesian, focusing on translation of English modal verbs into Indonesian (Cahyadi, 2014; Pangestu, 2015). There is also

another study talking about the contrastive analysis of modality in Indonesian and Arabic (Nugraha et al., 2013). Nevertheless, little—if anything—is known about the comparison of frequency of modal verb occurrence in English and in Indonesian. To complement previous corpus-based studies of modal verbs and to theoretically describe modality expressions, this study analyses English language core modal verbs (can, could, may, might, shall, should, will, would, must) and their counterparts in Indonesian.

2 FRAMEWORK OF THE STUDY

This paper uses corpus as a base of gathering data for analysis. McEnery and Hardie (2012) argue that linguists should use corpora as a source of data to validate, refute, or revise current linguistic theories or hypotheses. As such, by using corpora, this study attempts to investigate the modal verb phenomenon in English and Indonesia to validate, and, if possible, refute or revise available concepts. Corpora have been selected as data sources as the huge number of real language use examples compiled in them enable a wider range of data as well as easier data collection. Furthermore, this research attempts to describe the modality phenomenon. Modality is a broad notional concept referring to the quantification of proposition (Palmer 1986). In philosophy, modality is discussed as an abstract concept, yet in linguistics, modality analysis focuses on manifestation. One linguistic unit commonly used to express modality is core modal verbs. The term core modal verb is equivalent to the central modal concept in Quirk et al. (1985) as well as other categories, including marginal modals, modal idioms, semi-auxiliaries, catenatives, and main verb + non-finite clauses. The complete classification is described in Figure 1 below.

(one verb phrase)	(a) CENTRAL MODALS	<i>can, could, may, might, shall, should, will/'ll, would/'d, must</i>	(cf 3.39)
	(b) MARGINAL MODALS	<i>dare, need, ought to, used to</i>	(cf 3.41ff)
	(c) MODAL IDIOMS	<i>had better, would rather/sooner, BE to, HAVE got to, etc</i>	(cf 3.45f)
	(d) SEMI-AUXILIARIES	<i>HAVE to, BE about to, BE able to, BE bound to, BE going to, BE obliged to, BE supposed to, BE willing to, etc</i>	(cf 3.47f)
	(e) CATENATIVES	<i>APPEAR to, HAPPEN to, SEEM to, GET + -ed participle, KEEP + -ing participle, etc</i>	(cf 3.49)
(two verb phrases)	(f) MAIN VERB + nonfinite clause	<i>HOPE + to-infinitive, BEGIN + -ing participle, etc</i>	(cf 16.38f)

Fig. 1. Classification of Modals in English by Quirk et al. (1985)

The term core modal verb is also relevant with the term modal verb used by Collins (2009), Leech et al. (2009), and Payne (2011) as the dichotomy with quasi-modal, semi-modal, and semi-auxiliaries respectively.

3 METHODS

This is a mixed methods research, using both a contrastive and a diachronic approach. The research object of this study is eight core modal verbs in English (can, could, may, might, shall, should, will, would, must) and their counterparts in the Indonesian language (dapat, mampu, bisa, boleh, sebaiknya,

seharusnya, seyogianya, perlu, akan, hendak, ingin, harus, pasti, mesti). Data for this study is classified into two types, namely quantitative data (manifested in frequency of occurrence) and qualitative data (manifested as clauses or sentences containing core modal verbs). Data was collected through corpora searching by applying an observation method. Data was gathered by searching for each core modal verb in each corpus. For English language data, A Representative Corpus of Historical English Register (ARCHER) (alc.manchester.ac.uk) was used to collect data from 1600 to 1999 and the Contemporary Corpus of American English (COCA) (Davies, 2008) for data from 1990 to 2015. Meanwhile, for Indonesian language data, the Malay Concordance Project (MCP) (Proudfoot, 1991) was used to gather data from older versions of the Indonesian language and Wortschatz (corpora.uni-leipzig.de) was used to access contemporary data. Observation focuses on certain periods of time (from Early Modern English to Late/Contemporary Modern English for English Language and from classical Malay to the contemporary period for Indonesian Language), as these periods are easily accessible online and rigorous enough to show changes of language structure and/or language use. Corpora selection is based on the type of the corpora needed for the study. As this study discusses the use of modal verbs, synchronic and diachronic corpora are necessary to describe aptly modals' use over time (ARCHER and MCP are diachronic corpora, while COCA and Wortschatz are synchronic general corpora). This research uses ARCHER and MCP as diachronic corpora because of the similar characteristics (i.e. Both consist of data taken from two different language periods and mainly collected from literary works). Extensive general corpora (e.g. COCA and Wortschatz) are necessary for this study, as the bigger the dataset is, the more comprehensive and objective the results will be. Frequency of occurrence is counted using the normalised frequency method (McEnery and Hardie, 2012: 49). Normalised frequency (nf) is counted as follows.

$$nf = \frac{\text{token}}{\text{size of corpus}} \times \text{base of normalisation}$$

Meanwhile, qualitative data is analysed using the translational identity method (Sudaryanto, 2015). In the Translational identity method, a language is analysed using a parameter outside the language; in this study, this parameter is another language (i.e. Indonesian). To draw conclusions, the results of quantitative and descriptive analysis from ARCHER, COCA, MCP, and Wortschatz are combined inductively.

4 FINDINGS AND DISCUSSION

This section covers four aspects. First, it elaborates core modal verbs used in English. Second, it describes these words' counterparts Indonesian. Third, it indicates the frequency of occurrence of these modal verb counterparts. Four, it compares English and Indonesian core modal verb, considering speakers' choices as well.

4.1 English Core Modals

Modal verbs are classified based on the nature of their

meanings, especially as linked to the notion of modality. There are thus (i) modal verbs expressing possibility, permission, ability, e.g. can, could, may, might, (ii) modal verbs expressing necessity and obligation, e.g. shall, should, must, and (iii) modal verbs expressing volition and prediction, e.g. will and would. Changes in linguistic units are unavoidable and occur continuously; modal verbs are no exception. As they are used frequently in daily language, modal verbs experience significant changes. The following table (table 1) presents further details on the frequency of occurrence of English core modal verbs between 1600 and 1999 per million words. The normalised frequency is written in the bracket; the frequency written outside the bracket is the raw one.

TABLE 1
FREQUENCY OF OCCURRENCE
OF ENGLISH CORE MODAL VERBS IN ARCHER

Core modal verbs	Frequency of occurrence in ARCHER
Can	4.701 (1,240)
Could	4.215 (1,112)
May	5.833 (1,538)
Might	2.200 (580)
Shall	3.619 (954)
Should	4.091 (1,079)
Will	9.426 (2,486)
Would	6.915 (1,824)
Must	3.768 (994)

As seen here, core modal verbs are frequently used by English language users. There are thousands of occurrences of modal verbs per million words in the corpus. Based on this table, it is obvious that the core modal will was highly used between 1600 and 1999, followed by its preterite form would and the modal verbs may and can. Meanwhile, the core modal verb might is least used. This exhibits the prominence of modality of prediction and volition, followed by modality of possibility, permission, and ability, and by modality of necessity and obligation, respectively. The rank is illustrated in figure 2 below.

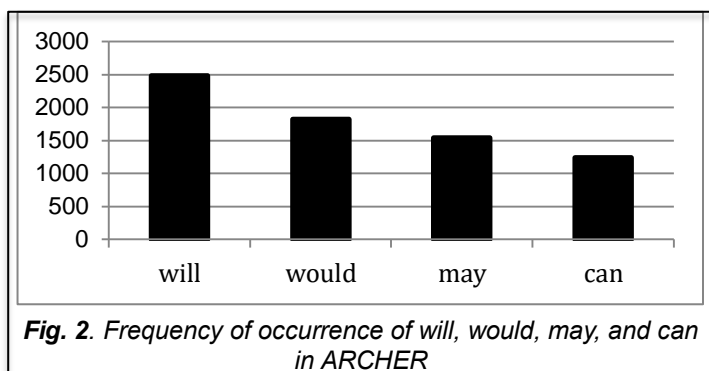


Fig. 2. Frequency of occurrence of will, would, may, and can in ARCHER

Modal verb will and its preterite form would are the two most frequently used modal verbs in ARCHER. This indicates that both, despite having similar meanings, embody different semantic as well as pragmatic interpretation. If their meanings were exactly the same semantically and pragmatically, nobody would use would instead of will. Moving to the synchronic corpus, COCA, the frequency of occurrence of core modal verbs between 1990 and 2015. Table 3 displays the normalised frequency of core modal

verbs per million words.

TABLE 2.
FREQUENCY OF OCCURRENCE OF ENGLISH CORE MODAL VERBS IN COCA

Core modal verbs	Frequency of occurrence in COCA
Can	1.001.420 (2,225)
Could	707.913 (1,573)
May	407.461 (905)
Might	240.547 (534)
Shall	17.067 (38)
Should	354.205 (787)
Will	910.855 (2,024)
Would	1.053.610 (2,341)
Must	190.855 (424)

Based on the table, it is evident that the core modal verb would is the most frequently used, followed by can, will, and could; the core modal verb shall occurs least frequently. This indicates, once again, that modality of volition and prediction is a salient expression in daily communication. It is followed by modal verbs expressing modality of possibility, permission, and ability. Interestingly, modality of necessity and obligation (represented with modal verbs shall, should, must) represent a small portion of modal verb use, slightly different from the trend between 1600 and 1999, in which the modal verb shall was quite commonly used (954, compared to 38 in the latter period). This is depicted in the following graph (figure 3).

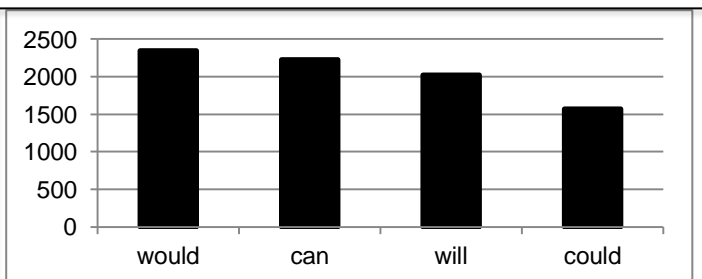


Fig. 3. Frequency of occurrence of would, can, will, and could in COCA

Based on observation of English core modal verbs over time, some prominent points require further discussion. First, the modal verb can has been used more intensively recently, while the modal verb shall experienced a sharp decrease between 1600 and 1999. The illustration is portrayed in figure 4.

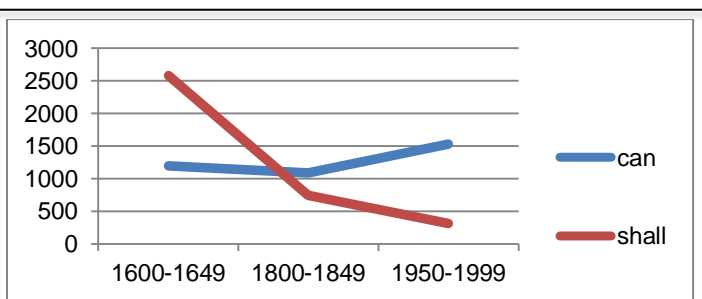


Fig. 4. The frequency of occurrence of can and shall from 1600–1999 in ARCHER

Also important to notice is that the expressions of volition and prediction will and would appear to level off from time to time. In addition, it is interesting to see that modal verbs expressing necessity and obligation such as, shall, should, and must, are not most frequently used. For the modal verb must, specifically, the frequency of occurrence is relatively small over time (in both ARCHER and COCA).

4.1 The Counterparts of English Core Modals in Indonesian

This study describes the concept of modality in Indonesian using English as its parameter. Therefore, it identifies modal verbs expressing (i) possibility, permission, and ability, (ii) necessity and obligation, and (iii) volition and prediction. The Indonesian language counterparts of English modal verbs expressing possibility, permission, and ability can be seen below.

TABLE 4
MODALITY OF POSSIBILITY, PERMISSION, AND ABILITY

English	Indonesian
Can	Dapat, mampu, bisa
Could	Dapat, mampu, bisa
May	Boleh, bisa
Might	Boleh, bisa

- (5) They { dapat, bisa, *mampu } can go now.
- (6) Mereka { dapat, bisa, *mampu } pergi sekarang.

The core modal verb can might be translated dapat, bisa, or mampu in Indonesian, depending on the context: whether it relates to the speaker's attitude or an external norm. In the modality of necessity and obligation, the words shall, should, and must can be translated as follows.

TABLE 5
MODALITY OF NECESSITY AND OBLIGATION

English	Indonesian
Shall	sebaiknya, seyogianya, seharusnya, perlu
Should	sebaiknya, seyogianya, seharusnya, perlu
Must	harus, mesti, wajib, pasti

The core modal verb should can be translated sebaiknya, seyogianya, seharusnya, or perlu in Indonesian.

- (7) I should study hard.
- (8) Saya { sebaiknya, seyogianya, seharusnya, perlu } belajar dengan giat.

Meanwhile, modality of volition and prediction are manifested in the English modal verbs will and would.

TABLE 6

MODALITY OF VOLITION AND PREDICTION

English	Indonesian
Will	Akan, hendak, ingin
Would	Akan, hendak, ingin

The core modal verbs will and would can be translated into three equivalent linguistic units in Indonesian: akan, hendak, ingin.

(9) He will visit his parents soon.

(10) Dia $\left\{ \begin{matrix} akan \\ hendak \end{matrix} \right\}$ mengunjungi orang tuanya segera.

The sentences above show that the prediction embodied by the modal verb will is translated into Indonesian with akan and hendak. The volitional meaning of will is related to the internal motivations of the speaker, which are difficult to determine. Indonesian, meanwhile, has the distinct modal verb ingin, as in sentence (11).

(11) Dia ingin mengunjungi orang tuanya segera.

It is evident that, in English modality, one modal (i.e. can) may have three interpretations, be they epistemic, deontic, or dynamic. However, in Indonesian the modal verb can might be represented in three different forms—dapat, bisa, mampu—regardless of the interpretations. Meanwhile, the modal verb will can be translated into Indonesian as akan, hendak, or ingin, depending on the context and the meaning, but the modal verb ingin has an epistemic reading. It is also clear that, for the modal verbs shall/should, the Indonesian counterparts are sebaiknya, seharusnya, seyogianya, and sepatutnya, all of which have the pattern se- + V/Adj + -nya. Meanwhile, the Indonesian language counterparts of the modal verb must are harus, mesti, wajib, and pasti. The modal verbs harus, mesti, and wajib relate to external aspects of the speaker (deontic), while pasti refers to internal aspects (epistemic). It seems that only the modality of obligation and volition have both epistemic and deontic interpretations in Indonesian language.

4.3 Frequency of Occurrence

This sub-section discusses the frequency of Indonesian modal verbs as counterparts of English core modal verbs. The table below (table 7) shows the frequency of occurrence in MCP.

TABLE 7.

FREQUENCY OF OCCURRENCE OF INDONESIAN MODAL VERBS IN

<i>MCP</i>	
Core modal verbs	Frequency of occurrence in MCP
dapat	10.090 (1,739)
mampu	34 (6)
bisa	238 (41)
boleh	8967 (1,546)
sebaiknya	18 (3)
seharusnya	43 (7)
seyogianya	175 (30)
perlu	260 (44)
akan	64.580 (11,134)
hendak	18.926 (3,263)
ingin	290 (50)
harus	1342 (231)
pasti	425 (73)
mesti	700 (120)

Examining the corpus of classical Malay, it can be seen that modality has always been an important part of the Indonesian language. Modality use in MCP is dominated by modality of volition and prediction (embodied in akan and hendak). The modal verbs dapat and boleh, both of which convey possibility and permission, also occur frequently. Meanwhile, modality of necessity and obligation, as expressed by sebaiknya, is the least frequently used. However, there are some considerations related to the meaning of the modal verbs bisa and boleh. First, modal verbs expressing ability/possibility/permission bisa and boleh are somehow problematic because modal verb boleh expressing ability in Classical Malay (and remain the same in Modern Malay). Being different from Classical Malay, modal verb boleh in Indonesian undergoes semantic shift expressing permission and the original meaning ‘be able to’ has never been used. Meanwhile, in Classical Malay and Indonesian, modal verb bisa, although in most contexts are used to express ability, is possible to mean ‘poison’ in some uses depending on the context. Either way, modal verb boleh expressing ability and boleh expressing permission belong to the same category of modality (possibility, permission, and ability). Figure 5 below illustrates the frequency of occurrence of modal verbs found in MCP.

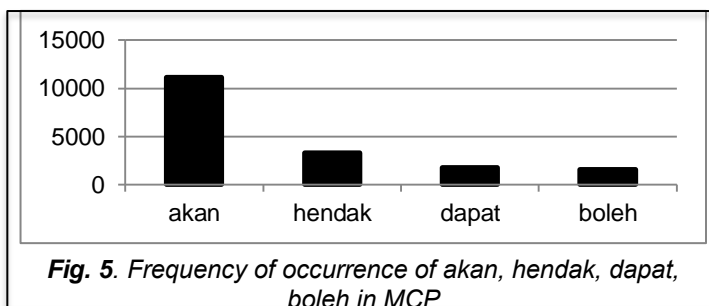


Fig. 5. *Frequency of occurrence of akan, hendak, dapat, boleh in MCP*

Table 8 shows the frequency of occurrence of Indonesian modal verb counterparts gathered from Wortschatz, a corpus of contemporary Indonesian language.

TABLE 8.

FREQUENCY OF OCCURRENCE OF INDONESIAN MODAL VERBS IN WORTSCHATZ

Core modal verbs	Frequency of occurrence in Wortschatz
dapat	3.561.469 (2,952)

mampu	761.153 (630)
bisa	4.445.616 (3,685)
boleh	308.020 (255)
sebaiknya	126.601 (104)
seharusnya	186.317 (154)
seyogianya	3.228 (2,675)
perlu	815.777 (676)
akan	6.676.654 (5,534)
hendak	100.270 (83)
ingin	840.371 (696)
harus	2.472.149 (2,049)
pasti	389.735 (323)
mesti	57.954 (48)

In Wortschatz, the most frequently used Indonesian modal verb counterparts are akan, which show volition and prediction; bisa and dapat, which show possibility, permission, and ability; and harus, which shows necessity and obligation. The modal verb mesti, despite showing necessity and obligation, has different usage tendencies than the modal verb harus. This illustrates an interesting phenomenon, in which the modal verb mesti shows a dramatic change in frequency of use. Frequency of use can be seen in Figure 6 below.

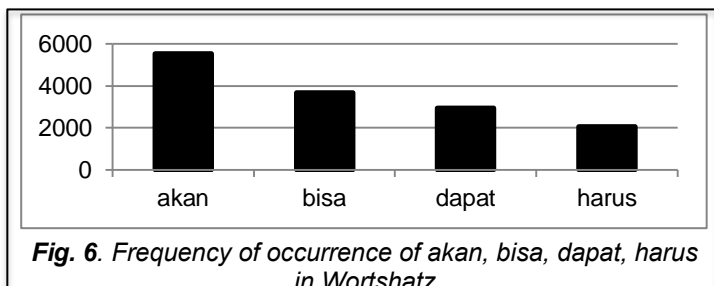


Fig. 6. Frequency of occurrence of akan, bisa, dapat, harus in Wortschatz

Based on this phenomenon, it can be concluded that usage of modals showing volition and prediction appear to level off. Language users express volition and prediction more commonly. Likewise, modal verbs expressing possibility, permission, and ability are also considered by language speakers. It is no wonder, then, that the modal verbs e.g. akan and dapat are frequently used over time. Unlike akan and hendak, the modal verb counterpart boleh exhibits a distinct decrease in frequency of use over time, as shown in MCP and Wortschatz. Where the modal verb boleh has been less frequently used, the modal verb bisa has increased sharply. The following graph (figure 7) illustrates these trends.

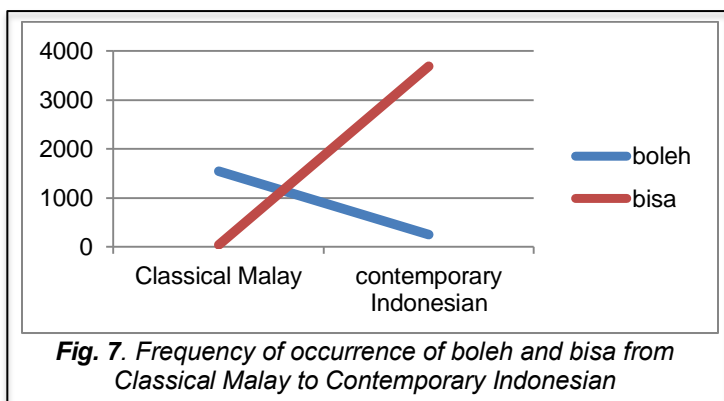


Fig. 7. Frequency of occurrence of boleh and bisa from Classical Malay to Contemporary Indonesian

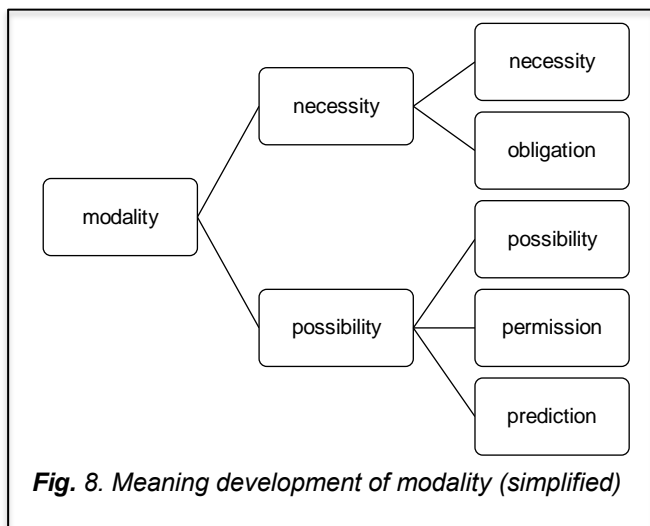
It is interesting to find out this trend since modal verb boleh also changes semantically. Another question then arises: does the semantic shift of boleh from expressing ability to expressing permission trigger the decrease in frequency? However, different profound study needs to be conducted. Another important point is the rising number of modal verbs expressing necessity and obligation. In the classical period, such modality is not frequently found. However, in the contemporary period, the modal verb counterpart of must—harus—has increased in prominence, showing that necessity is of important.

4.4 Comparing English Modal Verbs and Their Counterparts in Indonesian

Building on the previous discussion of frequency of occurrence, the following analysis focuses on further description of modal verbs and their cognitive aspects, seeking to identify which cognitive aspects can be revealed from the use of modal verbs in English and Indonesian. From the above discussion, it is clear that the modality of prediction and volition are most commonly used in English. The same phenomenon is found in Indonesian, showing that Indonesian speakers also consider modality of prediction and volition important. Such language expressions are indeed used on a daily basis. Humans express their predictions and volitions using particular linguistic units, ensuring that interlocutors are able to receive the message well. Expressing possibility and ability is also important in human communication. In their daily communications, people need to show possible events or ability to do something. Regarding different trends in modality choice, there is a prominent trend worth noting in the occurrence of modal verbs in English and Indonesian. In English, the modality of necessity and obligation has continued to exhibit a low frequency of occurrence over time. However, the frequency of occurrence of necessity and obligation modality is quite high in the Indonesian language, especially in contemporary Indonesian. To define the nature of modality, it is necessary to trace it to the philosophical realm. A logician, von Wright, dichotomized modality with the concept of truth, identifying truth-logic and modal-logic. Truth-logic deals with propositions with truth-value, while modal-logic involves possibility (von Wright 1951). The development of modality leads to a dichotomy of de re and de dicto modality, where de re literally means 'considering something' and de dicto literally means 'considering the content of proposition' (Ciesluk 2010). Independently, de re modality refers to the concept of necessity, while de dicto comes from the concept of modality, as depicted below.

de re: 'It is necessary that p'
de dicto: 'It is possible that p'

There are therefore two basic properties in modality, namely necessity and possibility. If it is a continuum, according to Halliday (2004), necessity will approach truth and possibility will be closer to untruth. It can be concluded that other meanings embodied by modal verbs have emerged lately as developments of necessity and possibility. This is shown in figure 8 below.



The diagram above shows that one meaning (ability) is expressed by *can* in English and *dapat*, *bisa*, and *mampu* in Indonesian. As stated by Gisborne (2007), the meaning 'ability' emerges due to a resistant 'know' in *can*, carried over from its roots in earlier English, presumably from the Old English period. This is congruent with the explanation found in Oxford Dictionary of English (2014), which states that 'can' is derived from the Old English form 'cunnan' (the third person form) meaning 'know'. The list below provides examples of the use of 'cunnan' for different subjects (taken from Atherton 2010).

ic kann	'I know'
þu kannst	'you know'
he kann	'he knows'
we cunnan	'we know'
hi cunnon	'they know'

It appears that English and Indonesian have taken the same direction regarding the development of modality. Although this is still a hypothesis, it is plausible that the direction of modality development among languages is universal. From necessity and possibility, modal verbs in languages develop to express other meanings. Based on language users' choice, it appears that expressions of prediction and volition are considered the most important forms of modality. Prediction can be defined as 'a thing predicted, a forecast' (OED), with a forecast being a calculation or estimate of a future event. Prediction is firmly connected with the concept of time, especially the future. As time is manifested in one of the most important modality expressions, it is clear that time is a significant concept in human life. It adds an important and necessary dimension to our comprehension of the world.

It is almost implausible to understand how humans would experience the world without time. All events happen in time. As such, physicists have analysed time, together with space, as a theoretical and empirical object (Evans 2005). As for prediction, it has to do with future of which human likes to talk about. The idea of what is going to happen, be they expected or unexpected, is thrilling for us. Volition, meanwhile, is the faculty or power of using one's will (OED). It is related human beings' innate possession of will. Internal and external factors affect this will. Volition cannot be separated from human's life; the basis of every action done by humans is volition (Ross et al. 2007). Whenever we act, there is a volition. Not limited to volition and prediction, according to Palmer (2013: 136), modal verb will also shows power and habit as parts of its subjective oriented interpretation. We can thus see that volition, prediction, power, and habit are such highly needed notion in human life. Because they are vital, there are modal verbs to express the notions and occupy the most frequently used modal verbs.

5 CONCLUSION

In brief, this study shows that modality and its manifestations exhibit the concepts of language users, both universal and language-specific. Modality itself is considered a prominent part of human perceptions of everyday activities. Therefore, frequently used core modal verbs reflect the salient concepts of the society spoken the language. The research shows that core modal verbs expressing volition and prediction have frequently been used in English over time, with the modal verb *will* being the most frequently used and its preterite form *would* occupying the third position. As with English, Indonesian language users also consider the expression of volition and prediction salient, as indicated by the frequency of *akan* among other modality expressions. The modal verbs *can* and *could* are also used intensively by English speakers, showing that speakers consider the concepts of possibility, permission, prediction and volition important. In Indonesian, the equivalent units of *can* and *could* e.g. 'dapat' and 'boleh', are among the top four most frequently used modal verbs. From comparing English and Indonesian, it is obvious that, among English and Indonesian language speakers, prediction and volition are important notional states, ahead of other modality expressions, e.g. possibility, permission, necessity, and obligation. There is furthermore no significant difference of modality choice between language users, perhaps due to the need to express prediction and volition in modern life. Regarding language teaching, the teaching of English then should be focused on prediction and volition expressions, along with the modal verbs embodied the meanings. This is assumed to be less difficult since Indonesian also expresses prediction and volition frequently. However, the lack of contemporary Indonesian corpus has surely limited the data on the Indonesian language. Further research, thus, is necessary to ensure complete and thorough discussion.

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