

Modal Verb “Shall” in Contemporary American English: A Corpus-Based Study

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Abstract. This paper explored the modal verb shall in formal and informal writings in academic and fiction registers. It focused on the frequencies of shall across academic and fiction domains in contemporary American English and the differences in the usage of shall between academic and fiction registers of contemporary American English. The researchers used a corpus linguistic method. Data were collected from the Corpus of Contemporary American English (COCA) and analysed using Hanks’ (2004) Corpus Pattern Analysis technique. All occurrences of shall in academic and fiction writing styles of COCA were retrieved, and 400 concordance lines consisting of 200 texts from each domain were collected. The texts were analysed and described in accordance with their syntactic, stylistic, and semantic characteristics. Results showed that shall was rare in COCA’s academic and fiction registers as the overall frequencies were 59.77 and 68.34 words per million, respectively. From all the 400 tokens being analysed, the researchers found that shall in the observed data could be classified as rules and regulations, direction, prediction, volition, and etc. The uses of shall in both domains in COCA varied syntactically, semantically, and stylistically.

Keywords: American English; COCA; corpus; modal; register; shall.

Introduction

Modality plays an essential part in communication. It is commonly found in spoken and written language. Portner (2009) defines modality as a linguistic phenomenon that allows speakers to talk about various situations. “Modality, as one of the complex areas of English grammar, reflects the writer’s attitude and is extremely important in academic

written discourse” (Yang, 2018, p. 122). Some purposes of modality are to express futurity, necessity, obligation, possibility, and even belief. Those expressions can be uttered in the English language through modal verbs, for example, *will*, *shall*, *may*, *can*, *might*, *should*, or *must*, with each verb performing different functions.

Presently, *shall* in American English is declining, and it occurs more frequently in British English because it is regarded as formal and old-fashioned (Darragh, 2000; Leech, 2004; Williams, 2009). According to Schluter (2009), American English has more colloquialisation than British English. This suggests that American English tends to use more informal patterns. Linguistically, *shall* is an English modal verb that has existed for centuries (Larrea, 2009, p. 23). In the past, its usage was mainly to deliver futurity and command, especially in legal or biblical texts. “In formal discourse, *shall* is used to emphasize the legal effect, indicates command and promise, and is used in second and third-person statements” (Chen, Jiang, Song, and Wang, 2020, p. 91). Umeh and Anyanwu (2020, p. 7) conclude that “*shall* invariably expresses intention, willingness, and insistence.” Over time, the use of *shall* is declining. Biber, Conrad, and Leech (2002), for instance, claim that *shall* in American and British English is the least frequent modal verb among *will*, *may*, *can*, *might*, *should*, and *must*. The most used modal verb nowadays is *will*. Meanwhile, *shall* and *will* are synonymous in expressing futurity (Darragh, 2000). To illustrate, “I *shall* arrive at 7 o’clock” is interchangeable with “I *will* arrive at 7 o’clock.”

Generally speaking, *shall* is regarded as formal and old-fashioned (Biber et al., 2002; Williams, 2009), and thus it is unlikely to be used in daily life. Portner (2009, p. 2) underlines that a modal verb can perform different functions in certain situations. Accordingly, the modal verb *shall*, in specific ways, can promote meanings that cannot be delivered through other modal verbs, making it still exist in current English. Some studies on several aspects of the modal verb *shall* have been conducted by several researchers, such as Biber et al. (2002), Darragh (2000), Gotti (2003), and Williams (2009). Gotti (2003), for example, investigates how the modal verb *shall* is used in Middle English and Early Modern English; the findings show that *shall* appears in diverse texts of Middle English and Early Modern English.

On the other hand, Williams (2009) examines the modal verb *shall* specifically in legalistic texts. It is revealed that although *shall* causes multi-interpretation of the texts, it has not been abolished altogether. Interestingly, Krapivkina (2017, p. 312) concludes that “the verb *shall* is semantically diverse, performing some functions in legal discourse.”

Although *shall* has been investigated previously, it still raises some issues. One cause is the inadequacy of data for the research. Gotti (2003), for instance, used the Helsinki corpus, while Williams (2009) mainly relied on the “world data” corpus (140,000 words) and the “*shall*-free” corpus (160,000 words). Those corpora, unfortunately, contain a relatively small number of words, which is considered weak in representing the language being used (Meyer, 2004, pp. 41–42). In contrast, Biber et al. (2002) have utilised a relatively large corpus, namely the Longman Spoken and Written English Corpus (LSWE), which consists of 40 million words. Nevertheless, their investigation has not clarified the use of *shall* exhaustively because the analysis only covers a few general points of how this auxiliary is used.

Therefore, the researchers investigate the use of *shall* in contemporary American English using a corpus. American English is chosen as the focus of the study since, nowadays, it is one of the most common English varieties used by native speakers, and it is studied by most foreign learners (Algeo, 2006, p. 1). It is also a standard variety of English (Rohdenburg, Schluter, 2009, p. 2) to which English teachers and students frequently refer.

Specifically, the researchers focus on the use of *shall* in formal and less formal written contexts represented by academic and fiction registers in COCA, respectively. A register or domain is language variety related to specific situations of use and certain communicative purposes (Biber, 1996). The study of *shall* in formal and informal written contexts of American English means to provide enrichment for English language teachers and learners on how *shall* is used, especially in writing academic and non-academic works.

Based on the background, the formulated questions are as follows. First, what are the frequencies of the modal verb *shall* across academic and fiction registers in contemporary American English? Second, how does the modal verb usage differ between academic and fiction registers of contemporary American English?

Method

This study employed a corpus linguistic method, relying on quantitative and qualitative techniques (Biber, Conrad, Reppen, 1998). It is quantitative because it involves calculating the occurrences of a particular linguistic item. Besides, it interprets the patterns found in the quantitative data functionally or qualitatively (Biber et al., 1998). Using a corpus-based approach means that corpus linguistics is the research method (Baker, 2010; Kennedy, 1998; McEnery, Hardie, 2012; Meyer, 2004).

The research data source was the Corpus of Contemporary American English (COCA), a corpus of American English created by Mark Davies (2008). There are 450 million words in this corpus. It presents raw data from spoken contexts, fiction, magazines, newspapers, and academic journals (Figure 1).

Using a purposeful sampling method, one can comprehensively select and study information-rich cases (Patton, 1990). In this study, purposeful sampling was used to select instances of *shall* in academic and fiction registers of COCA. Purposeful random sampling increases the credibility so that the texts have the same probability of being included in the sample (Patton, 1990).

To collect the data, the researchers used COCA by typing the modal verb *shall* in the search string of COCA. To examine the patterns of usage of *shall*, the researchers took 400 samples containing the modal verb *shall* from the corpus. The researchers adapted the Corpus Pattern Analysis (CPA) technique proposed by Hanks (2004) to analyse the qualitative data. The data were obtained in two steps. Firstly, 200 concordance lines from the academic register were taken. Next, the other 200 concordance lines were retrieved from the fiction register of COCA. The researchers selected the option sample in COCA to take a random sample, which automatically randomized the data (Figure 2).

The screenshot shows the COCA interface in a browser window. The top navigation bar includes the site name 'CORPUS OF CONTEMPORARY AMERICAN ENGLISH' and the date '450 MILLION WORDS, 1990-2012'. On the left, there are search filters for 'WORD(S)', 'COLLOCATES', and 'POS LIST'. The main content area features a 'BRIEF TOUR (GENERAL)' section with the following text:

See the new Corpus of **Global Web-Based English** (GloWBE): 20 countries, **1.9 billion words** and the **Google Books corpus** (50+ billion words from 1980s-2000s). There are also a wide range of resources based on the BYU corpora:

- Academic vocabulary** Download free lists containing "core" academic words in 120 million words of COCA-Academic texts (including grouping by word families), as well as the top 20,000 words overall in COCA-Academic. See *Applied Linguistics* article, or compare to the Academic Word List (Coxhead, 2000).
- Word and Phrase (academic)** Similar to the two Word and Phrase resources below, but limited strictly to the 120 million words of academic texts in COCA. Get detailed information on words and phrases, frequency by sub-genre (e.g. Law, Medicine, Science, Business, Humanities), and concordances and collocations in just the academic text. Also, analyze entire academic texts.
- Word and Phrase (analyze texts)** Enter entire texts and see detailed frequency information on the words in the text, and create word lists based on your text. Click through the words to see detailed information on any word. Highlight phrases in your text and have it search for related phrases in COCA.

The 'BRIEF TOUR (GENERAL)' section also includes instructions on how to use the interface and search for words, phrases, and lemmas.

Figure 1. COCA interface

The screenshot shows a concordance list for the word 'shall' in the COCA interface. The list is displayed in a table format with columns for year, register, and text. A red circle highlights the 'PAGE: << < 1 / 55 > >>' and 'SAMPLE: 100 200 500 1000' information.

Year	Register	Text
1997	ACAD	ABAJournal A B C shall provide promptly prepare a written report based on the site evaluation. The team shall not determine compliance or non-compliance with the Standards, but s
2004	ACAD	PSAJournal A B C any officer removed from office. A three-fourths majority of the members of the BOD shall be necessary to such reinstatement. ARTICLE IX Fiscal Year # The fisca
2008	ACAD	MiddleEastQ A B C Qur'an said of them: 'condemned to humiliation and misery.'. We shall send them back to their former status. " (n17) Arab Muslims frequently
1992	ACAD	CompIntnlDev A B C expanded state capacity to participate in the production and marketing of bauxite. 4 As we shall see, Seaga built on the foundations laid by the PNP and further pur
1995	ACAD	CanadaLaw A B C in goods and services. With Mr. Hufbauer and Mr. Crane as our guides we shall look at the new international competitive environment for trade in goods and service
1995	ACAD	AfricaToday A B C the African peoples " in the economic development and integration of the continent " 6 shall be ensured and a Court of Justice whose decisions will be binding on m
1996	ACAD	Style A B C readings of phallic desire in Lawrence by means of those two rhetorical codes. I shall first link some contemporary interpretations of the dyad of metaphor and met
1997	ACAD	ABAJournal A B C or official that grants degree-conferring authority, the school shall inform the Consultant, who shall invite the agency or official to observe the site evaluation. The C
1999	ACAD	ArtBulletin A B C without end. # Who will give us wings like the dove, and we shall fly across all the kingdoms of this world, and we shall penetrate the depths

Figure 2. Data randomisation in COCA

Quantitative and qualitative analysis techniques were employed to answer the research questions. After obtaining the raw data from COCA, the researchers examined the frequency counts of the modal verb *shall* in each register to answer the first research question. To compare academic and fiction registers, the normalised frequencies of the modal verb shall be used instead of the raw frequencies.

Hanks' (2004) Corpus Pattern Analysis (CPA) was employed to answer the second research question. First, CPA was used to extract a concordance list of the target word

from the corpus and examine the “general overview of the word’s behaviour” (Hanks, 2004, p. 91). Second, the analysis was done by selecting the sample consisting of 200 to 1000 concordance lines. After that, each concordance line was classified with those having the same meaning and similar syntactic structure.

To categorise the uses of *shall* from both registers, the researchers referred to the checklist adapted from Leech’s (2004) classification of modal verb *shall* and Palmer’s (2001) typology of modality.

Findings and discussion

A. Frequency of modal verb shall across registers in COCA

This section discusses the occurrences of modal verb *shall* in academic and fiction registers of COCA. It provides the frequency of modal verb *shall* across academic and fiction registers in numerical data. After that, an explanation of the frequency of modal verb *shall* is given to describe the numbers. Therefore, to obtain valid results, the frequency is normalised. Based on Biber et al. (1998, p. 263), the researchers concluded that the formula for frequency normalisation per million words is:

$$\frac{\text{raw frequency}}{\text{text size}} \times 1.000.000$$

Fortunately, COCA has provided the normalised frequency per million words for each domain. The results show that *shall* is slightly less dominant in the academic domain with the value range of 59.77 and 68.34 for academic and fiction registers. With those numbers, it is expected that there exist approximately 60 occurrences of *shall* in one million words of academic register and approximately 68 occurrences of *shall* in one million words of fiction register.

Table 1. Results for *shall* overall frequencies across written registers in COCA

No.	Register	Raw frequency	f per million
1	Academic	5443	59.77
2	Fiction	6180	68.34

The possible cause for slightly higher overall frequency in the fiction register is that the writers of fiction genres have more freedom to use diverse language elements as they are not required to comply with grammatical or semantical rules (Sanger, 2003). Thus, it allows various usages of the modal verb *shall* in a large number of fictional discourses. Meanwhile, there are rules in writing the journals in the academic domain, limiting certain functions of modal verb *shall*. Nevertheless, the minor difference in the overall frequency still signifies that *shall* is rare in the academic and fiction registers of contemporary American English. This, therefore, supports the idea that *shall* is rare (Biber et al., 2002; Sujatna, Sujatna and Pamungkas, 2019).

However, when the sub-registers of the academic and fiction domains are observed individually, results show that *shall* is used dominantly in COCA's law/political science domain with the frequency rate of 158.95 words per million. The second highest frequency is in the field of philosophy/religion, with 124.48 words per million. The numbers mean that, among the examined sub-registers, *shall* is highly used in legal and religious texts. The high frequency is likely to be caused by the retention of the modal verb *shall* in the Present-Day contexts. In Old English, back to the history *shall* was used to express command or obligation (Fowler, Fowler, 1931). Command or obligation is associated with legal texts and religious treatises. Additionally, Americans have been using *shall* in writing legal texts since 600 years ago (Williams, 2009, p. 199). The examples of how *shall* are used in COCA's law/political and philosophy/religion sub-registers are presented in (1) and (2).

- (1) [...] the circumstances constituting fraud or mistake **shall** be stated with particularity. (COCA:LawPublicPol)
- (2) [...] therefore, suspended until he **shall** manifest Such Repentance as Shall be Satisfactory to the Church. (COCA:ChurchHistory)

Example (1) reflects law enforcement using *shall* and (2) is related to church rules in old times. The high frequencies of *shall* in those two sub-registers are consistent with the earlier research conducted by Gotti (2003), who reveals that the frequent appearance of *shall* is located in legal texts, religious treaties, and the Bible in Middle English and Early Modern English.

On the contrary, the lowest frequencies are in the field of education and medicine. The normalised frequencies are subsequently 20.86 and 9.25. It implies that the use of *shall* in education and medicine fields is not significant compared to other sub-registers.

Table 2. Frequencies across written sub-registers of *shall* in COCA (sorted based on f per mil)

No.	Sub-registers	Raw frequency	f per million
1.	Academic-Law/PolSci	1367	158.95
2.	Academic-Philosophy/Religion	839	124.48
3.	Fic-Juvenile	348	110.18
4.	Fic-SciFi/Fantasy	1748	87.59
5.	Academic-History	1038	84.77
6.	Fic-Journal	2072	64.6
7.	Academic-Humanities	768	64.39
8.	Fiction (Book)	1497	61.14
9.	Fic-Movies	503	56.25
10.	Academic-Geography/Social Science	449	27.75
11.	Academic-Science/Technology	329	23.37
12.	Academic-Education	197	20.86
13.	Academic-Medicine	62	9.25

Table 2 shows that *shall* is used in various domains. Although considered rare in American English, it is predicted that this modal verb has some usages in academic and fiction registers, as seen in the different frequencies of each sub-register. Therefore, in the next section, *shall* across academic and fiction registers is examined comprehensively.

B. The usage of modal verb shall across registers in COCA

From a total of 400 random tokens, it is discovered that there are differences in the usage of *shall* across both domains. With the designed category scheme adapted from Leech (2004) and Palmer (2001), the researchers can classify uses of *shall* into rules and regulations, direction, permission, prediction, volition, and others. Table 3 presents the frequencies of the modal verb *shall* based on its usage.

Table 3. 400 random tokens of *shall* from academic and fiction registers of COCA

No.	Registers		Academic	Fiction
	Usages			
1	Rules and Regulations		65	0
2	Direction		28	23
3	Permission		10	11
4	Prediction		32	46
5	Volition		58	100
6	Others		7	20
		Total	200	200

1. Rules and regulations

Based on Palmer's (2001) types of modality, *shall* as rules and regulations is classified as deontic modality because an obligation applies to the addressee of the statement.

a. Prescriptive shall in the academic register

The modal *shall* as rules or regulations still primarily occur in the COCA academic register data sample. There are 65 occurrences of *shall* functioning as rules or regulations. According to Garner (2004, p. 4288), in legal texts, *shall* with the sense *has a duty to* is the only acceptable meaning. Therefore, in this case, *shall* is supposed to be used only to express a strong sense of obligation. *Shall* with prescriptive meaning has various preceding subjects, depending on who is given the obligation. All statements from the sample occur with third-person subjects. Examples are in (3), (4), and (5).

- (3) The Judges, [...] **shall** hold their respective offices ... (COCA:LawPublicPol)
 (4) The chairperson [...] **shall** present the Committee findings, conclusions ... (COCA:ABAJournal)
 (5) each Party **shall** ensure that persons with a legally recognized [...] its law ... (COCA:CanadaLaw)

In those cases, *the Judges, Chairperson, and Party* are the subjects being ordered to do something. The verbs following *shall* explain the deeds which the subjects are required to do. However, *shall* does not necessarily mean obligation in legalistic contexts. The first condition is when *shall* conveys negative senses as seen below:

- (6a) a lawyer **shall** not reveal information relating to the representation of a client ... (COCA:ABAJournal)
 (7a) No Federal court **shall** have jurisdiction under Federal ... (COCA:EnvirAffairs)

In examples (6a) and (7a), it would be irrelevant to categorise the meaning of *shall* as *having a duty*. If interpreted with that meaning, it would negate the duty. For instance, in (6a), the meaning would become “A lawyer does not have the duty to reveal information relating to the representation of a client.”

That interpretation does not convey the intended meaning since the expressions deliver prohibition. As Garner (2004, p. 4288) proposes, when *shall* is combined with negative words such as *no* or *not*, the meaning of *shall* changes into *may*. Because the example statements (6a) and (7a) are negated, the permission conveyed by *may* is invalidated. Therefore, if interpreted based on *Black's Law Dictionary*, the meanings become:

- (6b) a lawyer **may** not reveal information ...
 (7b) No Federal court **may** have jurisdiction ...

The researchers also discovered that although passive forms are undesired in American legal texts (Williams, 2009, p. 200), sentences with passive *shall* still occur. Passive verbs from the sample follow 14 expressions with *shall*. Examples are in (8) and (9).

- (8) and the provisions [...] as outlined above **shall** be largely externally determined. (COCA:ArabStudies)
 (9) On all matters and questions [...], a majority of votes cast **shall** be required to carry any action. ... (COCA:PSAJournal)

In (8) and (9), the actors are unclear. The actions to *determine* and to *require* are apparent.

b. Prescriptive shall in fiction register

While the use of prescriptive *shall* is dominant in the academic contexts, the fiction register contains no *shall* functioning as rules or regulations. This means that the use of prescriptive *shall* in informal writing is rare or even absent in COCA because academic and fiction registers are two different genres with different content.

2. Direction

The directive *shall* is also classified as deontic modality, of which the type is an obligation (Palmer, 2001). Since it involves giving orders to the addressee, the preceding subjects are other than first-person pronouns (*I* and *we*). As an order or instruction, *shall* is used with second-person *you* or third-person personal pronouns.

a. Directive shall in the academic register

In the sample from the academic register, there are 28 concordance lines with *shall* classified as direction. The patterns are similar to *shall* occurring in rules or regulations because the modal verb functions to express the obligation that the addressees must fulfil. The difference is that they do not occur in legal contexts, thus making them less incumbent. Based on Leech's (2004) usage classification of *shall*, the use of *shall* instead of *will* makes the situation formal. The patterns of use are represented in (10) and (11).

- (10) Instructor **shall** use Instructor's best efforts to cause all guest lecturers taking part in UNEX Classes ... (COCA:October)
- (11) And if that question **shall** be decided in the affirmative by two-thirds of the Senators ... (COCA:LawPublicPol)

Example (10) shows that *shall* is used to ask someone to do something. Meanwhile, example (11) implies that directive *shall* can be expressed through *if*-conditional sentences. If that particular event does not happen, the other action will not occur, either.

Among all the 28 concordance lines with *shall*, 10 are passives. Comparable to rules and regulations, passive *shall* causes the subjects or agents to be unclear. In examples (12) and (13), the agents are not apparent, making the addressee of the direction or to whom the necessity is given vague.

- (12) Baudrillard-style market-driven popularity **shall** henceforth be called (COCA:AnthropolQ)
- (13) [...] the President of the United States, and that the laws [...] **shall** be continued in force (COCA:AmerIndianQ)

b. Directive shall in the fiction register

In the fiction domain, there are 23 excerpts classified as directive *shall*. The subjects are also mostly second-person and third-person. The second-person subject *you* appears to be slightly more frequent than in the academic register with five occurrences. Regarding the frequency, *shall* as a direction in this field has no significant difference from an academic domain.

Nevertheless, although *shall* is typically used in formal situations (Darragh, 2000; Leech, 2004; Williams, 2009), it is reflected from this register that the use of directive *shall* in COCA is not limited to formal contexts as there are minor non-standard expressions found in the data. The language used to express a directive *shall* contains more colloquial vocabulary items. It is, in fact, closer to the language in everyday life.

- (14) La-la-la-la-la-la-la, # ... La-la-la-la, ... # For the Russians **shall** not have ConstantinOPLE!
(COCA:USCatholic)
- (15) [...] the dismal bells of harsh music: shall not, **shall** not, shall not. You shall not learn; you shall not earn (COCA:CriticalMatrix)
- (16) [...] And Ru-rulii, bow-bow: you **shall** act our will in this matter. I lower my nose ...
(COCA:Analog)

Examples (14), (15), and (16) show that directive *shall* is applied in various unconventional styles. In (14), the non-standard parts are located in the absence of the subject and the chanting. (14) is not a complete sentence because it starts with *for* without any main clause. Besides, the chanting of the *lalala* sound and the capitalisation of OPLE in “Constantinople” make the situation informal. In (15), the repetition of *shall not* makes the utterance unusual. Meanwhile, in (16), the informality lies in the speaker’s saying, “Ru-rulii, bow-bow,” which is considered colloquial style.

3. Permission

The researchers identified a new usage category of *shall* in academic and fiction registers in the data analysis, which differs from Leech’s (2004) classification of *shall* usage. Limited to rules and regulations or directions, *shall* with second-person and third-person subjects be used to express permission. When one encounters *shall* with second-person or third-person pronouns, it might be misinterpreted as rules, regulations, or other mandative meanings because of the similar characteristics. However, if being observed comprehensively, it can be shown that *shall* as permission involves giving someone the right to do something.

a. Permissive shall in the academic register

In the academic register, permissive *shall* is not dominant compared to other usages of *shall* in this domain as there are only ten texts classified from all 200 excerpts. In addition, permissive *shall* in the academic register with second-person subjects are not found in the

sample. There are only occurrences with third-person subjects. The use of *shall* to express permission in the academic register is given in example (17).

(17) The last words **shall** be his: # Genuine politics, politics ... (COCA:PerspPolSci)

b. Permissive shall in the fiction register

There are 11 occurrences of permissive *shall*. The use of *shall* in this domain is similar to that in the academic domain related to its syntactic structure. Nevertheless, there are both second-person and third-person subjects in this register, and it is used to express the act of granting something to someone.

(18) [...] clean stroke himself. [...] Frike, you have done very well. You **shall** enter my employ at once ... (COCA:BkSF:BringMeHead)

Example (18) represents permissive *shall* with the second-person subject *you*. It occurs five times, and the situations are all conversational. The second-person *you* and its absence in the academic register imply that, in fiction writing, *you* is a common pronoun because the conversation is one feature of fiction writing (Sanger, 2003). Similar to the patterns in other usages of *shall* in fiction register, utterances with permissive *shall* have minor unusual characteristics, as seen in (19).

(19) Ophelia is even now our captive. Should you exact thy vengeance, the maiden **shall** unto you be delivered ... (COCA:Mov:BourneSupremacy)

Example (19) contains an archaic second-person pronoun *thy* and the adverbial phrase *unto you* is put before the verb *be*. Example (19) reflects the characteristics of the common sentence patterns in Early Modern English, allowing diverse subject, auxiliary, or verb inversion (Singh, 2005).

4. Prediction

Predictive *shall* is categorised when the expressions involve the knowledge of the speaker. In other words, it belongs to the epistemic modality (Palmer, 2001). Predictive *shall* focuses on the events that are predicted to happen in the future using speculative or assumptive judgements.

a. Predictive shall in the academic register

Based on the investigation of the tokens in COCA, it is revealed that there are 32 occurrences of *shall* in academic discourse that are used to express futurity. *Shall* as prediction is primarily used with first-person personal pronouns *I* and *we*, as seen in (20).

(20) And let us not be weary [...], we **shall** reap if we faint not. (COCA:Church&State)

Example (20) shows that the uttered facts deliver either assumptive judgements. Unlike the usage of predictive *shall* suggested by Leech (2004), *shall* as prediction does not always start with first-person subjects.

- (21) Look to Africa for the crowning of a black king; he **shall** be the redeemer [...] (COCA:NaturalHist)
- (22) The righteous **shall** flourish like the palm tree [...] the workers of iniquity shall be destroyed ... (COCA:AmerScholar)

In (21), the agent predicts that there will be a redeemer, and in (22), the speaker predicts that there will be more righteous people in the future, “flourish like a palm tree” Predictive *shall* is chosen in the academic contexts because it is considered more formal than *will* and *may*.

b. Predictive shall in the fiction register

The fiction register uses richer sentence patterns with *shall*, conveying predictive meanings. Similar to that of the academic register, the use of predictive *shall* in this register is not limited to first-person personal pronouns as there are occurrences of *shall* with pronouns other than *I* and *we*.

The researchers find that variant forms are used with predictive *shall* in fiction. The results are that archaic words or inverted sentence patterns used with predictive *shall* be represented in examples (23–24).

- (23) [...] White is White and never the twain **shall** meet. (COCA:FantasySciFi)
- (24) [...] the grasses of the Valley of Elah, then **shall** my brother’s seed flow out from him. (COCA:SouthernRev)

Predictive-*shall* expressions show patterns in which adverbials are placed in inverted manners. For example, in (23), the adverb *never* is located before the subject *the twain*. Additionally, example (24) represents auxiliary inversion, in which *shall* is placed before the subject although it is not an interrogative form.

5. Volition

The most complex patterns of usage of modal verb *shall* are in the volitive *shall*. Based on Palmer’s (2001) modal typology, volitive *shall* can be categorised as either deontic or dynamic modality. *Shall* is classified as deontic when it expresses the speaker’s commission to do something. It is said to be dynamic, or specifically volition, because it is unrelated to the speakers’ knowledge and expresses willingness. The preceding subjects of volitive *shall* are first-person pronouns.

a. Volitive shall in the academic register

From the 200 random tokens of the COCA academic register, the use of *shall* as volition occurs 58 times. The sentence patterns are in the form of statements and interrogatives. When the subject of the statement with *shall* is the first person *I*, the speakers are identified as expressing their willingness to do specific actions. Examples are (25) and (26).

- (25) I **shall** discuss the relation between the verbal ... (COCA:Symposium)
(26) I **shall** refer indifferently to the EC or the EU. ... (COCA:AcademicQs)

When the subjects are the first person *we*, the meaning of *shall* slightly changes. In this case, the speaker initiates suggestions or offers to others.

- (27) These same visitors may also ask what we **shall** find to be a closely related question: ... (COCA:AnthropolQ)
(28) We **shall** see that at least one text is difficult ... (COCA:Monist)

In (27) and (28), the subjects, *we*, suggest that other people do something with them together.

The use of interrogatives with *shall* in the samples of academic domain, however, is rare. In the academic register, volitive questions using *shall* only occur five times. All of them appear in conversational situations, as shown in (29), (30), and (31).

- (29) Or **shall** I set in motion that works which I can carry out ... (COCA:CrossCurrents)
(30) **Shall** we alternately witness a broad shift towards radicalism [...] Muslim moderates? (COCA:MiddleEastQ)
(31) **Shall** we put that down, sir? (COCA:ContempFic)

Examples (29–31) have the same meaning as statements using volitive *shall* with first-person subjects *I* and *we*, respectively. Example (29) shows that the speaker offers to do something. In examples (29–31), the speakers ask the addressees to do something with them.

b. Volitive shall in the fiction register

In the fiction domain, *shall* as volition is significantly more frequent than that of academic register. There are a total of 100 occurrences with volitive *shall*. The characteristics of *shall* usage in this domain are similar to that in the academic domain. First, the sentence patterns are in the form of statements or questions. Secondly, the researchers found that *shall* is used to express personal intentions when it is preceded by the first-person subject *I* and suggestions when it starts with the first-person subject *we*. Excerpt (32), for example, uses *we* to deliver suggestions to the addressee, Mister Souter.

- (32) We **shall** speak later, Mister Souter. I believe I have a few obligations ...
(COCA:Bk:EnglishHorses)

Thirty-six of the tokens are interrogatives expressing volition or willingness. Apparently, the interrogative forms appearing in the data are more variable. Besides questions that start with *shall we*, which conveys suggestions, some questions start with *shall I* functioning to express one's intention to do something. Example (33) shows that *I* intends to get everything prepared at seven.

- (33) That would be very nice. **Shall** I be ready then at seven? [...] Yes, I should be finished ...
(COCA:Bk:InterviewVampire)

Apart from the fundamental question pattern (33), four of the utterances are question tags as represented in (34). All the examples of *shall* with question tag use *we*, and the expressions are always preceded with *let's*. In this case, it delivers the meaning that question tags with *shall*, in this case, are used to provide a suggestion.

- (34) Let's abandon the pretense that you know nothing, **shall** we? You don't care ...
(COCA:BkSF:SlowWaltz)

From the data, it is also identified that there are expressions with two modal verbs, *shall* and *have to*, at the same time. Six concordance lines from the sample are identified using this form. Meanwhile, *have to* is a modal verb used to express obligation. This reflects the speakers' volition, which is based on their obligation. Examples (35) and (36) show that the speakers or subjects have the intention to do certain deeds; however, the addition of *have to* makes the willingness driven by a particular force, either inside or outside the speakers.

- (35) I **shall** have to confess this [...], she thought, for... (COCA:Bk:DaughterYork)
(36) [...] be forced to pay the killer's brutal toll because of this decision? We **shall** have to wait and see ... (COCA:Bk:NightPrey)

The more novel forms of volitive *shall* in the fiction domain are reasonable because fiction allows writers to use various language elements (Sanger, 2003). Therefore, it makes sense that volitive *shall* in the data of COCA fiction register mostly occurs in conversational contexts.

Conclusion

The researchers conclude that *shall* occur more frequently in the fiction register than that in the academic register with the overall frequencies of 68.34 and 59.77 words per million, respectively. Results revealed that the highest frequencies of *shall* were in law and

religion/philosophy sub-registers. These frequencies implied that *shall* was significantly used in legal and religious contexts. On the contrary, the least occurrence of *shall* was located in the education and medicine sub-registers, which suggested that *shall* was not remarkable in those fields.

Usages of *shall* in academic and fiction registers varied syntactically, semantically, or stylistically. The researchers found out that the usage of *shall* could be classified as rules and regulations, direction, permission, prediction, and volition. The most significant difference of *shall* in academic and fiction registers was in rules and regulations. In the academic domain, *shall* occurred 65 times, but there was no occurrence of *shall* in the fiction domain. This could be true because both registers were domains with different content.

Shall was categorised as direction when it used second-person or third-person subjects, and it was used to express order or obligation. The distinction from that of rules and regulations was that directive *shall* was not written in legal contexts, thus making it less binding. In terms of frequency, there was no meaningful difference between academic and fiction registers in using directive *shall*. In the fiction domain, the difference was that there were patterns in which *shall* was used with inverted sentences or archaic language features.

The most variable patterns of usage of the modal verb *shall* were found in the concordance lines with volitive *shall*. The preceding subjects of volitive *shall* were first-person personal pronouns *I* and *we*. From the usage patterns being examined, it could be seen that when the subject was the first person *I*, *shall* was used to express one's intention. However, when the subject was the first person *we*, *shall* delivered suggestions to the addressee. In the academic field, volitive *shall* occurred 58 times. The fiction registers had more frequent volitive *shall* as there were 100 occurrences.

The limitation of this research lies in the number of data collected based on purposeful random sampling. Thus, it is possible that some minor patterns of *shall* usage have been excluded because they were not drawn as the sample. For further research, various aspects of *shall* can be explored. Future researchers are encouraged to investigate *shall* in spoken registers and other English varieties, such as British English and Australian English.

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