

Interdisciplinary Journal of Research on Religion

Volume 18

2022

Article 5

A Corpus-Based Comparison of Modality in Evangelical Christian and Zen Buddhist Books

Charles M Mueller*
Fuji Women's University
Sapporo, Japan

Peter Richardson
Hokkaido Bunkyo University
Eniwa, Japan

Baramee Kheovichai
Silpakorn University
Bangkok, Thailand

Miori Nagashima
Hokkaido University
Sapporo, Japan

* mueller@fujijoshi.ac.jp

A Corpus-Based Comparison of Modality in Evangelical Christian and Zen Buddhist Books

Charles M Mueller
Peter Richardson
Baramée Kheovichai
Miori Nagashima

Abstract

This paper contributes to the comparative analysis of religious language through an analysis of specific linguistic features in corpora of contemporary Evangelical Christian and Zen Buddhist texts. Based on a force dynamics framework from cognitive linguistics, this corpus-based study highlights and discusses some important differences between the linguistic patterns in the discourse of these two traditions, specifically in the use of modals. The results show that Evangelical language, with one noteworthy exception, generally makes more frequent use of modals based on positive compulsion. *Will* is also used more often to mark eschatological concerns and predictions about what Christians will experience and how they will respond. In contrast, the Zen Corpus exhibits greater use of modals associated with contingency and use of distal modal forms such as *might* and *would*. The fact that these are often used to hedge statements suggests the Zen authors have a greater tendency to avoid emphatic language. The linguistic patterns can be attributed largely to the texts' discourse contexts and aims: Zen discourse is primarily focused on offering teachings grounded in realizations drawn from the author's practice with only a secondary focus on interpreting and presenting the teachings of authoritative figures within the tradition. The abundance of hedging also reflects Zen authors' suspicions of teachings that put forth a priori claims of absolute truth. In contrast, the focus of Evangelical writers is often on conveying what they regard as the unequivocal truth of the Bible, whether by means of direct quotes, paraphrasing, or interpretative application. The relative avoidance of hedging and preference for modals of strong positive compulsion in the Evangelical texts thus reflect firm convictions regarding the divine authority of Christian scripture. This study demonstrates how corpus-based analysis and cognitive linguistic frameworks can be effectively combined in the study of religious language.

Religion has been defined as a family resemblance category that is typically associated with supernatural agency, ritual, costly commitment, grand narratives, transformative experiences, ethical codes, and responses to existential issues (Richardson et al., 2021, p. 4). Religious practices, to include meditation, prayer, and rituals, often involve interactions with supernatural agents who are thought to possess the power to spiritually transform both the individual believer and the community at large. Moreover, spiritual transformation is commonly regarded as involving inevitable struggle and conflict. In Christianity, the struggle may be viewed as resulting from the tension between God's will and humankind's sinful nature, or alternatively, through the human struggle to resist the temptations of Satan and follow the divine will. In Buddhism, where divine forces are often absent or less prominent, spiritual struggles may be of a more psychological nature. For example, there may be a perceived conflict between an individual's religious aspirations and the ingrained ignorance and unwholesome habits accrued over countless past lives. Religious practices and the struggles they engender also presuppose motivations, attitudes, and beliefs. As a result, epistemological concerns emerge as the devout express the strength of their confidence in specific beliefs and reflect on the source of these beliefs, distinguishing for example between direct versus inferential knowledge.

For researchers investigating religious language, concern with supernatural forces and the rationalization of beliefs would suggest a potentially fruitful approach. Linguistic features and constructions that are used to convey epistemological stance and the struggles between forces should provide a rich trove of insights into religious discourse and the ways in which this discourse varies across religious traditions. This being the case, it may be asked which particular linguistic features fulfill this role in English.

As in many other languages, the English modal system provides a particularly rich repertoire of forms to convey construals of opposing forces, whether these be physical or social. At the same time, modals can also convey epistemological distinctions such as the use of inference (e.g., *It must be raining* versus *It is raining*). For this reason, the current paper examines modals in religious discourse through a corpus-based analysis of two corpora consisting of recent Evangelical Christian and Buddhist Zen works written in English.

The research thus addresses two lacunae in existing research. First, it examines *contemporary* religious discourse, an area of emphasis that has remained underexplored despite a recent surge in scholarly interest following the publication of several book-length treatments (Hobbes, 2021; Pihlaja, 2018, 2021; Richardson et al., 2021). Second, it combines a force dynamics theoretical framework with corpus analysis. The research thereby demonstrates how these theoretical frameworks and approaches can be combined synergistically in comparative analyses of religious discourse.

The paper consists of five parts. The first section discusses previous research on modals and the force dynamic framework used in subsequent analyses. The second section discusses the corpus construction and methodology as well as the general features of the two corpora under investigation. The third section looks at the general frequencies of modals and then turns to the relative proportion of proximal and distal modals such as *can* and *may* versus *could* and *might*. Through

a qualitative examination of concordance lines taken from our two corpora, this section also explores several factors that may account for observed differences. The corpus analysis revealed an interesting discrepancy in the use of *must* and *have to* in the two collections of texts, so the fourth section reports the results of a follow-up analysis. The final section synthesizes the results and discusses what the analyses suggest regarding the distinctive features of written Evangelical and Zen discourse.

LITERATURE REVIEW

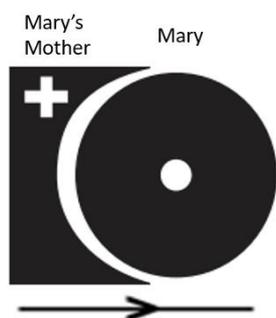
A key assumption within cognitive linguistics is that human conceptualization is both shaped and constrained by schematic patterns derived from embodied experiences that humans undergo as they carry out typical human tasks (Shapiro, 2014; Varela et al., 1991). A particularly influential set of patterns are related to experiences of force dynamics, which are based on the universal human experience of both agents and physical objects moving, being moved, being hindered, and applying pressure (Hart, 2011; Johnson, 1987; Talmy, 2000).

Force dynamics can be formally represented in a system of diagrams developed by Talmy (1988, 2000). In his system, the main focus of the force dynamic situation (the agonist) is depicted as a circle. The opposing force (the antagonist) is depicted as a concave figure. When representing examples like *the wind pushed the boat* in the form of a diagram, the antagonist (the wind) is acting as a coercing force, so it is shown to the left of the agonist. Conversely, if the antagonist acts as a blocking or hindering force, it is shown to the right. An entity's tendency toward movement is depicted by an arrowhead, and a tendency toward stillness is depicted by a dot. The agonist and antagonist force tendencies are always opposite. For this reason, the force tendency of only one of the entities is depicted in the figures (since the force tendency of the other entity can be assumed to be opposite). A plus sign is used to indicate which of the two forces are stronger.

While based on embodied experiences of forces, human conceptualization of force is conventionally extended to depictions of social and epistemic forces (Sweetser, 1990; Talmy, 2000). Social force involves some form of obligation imposed by others or by society as a whole. For example, in the sentence *Mary's mother made her do her homework*, Mary is the agonist who is being forced (or "pushed") to do her homework, with the implication that Mary's natural tendency is towards rest (i.e., towards not doing homework). In this case, the mother's force is stronger, so Mary's opposition is overcome, with the result that she does her homework. This sort of force-dynamic outcome is shown on a line below the figure (see Figure 1). It should be noted that unlike the Mary example, each entity in a force dynamic schema does not need to be explicitly mentioned in linguistic expressions based on the schema (Talmy, 2000). For example, the sentence *Tom has to do his homework* would involve the same schema with the precise identity of the coercing force unspecified. Force dynamics can also be extended to epistemic meanings. For example, the statement *It must be raining* implies that my default assumption that it is *not* raining has been overcome by the force of contrary evidence (e.g., someone walking into my room with a wet umbrella).

Figure 1

The Force Dynamic Configuration in “Mary’s Mother Made Her Do Her Homework”



Within English, force dynamics are especially important for understanding modals (Sweetser, 1990) and causative constructions such as *I had my photo taken* (Mueller & Tsushima, 2019). Both Sweetser (1990) and Talmy (1988) have provided detailed accounts of the force dynamics of English modals, but this paper will follow Sweetser’s (1990) account as it provides what we feel is a more intuitively plausible account of modal meaning. Due to methodological constraints (i.e., the use of corpus analysis), modals that occur rarely, and are thus unlikely to permit statistical comparisons using small corpora, will be omitted from the study. For this reason, the current study will focus solely on the modals *can*, *have to*, *may*, *must*, *need to*, *ought to*, *shall*, and *will*, and the distal forms of *can*, *may*, *shall*, and *will* (i.e., *could*, *might*, *should*, and *would*). These distal forms will be contrasted with their proximal counterparts as they have all undergone diachronic developments in which they have accrued uses beyond simple marking of the past tense (Bybee, 1995).

In Sweetser’s (1990) account, the modals *must*, *shall/should*, *have to*, *need to*, and *ought to* all involve a force dynamic situation characterized by positive compulsion, like that shown in Figure 1. *Shall* is said to differ from *must* in its implying that the imposer (often the speaker) is making herself/himself responsible for seeing to it that the action is done. *Have to*, *need to*, and *ought to* are said to differ from *must* and *shall* in implying coercing forces (antagonists) that are weaker and thus potentially resistible. Among these three, *ought to* is described as weaker and as implying moral overtones. In the case of *have to*, the obligation is imposed by an external authority. It therefore contrasts with *need to*, in which case the obligation is construed as internal. Sweetser (1982) provides the following examples that show a clear contrast between *have to* and *need to* (p. 487). The modals in the second and fourth sentence are semantically infelicitous.

I have to stay home, or Mom will get mad at me.
 * I need to stay home, or Mom will get mad at me.

You have to stay home, because I say so.
 * You need to stay home, because I say so.

It is not entirely clear whether *can* and *will*, in at least some of their uses, are based on a force-dynamic schema. They could perhaps be based on a configuration in which a strong agonist overcomes potential barriers (see Figure 2), but this is contentious.

Figure 2

Possible Force-Dynamic Construal Implied by CAN and Some Uses of WILL



Both Talmy (2000) and Sweetser (1990) agree that *may* represents a situation in which a barrier that could potentially block the agonist is lifted (see Figure 3). In other words, the force-dynamic configuration is akin to that evoked by the words *let* or *allow*.

Figure 3

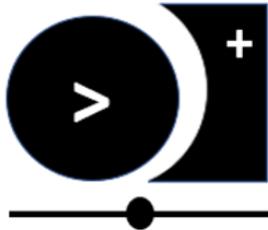
The Force-Dynamic Situation Implied by MAY



When modals are negated, the force dynamic schema changes. In many cases, the configuration is reversed. For example, the sentence *Mary must not go to the dance* could be depicted as in Figure 4, which is essentially the inverted form of Figure 1.

Figure 4

The Force-Dynamics of “Mary Must Not Go To the Dance”.

*GENERAL METHOD*

Two corpora, hereafter called the “Evangelical Corpus” and “Zen Corpus”, were created for this study. The two traditions were chosen as they are based on sharply divergent worldviews and areas of concern. Evangelical Christianity places particular focus on sincere conversion, missionary activism, biblical authority, and the atoning work of Jesus Christ on the cross (Bebbington, 1989). Zen (in Chinese *Chan*, in Korean *Seon*), a Mahayana Buddhist movement that began in China and then spread to Korea, Japan, and, more recently, Western countries, emphasizes the need for each person to achieve enlightenment. While the ultimate goal is Buddhahood, there is a strong non-dualistic current in Zen, which claims that the enlightened person ultimately realizes that there is no fundamental difference between enlightenment and the non-enlightened state (samsara). As in Christianity, Zen practitioners are expected to follow certain ethical rules, but there is a great deal of emphasis on formal meditation which often takes place in a retreat setting.

Both of the corpora for the current study consisted of popular English language books published in the year 2000 or later (see Appendix A). Only books that dealt directly with Evangelical or Zen beliefs and practices were included. To ensure that each corpus was not overly influenced by the idiosyncrasies of any particular writer, it was stipulated that each author could appear in each corpus only once. Following accepted practice, individual occurrences of word forms in the corpora (i.e., running words) are referred to as *tokens*. The Evangelical Corpus (1,156,834 tokens) contained full texts from 15 books, with roughly equal numbers of authors from the reformed (i.e., Calvinist) versus non-reformed churches. The Zen Corpus (1,169,393 tokens) consisted of full texts from 19 books. Female authors wrote three of the books from the Evangelical Corpus and seven of the books from the Zen Corpus. This female/male distribution, while uneven, is representative of the two traditions (especially Evangelical Christianity) in which male writers continue to be predominant. The two corpora were compiled and CLAWS-tagged in Sketch Engine. CLAWS is a software program that adds part of speech (e.g., noun, verb, etc.) tags to a collection of texts. This allows researchers to create more accurate searches and frequency counts that take advantage of complex query language (CQL). Sketch Engine is a cloud-based service providing access to a large number of corpora and to a detailed online interface enabling complex linguistic queries.

The current study's corpus investigations, beginning broadly and then narrowing in focus, involved four sets of analyses. The initial analysis examined general features of the texts using keyword analysis, sentiment analysis, and analysis of pronouns. The second analysis examined the relative frequency of modals in terms of force dynamic configurations. As noted in the introduction, negation can shift the force dynamic schema underlying modals in use. This is a complicated matter as different aspects of meaning can be negated depending on the modal. Since an investigation of negation is not essential to the aims of the current study and since the force dynamics of negated modals has not been worked out in detail in prior research, only non-negated modals will be considered in the current study. The third analysis compared the proportion of modals occurring as proximal or distal forms (e.g., *may* vs. *might*). The final analysis focused on 800 randomly selected concordance lines containing two particular modals, the lexemes *have to* and *must*.

GENERAL FEATURES OF THE TEXTS

Keyword analysis

Using the Sketch Engine interface, a keyword analysis was conducted on the Evangelical Corpus using English Web 2020 (38 billion words) as a reference corpus. A keyword is a word that occurs with unusual frequency in a set of texts. Keywords are identified through statistical comparisons of a target corpus with a larger corpus, which serves as a benchmark (Evison, 2010). The following comments are based on the top 100 keywords (see Appendix B). Abbreviations related to text navigation (e.g., "ref-1") have been omitted.

As would be expected, most keywords in the Evangelical Corpus were directly related to Christian discourse (e.g., *evangelize*, *Jesus*, *biblical*, *Bible*, *extrabiblical*, *God*, *preaching*, *Godly*, *Christ*, *non-Christian*, *sin*, *scripture*, *savior*, *repentance*, *gospel*, *baptize*, *disciple*, *Lord*, *salvation*, *testament*, etc.) Seven keywords were abbreviations referencing specific translations of the Bible, while 13 keywords referred to books of the Bible (mostly New Testament). One unexpected finding was an abundance of -ism words (e.g., *naturalism*, *monism*, *Platonism*, *neo-Platonism*, *humanism*, and *pantheism*) along with several words related to philosophical or ideological positions (e.g., *metaphysical* and *postliberal*). These suggest a concern with apologetics and the policing of doctrinal boundaries among Evangelical writers. Several keywords stand out as characteristic of King James English (e.g., *rejoice*, *forsake*, and *exalt*) or the Biblical historical context (e.g., *slave*, *doulos*). A couple of words (e.g., *intiversity*, *multi-campus*) were related to college life. In sum, the Evangelical Corpus made notable use of specialized religious terms and frequent scriptural references while displaying a concern with philosophical movements, particularly movements with views regarded as incompatible with Christianity.

Using the same interface and reference corpus, a keyword analysis was also conducted for the Zen Corpus. Over half (52) of the top 100 keywords (see Appendix C) were borrowed terms or names from Japanese (28), Sanskrit (16), or Chinese (8). The 29 Japanese words were closely associated with Zen retreats and

included words such as *koan*, *zazen*, *zen*, *roshi*, *kensho*, *zendo*, *tanden*, and *teisho*, as well as key figures such as Hakuin, Rinzai, Dogen, and Issan. In the case of Chinese, all the keywords were names of famous Zen masters. The words from Sanskrit were more closely associated with Mahayana doctrines and included words referring to general Buddhist concepts (e.g., *Buddha*, *dharma*, *sangha*, *sutra*, and *dukkha*) and the Bodhisattva ideal (e.g., *bodhisattva*, *Mahayana*, *upaya*, and *prajnapramita*). Many of the native English words (approximately 17) were related to meditation practice (e.g., *awakening*, *enlightenment*, *realization*, *mindfulness*, *meditation*, *not-knowing*, *warrior-spirit*, *oneness*, *actualize*, *dualism*, *MBSR*, *self-nature*, *Buddha-nature*, *exhalation*, and *burnout*). A smaller group of words were related to traditional Buddhist ideas (e.g., *precept*, *suffering*, *impermanence*, *eightfold*, *monk*, *renunciation*, *co-arising*, and *suchness*) and the Mahayana emphasis on compassion (e.g., *altruism*, *empathy*, *compassion*, *compassionate*). Another group of words expressed more abstract psychological concepts (e.g., *egocentricity*, *delusion*, *no-self*, *egoic*, *subpersonalities*, *intoxicant*, and *dis-ease*). In short, the Zen Corpus made heavy use of recently imported foreign terms, with keywords suggesting a focus on meditation and psychological introspection.

Sentiment Analysis

Sentiment Analysis (using the advanced module of ATLAS.ti, Version 9) was conducted on the paragraphs of the Evangelical Corpus and Zen Corpus. ATLAS.ti is a computer program used to uncover and systematically analyze complex phenomena in unstructured data, and its Sentiment Analysis module employs a trained semantic tagging system to classify the emotional tone of designated units of a text. For this study, the analysis was conducted on paragraphs rather than sentences. The number of paragraphs tagged with each sentiment are shown in Table 1.

Table 1
Sentiment Analysis for Paragraphs in the Evangelical and Zen Corpus

Sentiment	Evangelical Corpus	%	Zen Corpus	%
Negative	8,917	33.1%	6,383	30.8%
Neutral	6,849	25.4%	5,722	27.6%
Positive	11,179	41.5%	8,625	41.6%

A chi-square test of homogeneity showed that the proportions of sentiment types were significantly different in the two corpora, $\chi^2(2, N = 47,675) = 40.58, p < .001, V = .03$. However, the low Cramér's *V* indicated that the association between corpus type and sentiment type was negligible (based on the guidelines in Rea & Parker, 2014, p. 219, which are used throughout this paper). An examination of the adjusted residuals for each cell showed that only the values for the four cells for negative and neutral paragraphs (all $p < .001$) were significant at a Bonferroni adjusted alpha of $p = .008 (.05 / 6)$. Specifically, there was a greater proportion of

negative sentiment paragraphs in the Evangelical Corpus, and a greater proportion of *neutral* paragraphs in the Zen Corpus. In both corpora, the proportions of positive sentiment paragraphs were virtually identical.

Pronoun Analysis

Pronoun use in the two corpora is displayed in Table 2. The table shows the log-likelihood (LL) and odds ratio for the comparison between the Evangelical and Zen corpora. These calculations were performed using the online wizard provided by Lancaster University (<http://ucrel.lancs.ac.uk/llwizard.html>). A high LL indicates a greater likelihood that the differences in the use of the pronouns in Evangelical and Zen texts are, in fact, different. Odds ratios further from 1.00 (both lower and higher) likewise indicate greater differences. It should be noted that log-likelihood values of 3.84 or higher are equivalent to $p < .05$, and values of 10.83 or higher are equivalent to $p < .001$. Odds ratios higher than one indicate higher use in the category on the left (the Evangelical Corpus) and those lower than one, higher use in the category on the right (the Zen Corpus). In the left-hand column of Table 2, frequencies for the written portion of the British National Corpus (BNC) are provided for comparison. The BNC is a large corpus containing over 100 million words of text from a wide range of genres.

As can be seen, both corpora exhibited some differences from written sections of the BNC-W. For example, in both the Evangelical and Zen Corpus, *I* occurs over twice as often as it does in the BNC-W. *You* is also much more common in the two religious corpora, and occurs nearly twice as often in the Evangelical than in the Zen Corpus. This high use of *I* and *you* reflects a more intimate and direct style of discourse similar to that found in speech (Biber et al., 1999).

Table 2

Pronoun Use Per Million Words in the Evangelical and Zen Corpora and BNC-W

Pronoun	BNC (Written)	Evangelical	Zen	LL*	Odds Ratio
I	5,467	9,893	11,035	72.33	0.90
You	3,973	14,901	8,136	2,347.06	1.84
He	5,623	6,403	3,535	976.75	1.82
She	3,083	669	1,522	396.41	0.44
It	7,980	7,786	12,201	1,143.39	0.64
We	2,408	8,363	13,177	1,261.22	0.63
They	3,219	3,590	2,969	65.78	1.21

LL = log likelihood (based on raw token counts)

All three corpora show a problematic gender gap in pronouns, with *he* occurring with much greater frequency. While this can be partly attributed to the tendency in English to use *he* as the default pronoun for third person, it is noteworthy that *he* occurs at nearly ten times the rate of *she* in the Evangelical Corpus. To some extent, this may reflect the fact that Jesus is male, and God is consistently portrayed as

male in the Evangelical Corpus. Another possible explanation is that pronoun use is affected by the gender of the author of each work. To determine whether this was the case, pronoun use was examined separately for male and female authors in each corpus, as shown in Table 3.

Table 3
Frequency Per Million Words of SHE and HE in Two Corpora by Sex of Author

Evangelical Corpus				Zen Corpus			
female writer		male writer		female writer		male writer	
<i>she</i>	<i>he</i>	<i>she</i>	<i>he</i>	<i>she</i>	<i>he</i>	<i>she</i>	<i>he</i>
639	5,677	674	6,603	1,573	2,846	1,482	4,078

Although the descriptive statistics show slightly more use of *she* relative to *he* among female writers in the Evangelical Corpus, a chi-square test of independence did not show a significant relationship between authors' gender and the use of these pronouns, $\chi^2(1, N = 13,593) = 2.83, p = .092, V = .01$. In the Zen Corpus, on the other hand, a chi-square test of independence did show a significant relationship, albeit of weak strength, due to female authors' relatively greater tendency to use *she* versus *he*, $\chi^2(1, N = 9,979) = 97.67, p < .001, V = .10$. This finding is of interest as it suggests that women appear more prominently in some written forms of religious discourse when the authors are women.

It is more frequent in the Zen Corpus. This may be due to the frequent reference to psychological constructs that are construed as impersonal processes. In the two religious corpora, *we* is much more frequent than in the BNC-W. However, only in the Buddhist corpus does it exceed the frequency of *I*. *They*, on the other hand, occurs more in the Evangelical Corpus, suggesting (along with the previously mentioned keyword analysis) a preoccupation with apologetics among Evangelical writers. The relative frequency of *I* and *we* relative to *they* in the two religious corpora suggests that the Buddhist texts are characterized by a more inclusive discourse style relative to the Evangelical Corpus.

Frequency of Modals and Relative Preference for Distal Forms

Table 4 shows the frequency of the modals (as lemmas) without negation in the Evangelical and Zen Corpus along with the log-likelihood and odds ratio for the comparison. To provide a general benchmark, the frequencies of the modals in the written section of the BNC (BNC-W) are shown on the left. As can be seen, the Evangelical Corpus, relative to the Zen Corpus, has significantly more tokens of the modals *must*, *shall*, *should*, *ought to*, and *will*. The Zen Corpus has relatively more tokens of *have to*, *can*, *could*, *may*, and *might*.

Table 4

Frequency of Modals (Occurring Without Negation) Per Million Words in the Corpora

Modal	BNC-W	Evangelical	Zen	LL*	Odds Ratio
Must	612.0	754.6	572.9	35.07	1.35
Shall/Shalt	154.0	160.8	35.1	138.30	5.24
Should	881.5	781.4	689.2	5.21	1.11
Have To	648.2	420.1	835.5	159.49	0.51
Need To	193.9	549.8	522.5	1.06	1.06
Ought To	35.5	70.9	22.2	31.11	3.19
Can	1,845.6	2,748.9	3,927.7	210.92	0.73
Could	1,240.8	737.4	1,119.4	93.96	0.67
Will	2,564.7	5,184.0	2,237.9	1,540.08	2.38
Would	2,191.2	1,572.4	1,676.9	2.43	0.95
May	998.3	1,118.6	1,329.7	22.88	0.84
Might	481.4	343.2	782.5	212.88	0.44

* Log likelihood (based on raw counts of target words in each corpus)

When comparing the frequency of the modals in each corpus, several notable patterns can be identified. First, the modals based on a force dynamic schema of positive compulsion (i.e., *must*, *shall*, *have to*, *need to*, and *ought to*) are, with the exception of *have to*, all more common in the Evangelical Corpus. The inconsistent pattern found for *have to* will be explored later in the paper in a comparison with *must*, since these two modals are often regarded as roughly equivalent in meaning.

These results may reflect two distinct concerns in Evangelical and Zen discourse. Evangelical Christian discourse centers around the exegesis of the actions, words, and promises of God as contained in the Bible, which is regarded as the inspired Word of God. Within the force-dynamic configuration, this view of the Bible as a repository of objectively true statements and normative guidelines in tandem with the perception of dire consequences for human individuals and communities if these statements are ignored creates an antagonist element with an unusually clear and powerful force. As we can see in the examples below, this is often incompatible with weaker modals, which are often used to hedge statements.

God will unveil the truth as you apply His Word. He will also show you how you must be broken and humble before Him. (Swindoll, 2016)

I will warn you now: this is not going to be a fun chapter to read, but I will try to keep it short and to the point. Jesus himself is going to tell us that we need to hear this truth now, not later. (Frazee, 2017)

The authoritative role of the leaders as presenters of these divine statements and obligations also results in a high frequency of direct quotes and paraphrasing from the Bible in their discourse. This explains many of the occurrences of the more

archaic modal forms, such as *shalt*, and even extends to quotes nested within quotes (i.e., New Testament quotes that include a quote from the Old Testament).

Jesus is not hiding his expectations for us: "But I tell you that everyone will have to give account on the day of judgment for every empty word they have spoken" (Matthew 12:36). (Frazee, 2017)

Elsewhere, he told the Christians in Rome, "We shall all stand before the judgment seat of Christ. For it is written, 'As I live, says the Lord, every knee shall bow to me, and every tongue shall confess to God.' So then each of us shall give account of himself to God" (Rom. 14:10–12 NKJV). (MacArthur, 2010)

Buddhist discourse, on the other hand, often invokes a psychological framework in which practitioners acquire acumen in meditational techniques or social skills, which are often viewed from the standpoint of personal psychology and are thereby dependent upon individual investigation and confirmation. We can see this in the examples below:

Similarly, we can guard against the elaborate cascade of often vexing or enthralling thoughts and emotions commonly triggered by even one bare sense impression. We can do so by bringing our attention to the point of contact, in the moment of contact with the sense impression. (Kabat-Zinn, 2018)

At the beginning, it may be somewhat tedious. It may take quite a bit of time and intention, maybe even some real effort and discipline. (Adyashanti, 2009)

Moreover, Zen discourse focuses much less on foundational texts and more on the achievements of past and living masters, which in the case of the Zen Corpus, includes the authors of the books. These authors are undoubtedly respected in their communities. Even so, they may be concerned that strong language regarding their own spiritual achievements and overly forceful advice (e.g., advice using *must* and *shall*) risk giving readers the impression that they are haughty or condescending. There is also a consistent strand in Buddhist discourse that espouses the view that the words of scripture or teachers should not be viewed as absolute truth, but simply as expedients. Ultimately, enlightenment is to be achieved through one's own practice culminating in direct insight. We can see this reflected in these examples from the Zen Corpus:

The different Buddhist traditions or schools, all their various practices ... may also be considered vehicles in this way ... From this basic standpoint, no particular vehicle or tradition can be considered superior or inferior to another. Since we all have unique obstacles and abilities, the highest teachings and deepest practices for each of us are just those that work. (Moore, 2018)

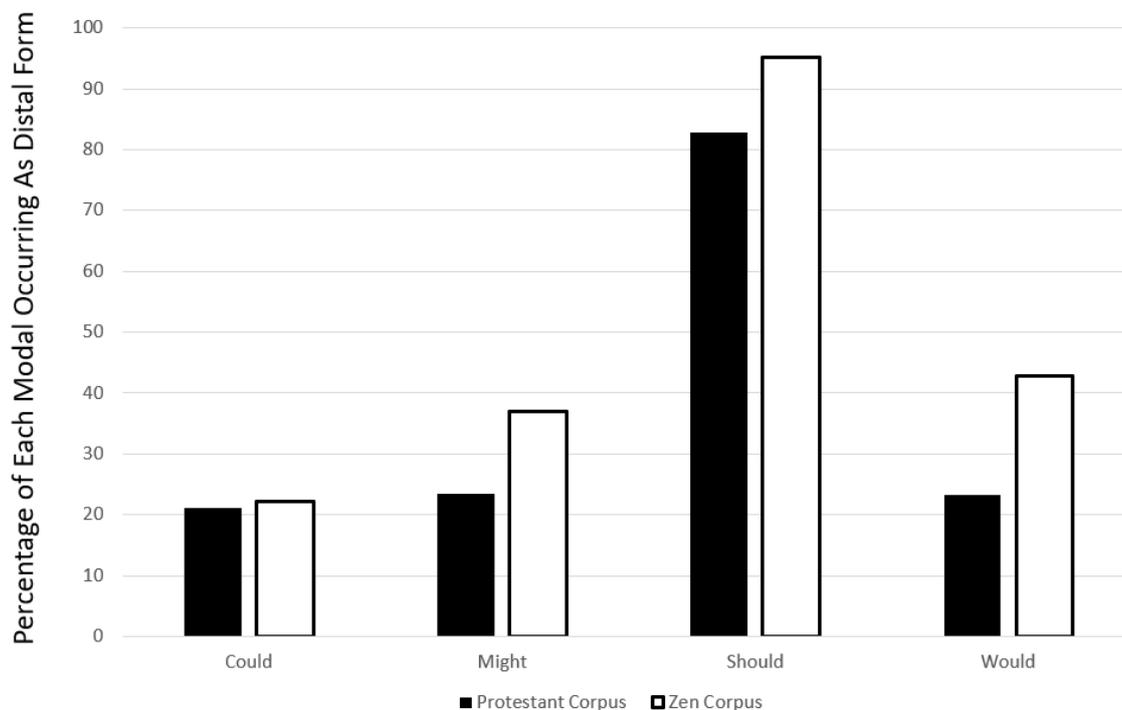
Until it occurs to us that what we have been taught to believe might not be the absolute truth, there is no reason to look for another reality. (Huber, 2000)

The relative frequencies of modals in the two corpora may also reflect a greater conservative tendency (and a corresponding tendency to resist diachronic linguistic shifts) among Evangelical Christians relative to American Buddhists. It is noteworthy that the Zen Corpus reflects recent developments in English favoring a decreased use of *must* and *shall* (Kranich, Hampel, & Bruns, 2020; Mair & Leech, 2006) and increased use of the modal *have to* (Collins, 2009), whereas the Evangelical Corpus exhibits greater resistance to this shift.

An additional analysis examined each corpus's proportion of proximal modals (i.e., *can*, *may*, *shall* and *will*) relative to their distal counterparts (i.e., *could*, *might*, *should*, and *would*) as shown in Figure 5. As can be seen, the distal forms (i.e., *could*, *might*, *should*, and *would*) tend to occur less than their proximal counterparts (i.e., *can*, *may*, *shall*, and *will*) except for *should*. Compared to the Evangelical Corpus, the Zen Corpus displayed a greater tendency to use distal forms relative to proximal forms.

Figure 5

Percentage of Each Modal Occurring as a Distal Form in the Two Corpora



To determine whether this discrepancy between proximal and distal use in the two corpora was significant, chi-square tests of homogeneity were conducted using

the per-million-word frequencies of proximal and distal modals in each corpus. These tests (Table 5) indicated that the proportions of use of proximal versus distal forms were significantly different for all four models with the exception of *can* and *could*.

Table 5

Chi-Square Tests of Homogeneity on Proximal vs. Distal Preference in Two Corpora

Modal	Chi-Square Tests of Homogeneity
<i>can/could</i>	$\chi^2 (1, N = 8,533) = 1.28, p = .257, V = .01$
<i>may/might</i>	$\chi^2 (1, N = 3,574) = 73.71, p < .001, V = .14$
<i>shall/should*</i>	$\chi^2 (1, N = 1,666) = 59.25, p < .001, V = .19$
<i>will/would</i>	$\chi^2 (1, N = 10,671) = 448.13, p < .001, V = .20$

* *Shall* includes the archaic form *shalt*.

As indicated by the Cramér's *V* values, the most marked discrepancy between proximal/distal proportions in the two corpora involved *shall/should* and *will/would*. The proportion of *would* (42.8%) relative to *will* in the Zen corpus was very close to that (46.1%) of the BNC-W and was higher than that (34.8%) of the massive English Web 2020 Corpus, in which *will* occurs 2,965 times and *would* only 1,580 times per million words.

To understand the low occurrence of *would* and preference for *will* in the Evangelical Corpus, it is useful to review the key uses of *will* in English. Aarts (2011) lists five major functions: (1) reference to future time, (2) epistemic uses involving evidence-based predictions, (3) expression of volition, (4) expression of a predisposition as in *Boys will be boys* or an invariable outcome, as in *A solvent is a substance...that will dissolve another substance*, and (5) expression of an obligation, as in *You will do what I tell you* (pp. 282-285). He further notes that the futurity use is especially prevalent.

Many of the uses of *will* in the Evangelical Corpus reflect the first two functions listed above. The texts often discuss what divine agents will do, or what they will do in particular situations. They also describe with strong confidence what will occur as a result, what human agents will experience, and how the devout will respond if they choose to follow divine guidance. These uses are seen in the examples below.

We should instead read from the Word that God will call a great number to himself from every tribe, tongue, and nation, which will encourage us in evangelism ... Again, if you will realize that conversion always accompanies proclaiming the gospel and the Spirit's work, then you will stop trying to do the Spirit's work, and you will give yourself to proclaiming the gospel. (Dever, 2007)

To friends like this we should continue to be faithful, knowing that the very strength of their response may indicate a strength God will someday convert and use for his own ends. (Dever, 2007)

The use of *will* to refer to prophecies and eschatological concerns of Christians (i.e., future time) was also prevalent.

There will be a day when Jesus will come in power and transform this world into either a millennial kingdom (as we believe) or the new earth (as many believe). All who refuse the gracious call to join with Jesus will be destroyed ... (Driscoll & Breshears, 2008)

In the Zen Corpus, on the other hand, predictions regarding key historical events in the future were absent. *Will* was much less frequent, and when it did occur, it was used to express outcomes that could be expected, as a matter of course, from specific spiritual practices. The follow excerpts are examples of these uses:

You'll notice that if you get to know somebody well, if you become their great friend or lover or mate, you also get to know their conditioning. Because of this you can predict, with great accuracy, how they will react in a given circumstance—what they will want, what they won't want, what they will tend to avoid, and what they will tend to move toward. (Adyashanti, 2009)

If you stay in a place that is sincere, you will know that any sense of superiority is not true. This will allow you to look and see what you are saying to yourself, what your mind is saying that is making you feel superior. (Adyashanti, 2009)

As mentioned above, the Evangelical Corpus generally used more modals involving a force dynamic schema characterized by positive compulsion. The one exception was the lexeme *have to*, which occurred more frequently in the Zen Corpus. To shed light on factors that would explain this finding, an additional analysis was conducted. The verbs occurring after the lexeme *have to* (i.e., *have to*, *has to*, and *had to*) and *must* were coded in terms of process type (Halliday & Matthiessen, 2014, ch. 5) by the first three authors. According to this classification, there are six process types. *Material processes* are those that are construed as outer experiences, and as such, they contrast with *mental processes* that are construed as internal. Between these two categories, there are *behavioral processes* (e.g., *laughing*) which involve external manifestations of inner workings. *Verbal processes* involve language and symbolic relationships. *Relational processes* involve identifying and classifying. They often involve *X is Y* statements or attributions of a quality (e.g., *It is good*). *Existential processes* involve existing or happening. Table 6 shows examples of each verbal process taken from the two corpora.

Table 6
Examples of Process Types From the Evangelical Corpus and Zen Corpus

Process Type	Example	Corpus*
material	...we have to work harder than someone else...	E
behavioral	...he just had to vent .	Z
mental	We have to realize that we are Buddha.	Z
verbal	Everyone must give account on the day of judgment.	E
relational	You have to be willing ...	Z
existential	In humanity's rebellion against God, there is no neutrality.	E

* E = Evangelical Corpus, Z = Zen Corpus

Coding the entire corpus was impractical, so a random set of 800 concordance lines (200 lines for each of the target modals in each corpus) was coded instead by the first three authors. To determine inter-rater reliability, 120 lines were coded by all three raters. Fleiss's kappa was .676 ($p < .001$, 95%CI: .602, .750), which can be interpreted as substantial agreement (Landis & Koch, 1977). Disagreements on the lines coded together were settled by using the majority consensus. Sentences involving epistemic meaning (e.g., *That must be true*), passive voice, and depersonalized constructions were excluded from the analysis. The occurrences of these constructions are shown in Table 7.

Table 7
Occurrence of Epistemic, Depersonalized, and Passive Constructions in Corpora

Construction Type		Evangelical Corpus		Zen Corpus	
		tokens	%	tokens	%
Epistemic	<i>had/has/have to</i>	4	2.0%	5	2.5%
Epistemic	<i>must</i>	14	7.0%	30	15.0%
Depersonalized	<i>had/has/have to</i>	6	3.0%	14	7.0%
Depersonalized	<i>must</i>	25	12.5%	18	9.0%
Passive	<i>had/has/have to</i>	6	3.0%	1	0.5%
Passive	<i>must</i>	25	12.5%	18	9.0%

Table 8 shows the process types of the verb immediately following the lexeme *have to* in in the random sample of concordance lines from both corpora. The percentages were in relation to the frequency of the total number of the concordance lines. The formula was as follows:

$$\frac{\text{The occurrences of each process type}}{\text{Total number of the selected concordance lines of the modal}} \times 100 = \text{percentage}$$

Table 8

Verb Process Types After HAVE TO in the Evangelical and Zen Corpus

Verb Process Types	Evangelical Corpus		Zen Corpus	
	tokens	%	tokens	%
Behavioral	4	2.2%	4	2.2%
Existential	0	0.0%	0	0.0%
Material	75	41.2 %	77	42.5%
Mental	59	32.4%	62	34.3%
Relational	14	7.7%	26	14.4%
Verbal	30	16.5%	12	6.6%

Due to the exceedingly rare occurrence of behavioral and existential verb process types and to allow for the use of inferential statistics, these two types have been combined into a single “other” category in the statistical analyses. A chi-square test of homogeneity showed that the proportions of each verb process type were different in the two corpora, $\chi^2(4, N = 363) = 11.41, p = .022, V = .18$. Post hoc tests using the adjusted residuals were conducted, and to adjust for multiple comparisons, a conservative Bonferroni adjusted alpha of .005 (0.5 / 10) was adopted. The test indicated that the cells for Verbal Process Type x Evangelical Corpus ($p = .003$) and Verbal Process Type x Zen Corpus ($p = .003$) were significant. The cells for Relational Process Types x Evangelical Corpus and Relational Process Types x Zen Corpus (both $p = .042$) were nonsignificant using the adjusted alpha value.

An investigation of verbs occurring to the right of the lemma *have to* in the Evangelical Corpus found that *have to* was strongly associated with *admit* (MI = 8.76, LogDice = 9.21), which would be classified as a verbal process type. This occurred in statements of humility and often expressed the speaker’s failure to live up to some ideal. Below are some typical examples:

...I burned my bridges with my family over twenty years ago. They weren’t perfect, but I have to admit I was the main problem. (Graham, 2013)

... but now that I am gaining some experience, I have to admit that not all things get better with age. (Graham, 2013)

In the Zen Corpus, the most common verb after *have to* was *be*, a reflection of the frequency of the relational process category. *Have to be*, in turn, had a tendency to collocate with *willing* (MI = 9.24, LogDice = 10.20). The collocation suggests the importance that Western Zen texts place on the adoption of a bold openness as

a requisite to undertake spiritual training. The following excerpts are typical examples.

Sincerity is the key. You have to be willing; you have to want to see everything. When you want to see everything, you will see everything. (Adyashanti, 2009)

In fact, we have to be willing to lose our whole world. (Adyashanti, 2009)

We have to be willing to expose our most tender areas and commit to setting aside anything and everything that puts a barrier between us and the world. (Williams, 2014)

Have to be willing also appeared in the Evangelical Corpus, but only within a single text. In the Zen Corpus, the lemma *have to* also had a tendency to collocate with *done* (MI = 7.90, LogDice 9.44). The subject, in this case, was third person, as in the following example:

The practice has to be done by each individual. There is no substitute. (Beck, 2009)

Turning now to *must*, Table 9 shows the verbs process types occurring after this modal in the analysis of a random sample of concordance lines from both corpora.

Table 9

Verb Process Types After MUST in the Evangelical and Zen Corpus

Verb Process Types	Evangelical Corpus		Zen Corpus	
	tokens	%	tokens	%
Behavioral	1	0.7%	1	0.8%
Existential	0	1.5%	0	0.0%
Material	36	27.3%	22	17.5%
Mental	71	53.8%	81	64.3%
Relational	21	15.9%	19	15.1%
Verbal	4	3.0%	4	3.2%

The descriptive statistics suggest a slightly greater tendency to use mental process types after *must* in the Zen Corpus as opposed to material process types after *must* in the Evangelical corpus. To determine whether these differences were significant, a chi-square test of homogeneity was conducted. To meet the assumptions of the test, the behavioral, existential, and verbal process categories were collapsed into a single “other” category. The test did not show a significant association between corpus type and verb process types occurring immediately after *must*, $\chi^2(3, N = 260) = 4.00, p = .261, V = .12$.

To further investigate the verbs used with *must*, collocating words were examined. In the Evangelical Corpus, *must* was typically preceded by *we*, *you*, or *there*. An examination of verbs occurring to the right found that closely associated mental process verbs included *learn* (MI = 5.85, LogDice = 8.69), *choose* (MI = 6.10, LogDice = 8.22), *remember* (MI = 5.48, LogDice = 8.09), *believe* (MI = 3.81, LogDice = 7.21), *trust* (MI = 3.89, LogDice = 7.11), *love* (MI = 1.93, LogDice = 5.99), and *embrace* (MI = 6.74, LogDice = 7.39). Among relational verb process types, *must be* was associated with the adjectives *willing* (MI = 8.79, LogDice = 10.09) and *careful* (MI = 8.54, LogDice = 8.54). The following examples were typical.

We must be willing to risk in order to evangelize. (Dever, 2007)

Any Christian considering bringing a charge against another Christian must be careful not to harm the reputation of the gospel in the eyes of non-Christians. (Driscoll & Breshears, 2008)

Material verb process types were also associated with *must* in the Evangelical Corpus. Examples include *go* (MI = 4.15, LogDice = 7.80), *worship* (MI = 4.13, LogDice = 7.19), and a wide range of other verbs (e.g., *walk*, *work*, etc.) that occurred at low frequencies. In many cases, the verbs had possible metaphorical or metonymic readings or involved simile. The following is a typical example:

And we know that if we fear him uniquely (as Peter urged Christians to do), it's as if we are tied to him, and we must go where he leads. (Dever, 2007)

In the Zen Corpus, frequent mental process types occurring to the right of *must* included *learn* (MI = 5.62, LogDice = 8.31), *realize* (MI = 4.26, LogDice = 7.18), *experience* (MI = 3.04, LogDice = 6.67), *understand* (MI = 3.63, LogDice = 6.48), and *know* (MI = 2.57, LogDice = 6.27). In contrast with the collocates of *must* in the Evangelical Corpus, these verbs focus more on immediate insight and less on emotion.

Looking at the L1 (i.e., one word to the left) collocates of *must* in the Evangelical Corpus, *you* and *we* occurred in the L1 position at roughly the same frequency (19.1% and 24.4%, respectively). In the Zen Corpus, on the other hand, *you must* was clearly avoided, occurring in only 8.3% of instances, compared to 39.3% in the case of *we must*. A chi-square test of homogeneity, with proportions normalized at occurrence per 600 instances (to allow for comparisons of groups with different base rates of *must*), showed that the difference in proportions of *you must* and *we must* in the two corpora was significant, and that the association was of moderate strength, $\chi^2(1, N = 547) = 46.48, p < .001, V = .29$.

An examination of individual concordance lines revealed that numerous uses of *you must* in the Evangelical Corpus involved direct or paraphrased scriptural quotes.

You must choose for yourselves today whom you will serve. [Joshua 24:15 NCV] (Lucado, 2013)

Remember Jesus' statement in John 13:34–35: "A new command I give you: Love one another. As I have loved you, so you must love one another. By this all men will know that you are my disciples, if you love one another." (Dever, 2007)

It makes sense that *must* is used in these instances, since the antagonist element represents a powerful force (i.e., the will of God). Even when scripture is not referenced, the use of Biblical phrases or archaic language was employed to convey the sense of the divine within the coercing force of the antagonist. Note the use of *dazzling* and *majesty* (both words that occur much more frequently in the Bible than in modern English), and the Biblical metaphor *eyes of the heart* (Ephesians 1:18) in the following example.

Then you will know you are accepted. If you are filled with worry and anxiety, you do not only need to believe that God is in control of history. You must see, with eyes of the heart, his dazzling majesty. Then you will know he has things in hand. (Keller, 2018)

An examination of the concordance lines with *you must* in the Zen Corpus revealed that only five of the 57 lines involved direct or oblique references to scripture or sacred words and only one of these was from Buddhist scripture.

The Buddha said, "You must work out your own salvation diligently." (Huber, 2000)

There was also one quote from Gandhi, who was a Hindu political activist and leader rather than a Buddhist.

You must be the change you wish to see in the world. –Mahatma Gandhi (Williams, 2014)

Another instance was a rhetorical question that the teacher (Diane) uttered in response to a student's question. It should be noted that *must* in this case denotes an imposition that is evaluated negatively.

Diane: Where is it written that you must always be relaxed and enjoy your family? (Rizzetto, 2019)

Tellingly, the other two quotes involving *you must* in the Zen Corpus are from the Bible. These both occur in the same text.

"You must become as little children" is profound spiritual advice. (Huber, 2000)

In the second instance of the quote, it is noteworthy that when the writer switches from quotation to commentary mode, she uses *we must* instead of *you must*.

When Jesus said, "You must become as little children," I think what he meant is this: We must be willing to set aside the knowing, smart, clever, sophisticated mind of the socially conditioned person to return to the innocent, authentic, "new" mind ... (Huber, 2000)

Most of the *you must* collocations occur within strong exhortations to meditators to put forth great effort in their practice. The following are typical examples.

You must come to the end of the line; you must come to the end of your rope. Only then can spontaneous surrender happen. (Adyashanti, 2009)

Even when *you must* is used as an exhortation to strive in one's practice, the purpose is often to criticize or raise doubts about spiritual practices that establish an overly dualistic conception of the meditator's current state and the envisioned goal of enlightenment.

Then, of course, there are other schools and approaches that would be much more effort-centered. These schools would say that you must strive to transcend your own illusions; you must make a great amount of effort; you must have a great amount of spiritual discipline; you must have the willingness to really look and question. (Adyashanti, 2009)

You will read, or people will tell you, that you must sit in the full lotus position for several hours each day if you are going to get anywhere as a meditator. You must clear your mind, change your life, and let go of your attachments if you are going to advance toward enlightenment. Now I'm not going to tell you that those are utterly untrue statements, but I *will* tell you that the person who would take that advice doesn't need it. (Huber, 2000)

DISCUSSION

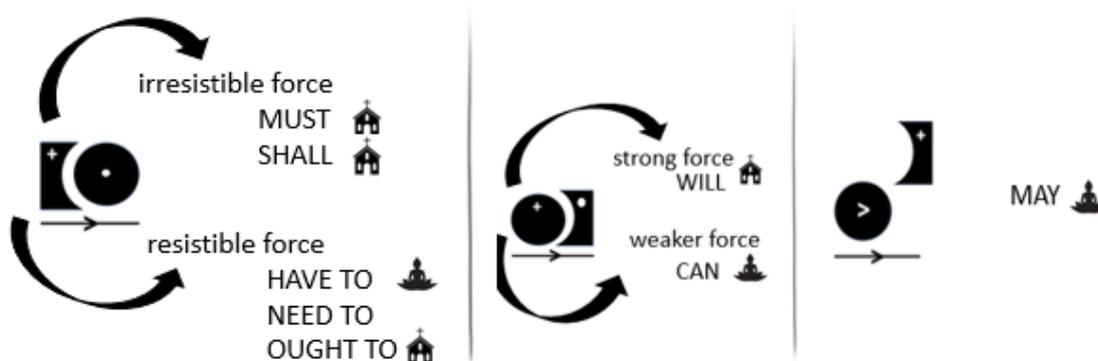
The current study compared linguistic features of modern Evangelical and Zen books written in English. An examination of keywords showed that Evangelical works are distinctive in their soteriological concerns and in their critical engagement with opposing philosophies and ideologies. Zen books, on the other hand, showed heavy use of East Asian terms, particularly those from Japan. The sentiment analysis showed a preference for positive messages in both corpora, but slightly more negative sentiment paragraphs in the Evangelical Corpus. Analysis of pronoun use revealed an intimate style involving heavy use of *I* and *you*, reminiscent of spoken English, in both corpora, and a marked underuse of the pronoun *she* relative to *he* in the Evangelical Corpus relative to both the Zen Corpus and the written portion of the BNC. A detailed analysis of this discrepancy was beyond the scope of the current paper, but it should be noted that similar findings have been found in past research (e.g., Hobbes, 2019) showing a greater focus on men versus women within Christian sermons.

The key focus of the current study was on modality in the two corpora. The study focused on three force-dynamic configurations (see Figure 6) that are common to most of the core modals in English. Comparisons of frequencies of occurrence showed that Evangelical works made relatively greater use of modals based on positive compulsion, especially modals such as *must* and *shall*, in which the antagonist represents a force construed as irresistible. This pattern is best explained in terms of key differences between the worldviews of Evangelical Christianity and Zen Buddhism. The Evangelical works made frequent reference to God and Jesus, and to the dynamic work of God revealed in scripture. Divine forces, when appearing as the antagonist within force-dynamic configurations, were construed as strong in terms of power, authority, and deontic force.

One exception to the general pattern of modals of positive compulsion involved *have to*, which was relatively more common in the Zen Corpus. A straightforward explanation for this is that the Zen writers used *have to* in place of *must* due to concerns that the antagonist force in *must* is overly strong. An analysis of the Zen Corpus concordance lines suggested that many instances of language involving positive compulsion were related to attitudes deemed essential for spiritual development.

Figure 6

Relative Prominence of Modals Within Force-Dynamic Configurations in the Corpora



Turning to the other force-dynamic configurations, the Evangelical Corpus made more use of *will*. An examination of concordance lines suggested that this was due to two factors. First, Evangelical works displayed greater eschatological concerns and interest in prophecy, areas of interest that were absent from the Zen Corpus. Second, statements regarding predictions about what would happen to individual Christians based on their behavior often employed *will*, suggesting the writer's confident stance.

The Zen Corpus had relatively more tokens of the modals *can* and *may*. In addition, it made greater use of distal modal forms. These are often used in hedging, so the findings suggest greater reluctance to make emphatic statements. This likely reflects the framework of authority in the Zen works. Generally, these writers base statements of fact on insights gleaned from personal experience. This is also true when providing advice, admonitions, and exhortations. The writers offer

suggestions based on their personal realizations achieved through spiritual practice (which often implies meditation). The Evangelical writers, on the other hand, seem more comfortable making strong statements that reflect the absolute authority of God as stated in scripture. Hedging may be avoided as it calls into question the absolute nature of divine authority.

It should be mentioned that the patterns of modal use in the Evangelical Corpus is linguistically conservative. This is particularly evident in its relatively frequent use of *must* and *shall* (including the archaic *shalt*), and the relatively lower use of *have to*. These patterns show the continued influence of King James English, along with a more traditional attitude toward religious truth as epistemologically absolute and dependent upon faith and trust. The Zen texts, on the other hand, show a greater tendency to reflect current changes in English. This less conservative tendency reflects the histories of the two religious movements. Current Christian texts reflect the influence of the use of English to convey Christian ideas, in both written texts and spoken discourse, for over a millennium. Zen discourse, on the other hand, has taken place almost entirely in non-English settings until quite recently. For this reason, the only option for Zen writers' seeking to evoke tradition through the adoption of a marked linguistic style is to introduce lexical items or expressions from the languages and cultures associated with Zen (e.g., Japanese, Chinese, and Korean).

The current study has a number of limitations. The findings should be understood as applying to a narrow range of texts. The Evangelical writers may be quite different from writers in the Catholic tradition, and Western adherents of Zen Buddhism are undoubtedly different in important ways from Zen adherents in traditional settings. In addition, it should be noted that the current article only examined key modals, and the analysis was further limited to sentence contexts in which the modals were not negated. A more comprehensive examination may reveal slightly different patterns.

It is also important to note the limitations of corpus linguistic analysis of collections of texts. We recognize that this form of analysis complements rather than replaces methodological approaches that are more sensitive to rhetorical structures and contextualized meaning. Even so, corpus-based approaches like that of the current study have their place due to their ability to reveal general features of language use that are likely to be overlooked in other forms of analysis.

Finally, the study provides an example of how corpus linguistics can be used in analyses based on cognitive linguistic frameworks. In this study, the grouping of modals into force-dynamic configurations and the analysis of co-occurring verbal process reveal general patterns that would have been missed if the modals had been viewed in isolation. The use of statistics applied to large collections of texts also allows for greater reliability and generalizability of findings. Such quantitative approaches have two benefits. They can serve to confirm researchers' subjective impressions based on more fine-grained qualitative approaches. At the same time, they can reveal patterns that may have been overlooked in previous qualitative research. This can be illustrated in our core findings concerning the emphasis on projecting certainty in divine truths and the key influence of the Bible on the language of the Evangelical writers. As shown, these findings form an interesting

contrast with Zen Buddhist writers' emphasis on personal experience and relative discomfort with absolute statements of truth.

REFERENCES

- Aarts, B. (2011). *Oxford modern English grammar*. Oxford University Press.
- Bebbington, D. W. (1989). *Evangelicalism in modern Britain: A history from the 1730s to the 1980s*. Routledge.
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman grammar of spoken and written English*. Pearson Education.
- Bybee, J. L. (1995). Modals in English. In J. L. Bybee & S. Fleischman (Eds.), *Modality in grammar and discourse* (pp. 503-517). John Benjamins Publishing Company.
- Collins, P. C. (2009). Modals and quasi-modals in world Englishes. *World Englishes*, 28(3), 281-292.
- Evison, J. (2010). What are the basics of analysing a corpus? In A. O'Keeffe & M. McCarthy (Eds.), *The Routledge handbook of corpus linguistics* (pp. 122-135). Routledge.
- Halliday, M. A. K., & Matthiessen, C. M. I. M. (2014). *Halliday's introduction to functional grammar* (4th ed.). Routledge.
- Hart, C. J. (2011). Force-interactive patterns in immigration discourse: A Cognitive Linguistic approach to CDA. *Discourse and Society*, 22(3), 269-286.
- Hobbes, V. (2019). The discourse of divorce in conservative Christian sermons. *Critical Discourse Studies*, 1-18.
- Hobbes, V. (2021). *An introduction to religious language: Exploring theolinguistics in contemporary contexts*. Bloomsbury.
- Johnson, M. (1987). *The body in the mind: The bodily basis of meaning, imagination, and reason*. University of Chicago.
- Kranich, S., Hampel, E., & Bruns, H. (2020). Changes in the modal domain in different varieties of English as potential effects of democratization. *Language Sciences*, 79(3).
- Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33, 159-174.
- Mair, C., & Leech, G. N. (2006). Current changes in English syntax. In B. Aarts & A. McMahon (Eds.), *Handbook of English linguistics* (pp. 318-342). Blackwell.
- Mueller, C. M., & Tsushima, Y. (2019). Effectiveness of force dynamic explanations of English causative verbs and the role of imagery. *Cognitive Linguistics*, 30(3), 439-466.
- Pihlaja, S. (2018). *Religious talk online: The evangelical discourse of Muslims, Christians, and atheists*. Cambridge University Press.
- Pihlaja, S. (Ed.) (2021). *Analysing religious discourse*. Cambridge University Press.
- Rea, L. M., & Parker, R. A. (2014). *Designing and conducting survey research: A comprehensive guide* (4th ed.). Jossey-Bass.
- Richardson, P., Mueller, C. M., & Pihlaja, S. (2021). *Cognitive linguistics and religious language: An introduction*. Routledge.
- Shapiro, L. (2014). *The Routledge handbook of embodied cognition*. Routledge.
- Sweetser, E. E. (1982). Root and epistemic modals: Causality in two worlds *Proceedings of the Eight Annual Meeting of the Berkeley Linguistics Society* (pp. 484-507).
- Sweetser, E. E. (1990). *From etymology to pragmatics*. Cambridge University.
- Talmy, L. (1988). Force dynamics in language and cognition. *Cognitive Science*, 12(1), 49-100.

Talmy, L. (2000). *Toward a cognitive semantics. Vol. II: Typology and process in concept structuring*. MIT.

Varela, F. J., Thompson, E., & Rosch, E. (1991). *The embodied mind: Cognitive science and human experience*. MIT Press.

Appendix A: Texts in the Evangelical Corpus and Zen Corpus

Evangelical Corpus

- Dever, M. (2007). *The gospel and personal evangelism*. Crossway.
- Driscoll, M., & Breshears, G. (2008). *Vintage church: Timeless truths and timely methods*. Crossway Books.
- Fraze, R. (2017). *What happens after you die? A biblical guide to paradise, hell, and life after death*. Nelson Books.
- Graham, B. (2013). *Nearing home: life, faith, and finishing well*. Thomas Nelson.
- Keller, T. (2018). *The prodigal prophet: Johah and the mystery of God's mercy*. Viking.
- Lucado, M. (2013). *One God, one plan, one life: A 365 devotional*. Thomas Nelson.
- MacArthur, J. F. (2010). *Slave: The hidden truth about your identity in Christ*. Thomas Nelson.
- Meyer, J. (2003). *How to hear from God: Learn to know his voice and make right decisions*. FaithWords.
- Moore, B. (2000). *Praying God's word day by day : Breaking free from spiritual strongholds*. B & H.
- Olson, R. E. (2017). *The essentials of Christian thought: Seeing reality through the biblical story*. Zondervan Academic.
- Piper, J. (2014). *A godward heart: Treasuring the God who loves you*. Multnomah Books.
- Platt, D. (2010). *Radical: Taking back your faith from the American dream*. Multnomah Books.
- Swindoll, C. R. (2016). *Searching the scriptures: Find the nourishment your soul needs*. Tyndale House.
- Warren, R. (2002). *The purpose driven life: What on earth am I here for?* Zondervan.
- Young, S. (2004). *Jesus calling: Enjoying peace in his presence*. Integrity Publishers.

Zen Corpus

- Adyashanti. (2009). *The end of your world: Uncensored straight talk on the nature of enlightenment*. Sounds True.
- Aitken, R. (2015). *The mind of clover: essays in Zen Buddhist ethics*. North Point Press.
- Anderson, R. (2001). *Being upright: Zen meditation and the bodhisattva precepts*. Rodmell Press.
- Beck, C. J. (2009). *Everyday Zen: Love and work*. HarperOne.
- Buksbazen, J. D. (2005). *Zen meditation in plain English*. Wisdom Publications.
- Glassman, B. (2003). *Infinite circle: Teachings in Zen*. Shambala Publications.
- Halifax, J. (2018). *Standing at the edge: Finding freedom where fear and courage meet*. Flatiron Books.
- Huber, C. (2000). *How to get from where you are to where you want to be*. Hay House.
- Kabat-Zinn, J. (2018). *Meditation is not what you think: Mindfulness and why it is so important*. Hachette Books.
- Loori, J. D. (2020). *A beginner's guide to Zen meditation*. Shambhala.
- Moore, M. (2018). *The Rinzaï Zen way: A guide to practice*. Shambhala.
- Murphy, S. (2016). *Red thread Zen: Humanly entangled in emptiness*. Counterpoint.
- Rasheta, N. (2018). *No-nonsense Buddhism for beginners: Clear answers to burning questions about core Buddhist teachings*. Althea Press.
- Rizzetto, D. E. (2019). *Deep hope: Zen guidance for staying steadfast when the world seems hopeless*. Shambhala.

- Strand, C. (2015). *Waking up to the dark: Ancient wisdom for a sleepless age*. Random House.
- Tarrant, J. (2004). *Bring me the rhinoceros : and other Zen koans that will save your life*. Shambala.
- Treace, B. M. (2019). *Wake up: How to practice Zen Buddhism*. Rockridge Press.
- Warner, B. (2009). *Zen wrapped in karma and dipped in chocolate*. New World Library.
- Williams, A. K. (2014). *Being black : zen and the art of living with fearlessness and grace*. Penguin Publishing Group.

Appendix B: First 100 Keywords in the Evangelical Corpus

1	NCV	21	metaphysical	41	Christ
2	biblical-Christian	22	Colossians	42	sin
3	Cherbonnier	23	Cor.	43	thankfulness
4	metaphysic	24	extrabiblical	44	scripture
5	missional	25	Jesus	45	postliberal
6	NKJV	26	unfailing	46	savior
7	NLT	27	biblical	47	obedience
8	Tresmontant	28	non-Christian	48	Abram
9	evangelism	29	Bible	49	repentance
10	Corinthian	30	God	50	obey
11	Philippians	31	Eerdmans	51	Platonism
12	Brunner	32	parable	52	Blik
13	naturalism	33	preaching	53	Huss
14	psalm	34	proverb	54	theologian
15	NIV	35	Heb.	55	faithfulness
16	Ephesians	36	monism	56	repent
17	Romans	37	rejoice	57	theism
18	ibidem	38	godly	58	eternity
19	evangelize	39	Isaiah	59	glory
20	faith-learning	40	Thessalonians	60	first-century
61	<i>doulos</i>	81	dualism		
62	gospel	82	Lazarus		
63	CEV	83	metaphysics		
64	righteousness	84	crossway		
65	unbeliever	85	lord		
66	Neoplatonism	86	sinful		
67	Zondervan	87	multi-campus		
68	Galatians	88	Prov.		
69	psalmist	89	panentheism		
70	MSG	90	purpose-driven		
71	humanism	91	testament		
72	slave	92	salvation		
73	Heschel	93	eternal		
74	interversity	94	preach		
75	evangelistic	95	forsake		
76	Philemon	96	unbelieving		
77	believer	97	Acts		
78	sinner	98	Onesimus		
79	baptize	99	sermon		
80	disciple	100	exalt		

Appendix C: First 100 Keywords in the Zen Corpus

1	koan	21	sutra	41	egocentricity
2	zazen	22	Rinzai	42	Yantou
3	Zen	23	altruism	43	meditation
4	precept	24	Joko	44	Nishijima
5	roshi	25	samadhi	45	Yunyan
6	Dogen	26	kensho	46	delusion
7	bodhisattva	27	buddhism	47	no-self
8	sesshin	28	Jianyuan	48	Nakano
9	paramita	29	mindfulness	49	enlightened
10	dharma	30	prajna	50	self-centered
11	Shakyamuni	31	buddhist	51	Adya
12	sangha	32	compassion	52	empathic
13	Buddha	33	tanden	53	gateless
14	Zenji	34	Mahayana	54	impermanence
15	Hakuin	35	Shambhala	55	teisho
16	awakening	36	Xuefeng	56	upaya
17	Bodhidharma	37	not-knowing	57	warrior-spirit
18	Daowu	38	zendo	58	realization
19	emptiness	39	Dongshan	59	oneness
20	Zhaozhou	40	enlightenment	60	actualize
61	dualistic	81	monk		
62	MBSR	82	Omori		
63	suffering	83	Eihei		
64	awaken	84	Samu		
65	Torei	85	Angulimala		
66	Yuka	86	renunciation		
67	Maezumi	87	egoic		
68	vow	88	Dōgen		
69	prajnaparamita	89	subpersonality		
70	eightfold	90	intoxicant		
71	meditate	91	co-arising		
72	ryokan	92	mudra		
73	Yamada	93	dis-ease		
74	zafu	94	suchness		
75	self-nature	95	Tassajara		
76	buddha-nature	96	Issan		
77	Suzuki	97	subpersonalities		
78	dukkha	98	ourselves		
79	burnout	99	compassionate		
80	exhalation	100	Linji		