

Assertiveness and Crisis Communication: A Multidimensional Analysis of English Varieties during COVID-19

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Abstract: This paper investigates the linguistic implications of the COVID-19 pandemic on different varieties of English, focusing on assertive and non-assertive linguistic markers in crisis communication. Motivated by the convergence of socio-cultural shifts and linguistic change, the study explores variations across Inner Circle (GB, US, NZ) and Outer Circle (SG, ZA) varieties within the *Coronavirus Corpus* (Davies 2019-). The central hypothesis posits an increased use of assertive markers and decreased use of non-assertive markers during crises. Such markers are taken from Biber's (1988) multidimensional analysis, specifically from Dimension 4 and Factor 7. Thus, analyzing persuasive verbs, conditional subordination, necessity modals, hedging strategies, downtoners, and concessive subordination, the findings reveal distinct patterns influenced by the timing and intensity of COVID-19 waves and the socio-political measures adopted. The results challenge the conventional Inner and Outer Circle dichotomy, emphasizing localized strategies in crisis communication over geographical distinctions, and they also confirm the validity of Biber's multidimensional analysis nearly 40 years after its publication.

Keywords: persuasion; hedging; Biber's multi-dimensional analysis; crisis communication; World Englishes

ENG Asertividad y comunicación de crisis: Un análisis multidimensional de variedades del inglés durante la COVID-19

Resumen: Este artículo investiga las implicaciones lingüísticas de la pandemia de COVID-19 en diferentes variedades del inglés, centrándose en marcadores lingüísticos asertivos y no asertivos en la comunicación de crisis. Motivado por la convergencia de los cambios socioculturales y el cambio lingüístico, el estudio explora las variaciones entre las variedades del *Inner Circle* (GB, US, NZ) y el *Outer Circle* (SG, ZA) dentro del *Coronavirus Corpus* (Davies 2019-). La hipótesis central postula un mayor uso de marcadores asertivos y una disminución del uso de marcadores no asertivos durante las crisis. Dichos marcadores se toman del análisis multidimensional de Biber (1988), específicamente de la Dimensión 4 y el Factor 7. Por lo tanto, al analizar los verbos persuasivos, la subordinación condicional, los modales de necesidad, las estrategias de atenuación, los mitigadores y la subordinación concesiva, los hallazgos revelan patrones distintos dependiendo del momento y la intensidad de las olas de COVID-19 y las medidas sociopolíticas adoptadas. Los resultados desafían la dicotomía convencional entre *Inner Circle* y *Outer Circle*, enfatizando las estrategias localizadas en la comunicación de crisis por encima de las distinciones geográficas, y también confirman la validez del análisis multidimensional de Biber casi 40 años después de su publicación.

Palabras clave: persuasión; atenuación; análisis multidimensional de Biber; comunicación de crisis; ingleses del mundo.

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1. Introduction

Crisis management and crisis communication have been studied from a variety of perspectives, including sociology, rhetoric, the role of persuasion in the media, discourse analysis, and also involving multi-disciplinary approaches (e.g. Van Dijk 1991; Wodak et al. 1999; Halmari and Virtanen 2005; Hodges and Nilep 2007; Haarm and Lombardo 2009; Neüff 2018; Huang and Holmgreen 2020; Kaschner 2021, among many others). Common to all such studies is the aim of identifying the most efficient means of communicating in a crisis, which includes the expectation that an audience will perform certain actions as a result of such communication. Hence, attention has been paid to the kinds of pragmatic effects that work in different cultures, such as metaphors, the stance taken by politicians and the media, and a variety of other discursive strategies that legitimize the decisions of those in power. Needless to say, these strategies vary across cultures as well as across individuals, and several factors have been considered crucial in terms of how people perceive a critical situation, as set out in Table 1.

Table 1. Factors that affect the perception of crisis across individuals (adapted from Kaschner 2021, 11-12).

FACTOR	DESCRIPTION
Affectedness	How is the stakeholder affected by this crisis?
Distance	How spatially and emotionally distant is the stakeholder from the risk?
Voluntariness	Has the stakeholder become involved with the risk voluntarily?
Controllability	Is the situation subjectively controllable by the stakeholder?
Immediacy	How soon will the stakeholder be affected by the crisis?
Socialization	What do those in a person's personal environment think about the crisis?
Coverage	How is the issue reported in the media?
Cultural filters	Different countries, different customs—but which cultural background shapes the stakeholder?
Purpose	Does the trigger of risk promise fundamentally positive things?
Threat level	What is threatened? Life and limb? Property? One's own existence?

The ten factors identified by Kaschner (2021) can be applied to the COVID-19 pandemic crisis, as declared by the World Health Organisation on 11 March 2020 (WHO, n.d.). This health crisis affected individuals to different degrees, depending on how close and how controllable they felt the threat to be (De Rosa et al. 2020), on the role played by their leaders (Crayne and Medeiros 2020; Bergenfalk 2020), on how the crisis was reported in the media (Wodak 2021), and on cultural differences between territories (e.g. Normile 2020). Thus, Italian citizens felt the threat earlier than any other European country (De Rosa et al. 2020, 17), New Zealanders praised Prime Minister Ardern for her response to the crisis, while President Trump's management was disapproved of by 58% of the US population (Boin et al 2020, 196; Kahn 2020); meanwhile, two main strategies to manage the crisis (containment and suppression) were often discussed by scientists and organizations (WHO 2020; Wu et al. 2021). Suppression, also known as an elimination or zero-COVID strategy, aimed at eliminating the virus, and was the approach taken in the Western Pacific Region (e.g. China, Hong Kong, New Zealand). By contrast, containment sought to reduce the incidence of the virus in order to prevent saturation of the healthcare system, and this was the strategy broadly adopted in Europe, Africa and America (WHO 2020).

Within this scenario it makes sense to hypothesize that the language used by the media in different territories would reflect perceptions of emergency in different societies according to all these factors. The aim of the current paper, then, is to study varieties of English across the world from the beginning of 2020 up until December 2021, the latter date chosen because most alert systems ended at this time (e.g. New Zealand – Government of New Zealand 2022) or before (e.g. 19 June 2021 was 'Freedom Day' in GB – Institute for Government Analysis 2022). The data will be taken from the *Coronavirus Corpus* (Davies 2019-), which comprises online news, as described below in Section 3, and attention will be paid to how persuasion is conveyed in the twenty varieties included therein. While persuasion has typically been studied from critical discourse perspectives (e.g. Van Dijk 1991; Halmari and Virtanen 2005), in this paper we focus on those morphosyntactic features identified in Biber's (1988) multidimensional analysis based on register variation in English. More specifically, we will consider his Dimension 4, 'Overt expression of persuasion' and Factor 7, 'Hedging' (described in Section 2). Dimension 4 contains a number of morphosyntactic features that help to determine the intention of the writer (or speaker). This kind of persuasive language is characterized by the use of assertive linguistic markers, which we hypothesize will be more frequent in critical, urgent moments of public discourse than in normal circumstances. Conversely, Biber's (1988) Factor 7 identifies a number of linguistic features that serve as hedging devices that allow the speaker/writer to avoid expressing a strong commitment to their statements. We hypothesize that such devices will be less frequent in critical moments than in normal circumstances. The aim of the study, then, is to test the degree to which the following two hypotheses hold in the varieties of English represented in the *Coronavirus Corpus*:

- H1: Linguistic markers included in Biber's (1988) Dimension 4, 'Overt expression of persuasion', will be more frequent during the most critical moments of the COVID-19 pandemic.
- H2: Linguistic markers included in Biber's (1988) Factor 7, 'Hedging', will be less frequent during the most critical moments of the COVID-19 pandemic.

These two hypotheses will be tested by means of an analysis of the relative frequencies of use of these markers, and by comparing their occurrence across the various periods of the crisis, in order to see whether an explanation for any increasing or declining tendencies can be found in social responses to the COVID-19 health crisis in the different territories analysed.

2. Background

2.1. Crisis communication and COVID-19

Crisis communication depends to a large extent on culture-bound factors such as the specific histories of countries, their collective memory, and the traditions of governmental rhetoric (Wodak 2021, 346). However, despite cultural differences, the aim of crisis communication is always essentially the same: to make members of society understand that the stakes are very high and to convince them that their collaboration towards a common goal is crucial. Thus, for crisis management to be successful, communication must be quick, empathic, factual, credible and reliable (Kaschner 2021, 65), and two main objectives must be reached. First, decision makers must satisfy stakeholders' informational needs by answering the following questions: (i) what happens?, (ii) what are the consequences?, (iii) what can the stakeholders do to avoid negative consequences?, (iv) what will those in power do to prevent such consequences?, (v) what is next? (Kaschner 2021, 69). The second objective is to compensate for the bad news by providing people with positive messages. Learning to navigate these two objectives, that is, to construct a narrative between fear and hope, is key to the actions of leaders who need to persuade a nation at a critical moment (Neüff 2018, 47-49). However, the role of persuasion is not restricted to national leaders, but is also, as we know, one of the aims of the press. As Van Dijk (1991, 82) notes:

[E]ven if the listener or reader has understood perfectly well what we meant—semantically or pragmatically—this is half of the intent of communication. We also want him or her to accept what we say, that is, believe our assertion, perform the actions requested, and execute our commands. In traditional pragmatic jargon, our speech acts should not only have illocutionary functions but also perlocutionary effects. In terms of rhetoric or of the study of speech communication, this means that we are involved in a process of persuasion. (Van Dijk 1991, 82)

In order for speech acts in news discourse to have perlocutionary effects, they must (a) emphasize the factual nature of events (using the direct description of events and providing sound evidence), (b) build a strong relational structure for facts (discussing conditions and causes that allow us to predict future events), and (c) provide information that has attitudinal and emotional dimensions, as discussed by Van Dijk (1991, 85). Thus, the do's and don'ts as set out in Kaschner's (2021) list for leaders have an almost exact correlate in newspaper language, and can all be summarized thus: crisis communication involves an intelligent use of persuasive language that should combine assertive, direct languages with an emotional dimension.

The COVID-19 crisis that began officially on 11 March 2020 (WHO, n.d.) constituted an unprecedented situation that required an immediate response by nation states, the scientific community, and the media. All events, decisions and measures had to be communicated to the population in an effective way, one which navigated fear, hope, and a great deal of uncertainty. This crisis communication has already led to a number of linguistic studies.

For example, Don et al. (2021) investigated discourse dynamics and attitudinal responses to the pandemic in academic and media discourse, focusing on attitudinal markers relating to affect (e.g. *interesting, sad*), appreciation (e.g. *important, significant*) and judgement (e.g. *reasonable, logical*). Exploring an academic corpus (Semantic Scholar 2019) and a further one of media discourse (Davies 2019-), they found that appreciation markers were the most frequently occurring ones in both corpora. That is to say, writers chose to provide a value-laden evaluation of the state of affairs in an attempt to maintain readers' attention (Don et al. 2021, 543). Similar conclusions were drawn by Hyland and Jiang (2021), who looked at scientific papers on COVID-19 and found a significant increase in the use of expressions of certainty, which they explained as an attempt at scientific persuasion. In a similar vein, Curry and Pérez-Paredes (2021) focused on the use of stance nouns in COVID-19-related blogs published in English and in Spanish (e.g. *evidence that, reasons that*) and found that the English and Spanish-speaking writers here very often resorted to linguistic structures of this kind for persuasive reasons "in lieu of the objectivity and empiricism readers may expect" (Curry and Pérez-Paredes 2021, 493). In another contrastive study, emotions such as anxiety, disagreement and doubt in the British and the German press were addressed (Müller et al. 2021). After exploring lexical and grammatical markers relating to these emotions in terms of qualitative frequency peaks, the authors contextualized their findings from a sociological perspective and found, among other things, that a higher degree of subjectification was found in the British than in the German press (Müller et al. 2021, 526). This, they argued, was a very productive way of unveiling discourse dynamics that "develop below the surface of conscious risk communication but unintentionally shape public debate" (Müller et al. 2021, 526). All in all, the COVID-19 pandemic has shown itself to constitute a useful real-time framework for the study of crisis communication, embracing as it does a variety of points of intersection between linguistics, sociology and media studies.

2.2. Biber's (1988) multidimensional analysis: A variationist approach to persuasion

Biber's (1988) pioneering work on register variation is the result of a corpus-driven study that led him to identify common linguistic patterns that tend to co-occur in specific registers. Using factor analysis, he identified

seven factors, six of which could be linked to the functional dimension of language use. For the purposes of the current study, the focus will be on Dimension 4, 'Overt expression of persuasion', and Factor 7, 'Hedging', in that, as we will show below, these are considered to play almost opposite roles in the assertiveness required during crisis management.

Biber's (1988) dimension 4, 'Overt expression of persuasion,' includes the following linguistic features (numbers reflect the loadings on each of the factors):

FACTOR 4

infinitives	.76
prediction modals	.54
suasive verbs	.49
conditional subordination	.47
necessity modals	.46
split auxiliaries	.44
(possibility modals	.37)

-- no negative features --

(from Biber 1988, 90)

Thus, the presence of these linguistic markers is related to an overt expression of persuasion, in that "prediction modals are direct pronouncements that certain events *will* occur", and that necessity modals and suasive verbs refer to the obligation and the intention to bring about certain events (Biber 1988, 111). The fact that no negative features have been found to stand with these markers in complementary patterns entails that there are no linguistic features that typically do not co-occur with them; in other words, no linguistic features here prevent the occurrence of the high-scoring positive features. It must also be taken into account that in Biber's model possibility modals are bracketed, since their loading is so low that they are not used in the computation of factor scores (Biber 1988, 89, 93), although they also qualitatively reinforce the overt expression of persuasion, in that they refer to the ability or possibility of certain events occurring. All these positive features of Biber's Factor 4 can be considered as serving the persuasive function required in crisis communication, as discussed in Section 2.1, and for this reason they will be explored in Section 4.

The second factor in Biber's (1988) multidimensional analysis to be considered here is Factor 7, relating to hedging expressions:

FACTOR 7

SEEM/APPEAR	.35
(downtoners	.33)
(adverbs	.31)
(concessive subordination	.30)
(attributive adjectives	.30)

-- no negative features --

(from Biber 1988, 90)

The very low loadings of all the features in Factor 7 prevent Biber (1988) from providing a firm interpretation of this Factor (hence his analysis has no Dimension 7). Nonetheless, all the features share the underlying function of hedging, since SEEM/APPEAR mark perception rather than assertion, downtoners indicate degrees of probability, and concessive subordination challenges assertion, since the truth of an assertion is determined within the bounds of some other truth. While hedging has not been found to stand in complementary distribution to the overt expression of persuasion (and, thus, no negative features were identified in Factor 7 either), it is nevertheless the case that persuasion is usually characterized by assertiveness while hedging exists at the opposite end of the assertive-passive scale. For this reason, the linguistic markers in Biber's (1988) Factor 7 will also be considered in the analysis presented in Section 4, below.

The ground-breaking publication of Biber's (1988) study on multidimensional analysis opened a path for variationist research that seeks to quantify the linguistic markers that tend to appear in specific registers. Thus, Xiao (2005) applied Biber's analysis to different World Englishes and found notable differences between British English and Indian English regarding the projection of the future, which in his view might have to do with socio-cultural perspectives, in the sense that not all cultures think about the future in the same way (Xiao 2005, 446). Further contrastive studies looked at differences between native and non-native (Chinese) academic English (Cao and Xiao 2013), and also the exclusive analysis of non-native academic English (Hu 2020), both of which revealed significant pragmatic differences, such as the contrast between native English speakers' active involvement and commitment, as opposed to Chinese writers' preference for conceptual

elaboration. The fact that such pragmatic differences between varieties of English have been found through the application of Biber's multidimensional analysis constitutes solid ground on which to test the two hypotheses set out in Section 1, which have to do with the frequency of the features in the two Factors during the most critical moments of the COVID-19 pandemic.

3. Methodology

This paper adopts a corpus-based methodology using the *Coronavirus Corpus* (CC; Davies 2019-), a 1.5-billion-word corpus of 20 varieties of English that includes news items relating to COVID-19. It is a subset of *Corpus of News on the Web* (NOW; Davies 2016-) and includes texts that meet one of the following two criteria: (i) the text contains at least three occurrences of the words *coronavirus/ COVID* or *COVID-19*, and (ii) the title of the text has at least one keyword relating to the pandemic (e.g. *at risk, cases, curve, distanc**) (Davies 2021, 588). Because of its worldwide coverage and its constant growth (3-4 million words are added daily), this corpus is "designed to be the definitive record of the social, cultural, and economic impact of the coronavirus (COVID-19) in 2020 and beyond" (Davies 2019-).

The CC can be explored diachronically (monthly), which allows for the observation of changing linguistic tendencies, and can show frequencies per section, allowing for the exploration of a particular linguistic variety. Thus, by selecting the search tab "Chart" and checking the "Section" box we can specify which country we want to explore. The results obtained include the raw frequency of the linguistic feature (FREQ) per month, the size of the month-long section (WORDS (M)), and the frequency per million words in that month section (PER MIL). However, a word of caution is needed here: the PER MIL frequency is calculated based on the total number of words in the corpus for each month (WORDS (M)), rather than on the total number of words per country for each month. For this reason, it was necessary to calculate manually the normalized frequency per million words taking into account the exact size of the data for each month for each variety.¹

For the purposes of this paper, the time span considered runs from January 2020 (the very beginning of the corpus) to December 2021, in that by this date most alert systems had come to an end. Thus, the total size of the corpus used approaches 1.3 billion words, as seen in Table 2.

Table 2. Size of the corpus sample analysed (Coronavirus Corpus, Jan-2020 to Dec- 2021).

Region	Country	ISO Code	N. of words	
Inner-circle	United States	US	610,581,873	
	Canada	CA	95,994,616	
	Great Britain	GB	105,893,464	
	Ireland	IE	57,162,860	
	Australia	AU	68,191,016	
	New Zealand	NZ	36,458,543	
Outer-circle	Asia	India	IN	91,389,657
		Sri Lanka	LK	12,116,189
		Pakistan	PK	11,645,190
		Bangladesh	BD	8,562,655
		Malaysia	MY	18,588,587
		Singapore	SG	25,693,321
		Philippines	PH	24,695,428
	Hong Kong	HK	7,291,117	
	Africa	South Africa	ZA	42,050,185
		Nigeria	NG	32,881,803
		Ghana	GH	5,030,142
		Kenya	KE	15,036,729
		Tanzania	TZ	2,666,397
	Caribbean	Jamaica	JM	2,476,386
TOTAL			1,274,406,158	

¹ This manual calculation was possible because Mark Davies generously provided me with the total numbers of words per month and per country. I gratefully acknowledge his help.

As noted above, the linguistic features used to measure crisis communication in each country were taken from Biber's (1988) Dimension 4 and Factor 7.² Nonetheless, not all the features listed by Biber could be considered, because some of them (e.g. infinitives, attribute adjectives, semi-modals such as *have to*) are too frequent to be searched for using the current online interface. Hence, the features to be explored here are those shown in Table 3, for which two clarifications are in order. First, due to the large number of tokens, no distinction is made between epistemic and deontic uses of modals. Second, the search strings used to obtain the data help to filter the relevant tokens. Note, for example, the use of the [v*] wildcard as a means of only considering verbs (rather than nominal or adjectival forms, such as the noun *will* or the adjective *demanding*), the use of [vm] to limit the search to modal instances of the verb *can*, and the specification that only examples of the adverb *pretty* should be retrieved ([r*]). In addition, the downtoners *kind of* and *sort of* can appear in a number of contexts, and thus manual pruning of the data would be necessary (e.g. *a kind of blue* may have a literal meaning, 'a type of blue', or a pragmatic one, 'blueish'). Owing to the large size of the corpus, this kind of manual pruning was not possible, so the search was restricted to a construction in which the only possible readings of *kind of* and *sort of* are as downtoners, i.e. when they are followed by a verb (e.g. *kind of makes fun of the formula*).

Table 3. List of features from Biber's (1988) Dimension 4 and Factor 7 studied in the corpus.

Dimension 4 'Overt expression of persuasion'		
Biber's label	Feature	Search string in corpus
Prediction modal	<i>will</i>	will.[v*]
Suasive verbs	COMMAND	[command].[v*]
	DEMAND	[demand].[v*]
	INSTRUCT	[instruct].[v*]
Conditional subordination	<i>If</i>	if
Necessity modal	<i>Must</i>	must.[vm]
Possibility modals	<i>Can</i>	can.[vm]
	<i>Might</i>	might.[vm]
Factor 7 'Hedging'		
Biber's label	Feature	Search string in corpus
SEEM/APPEAR	SEEM	[seem].[v*]
	APPEAR	[appear].[v*]
Downtoners	<i>Barely</i>	barely
	<i>Mildly</i>	mildly
	<i>Partially</i>	partially
	<i>Less</i>	less
	<i>Slightly</i>	slightly
	<i>Somewhat</i>	somewhat
	<i>Rather</i>	rather
	<i>Quite</i>	quite
	<i>Almost</i>	almost
	<i>Nearly</i>	nearly
	<i>Pretty</i>	pretty.[r*]
	<i>Sort of</i>	sort of [v*]
	<i>Kind of</i>	kind of [v*]
	<i>Maybe</i>	maybe
<i>Perhaps</i>	perhaps	
Concessive subordination	<i>Though</i>	though
	<i>Although</i>	although
	<i>Despite</i>	despite
	<i>In spite of</i>	in spite of

4. Results and discussion

Results are presented in two ways: (i) globally, so that we can evaluate the robustness of the linguistic markers of persuasion and hedging as far as crisis communication is concerned (Section 4.1); and (ii) country by

² Biber's (1988) lists of features were obtained for British and American English. Therefore, in using his lists we may be overlooking the role played by specific pragmatic features that might be more common in some outer-circle varieties due to language contact. This should be the focus of further research.

country, in order to see if the differing frequencies of the features of Dimension 4 and Factor 7 have a socio-cultural explanation relating to crisis communication (Section 4.2, in which, due to space constraints, only five countries are discussed). Although the data are quantitative in nature, the analysis will take a qualitative approach, because rather than focusing on the actual frequencies of the features, it will be of greater interest here to consider the relationship between their tendency to increase or decrease in frequency and the social context at those particular moments of use.

4.1. Global results

The first step in the analysis was to compare the frequencies of the linguistic features in Biber's (1988) Dimension 4 (D4, henceforth) and Factor 7 (F7, henceforth) in the CC with the frequency of the same markers in NOW, in order to reveal whether these markers in fact correlate with the specific nature of the CC. In other words, since this corpus is a subset of NOW (and both of these include news from the same media sources), we hypothesize that the linguistic aspects in which they differ are related to the urgency communicated in CC, a kind of urgency commonly expressed in critical moments in which journalism cannot afford to use language ambiguously (as shown by Seoane and Loureiro-Porto 2024).

Thus, Table 4 presents the normalized frequencies per million words (pmw) of all the D4 markers in the two corpora (as of October 2022). For each marker a percent difference was calculated (in italics). Negative percent difference indicates that a given marker is more frequent in NOW than CC, while a positive percentage difference confirms the hypothesis that D4 markers serve to express the urgency required during the critical moments of the pandemic. Countries are ordered as they are in Table 2 above and using the same codes, while linguistic features are ranked according to their consistency across varieties.

As Table 4 shows, most D4 markers exhibit a higher frequency in CC than in NOW, which corroborates the hypothesis that D4 markers (overt expressions of persuasion) are expected to communicate urgency, and thus to avoid ambiguity, in crisis communication. However, their degree of effectiveness in achieving this seems to vary. So, the order of these markers, taking into account the number of varieties in which their frequency seems to signify urgency/lack of ambiguity/crisis, is as follows: *must* (20 varieties) > *will* / INSTRUCT (19) > *can* (18) > *should* / *might* (16) > conditional *if* (13) > DEMAND (10) > COMMAND (1). In light of this, it is safe to conclude that COMMAND is certainly a 'bad' or ineffective marker of the kind of communication we were expecting; that is, it does not exhibit higher frequencies at critical moments. Likewise, DEMAND is not a very 'good' marker either, because it only exhibits higher frequencies in 10 out of 20 varieties. Thus, these two suasive verbs do not seem to be associated with the kind of urgency that emerged during the COVID-19 crisis, as opposed to all the other D4 markers. Except these two verbs, all other features in Biber's (1988) D4 are indeed reliable markers of crisis communication, since they are more frequent in CC than in NOW. Below we will see whether these markers are more frequent especially at the most critical COVID-19 moments, with the aim of testing our first hypothesis (H1).

Looking at Table 4 horizontally, we can group varieties of English in terms of the relative frequency of D4 markers. To begin with, the inner-circle varieties are very coherent: all features are more common in CC than in NOW (with the exception of COMMAND and, to a slight extent, *might* in IE³). In Asian varieties, more variation is found, and the only systematic result is that DEMAND aligns with COMMAND in being non-representative of crisis communication. In addition, IN and PK also exhibit lower relative frequencies of *might* and conditional *if* (in the case of PK, *can* and *should* also exhibit unexpectedly lower frequencies in CC than in NOW). African Englishes coincide in the identification of conditional *if* as a bad marker of crisis communication, since in four (out of five) varieties it exhibits a lower frequency in CC than in NOW. The only Caribbean variety in the corpus, JM, shows a very different pattern from all the other Englishes here, and is the variety that differs the most from inner-circle varieties. Probably due to its status as a variety of English Second Dialect, JM has also been shown to be an outlier in terms of other grammatical features (see, e.g., Seoane 2016; Collins 2020). Nonetheless, three modal verbs (*must*, *will* and *can*) and a suasive verb (INSTRUCT) prove very strong markers of the specific kind of communication in CC, since in JM they also show the expected higher frequencies.

Biber's (1988) F7 linguistic features are too numerous (see Table 3 above) to include in a single table. Hence, the first step was to rank them according to the number of varieties in which they occur less frequently in CC than in NOW: the adverb *pretty* (19 varieties) > *quite* (17) > SEEM / APPEAR (15) > *maybe* / *perhaps* / *kind of* + V / *barely* / *rather* (14) > *sort of* + V (12) > *though* (10) > *somewhat* (9) > *slightly* (7) > *in spite of* (5) > *mildly* (4) > *although* (3) > *almost* (2) > *partially* / *less* (1) > *despite* / *nearly* (0).

Based on these data, Table 5 shows the frequencies of those features which are less common in CC than in NOW in more than half of the varieties (up to *sort of* + V in the above list), and Table 6 shows the frequencies of all the remaining features (from *though* onwards). The first notable finding on these F7 features is that their behaviour is not so coherent as those of D4; although in general they have a tendency to be less frequent in CC than in NOW (in accordance with H2), far more variation is found than in the case of the D4 features. Thus, although many D4 features are clearly robust markers of crisis communication, the hedging devices in F7 are not altogether banished as a consequence of the urgency of the discourse: it may be that their specific pragmatic roles make many of them useful devices to discuss uncertain situations, and perhaps to hint at hope for the future.

³ Please note that, as seen above (Table 2), countries are designated with their ISO codes (<https://www.iso.org/obp/ui/#iso:pub:PUB500001:en>).

Table 4. Dimension 4 markers in the *Coronavirus Corpus* and in *NOW*. Normalized frequencies per million words and percentage differences between the two corpora.

D4 MARKERS	MUST		WILL		INSTRUCT		CAN		SHOULD		MIGHT		CONDIT IF		DEMAND		COMMAND	
	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW
US	313,4	199,8	3645,2	2447,7	15,0	8,7	2150,1	1729,2	801,6	548,4	379,9	315,9	1924,7	1497,7	71,7	47,6	5,5	7,8
% diff	56,8		48,9		71,4		24,3		46,2		20,2		28,5		50,6		-29,4	
CA	324,3	227,7	3820,3	2739,5	11,4	7,9	2091,4	1745,3	747,4	572,3	294,6	272,0	2020,0	1528,3	62,2	47,9	5,3	6,1
% diff	42,4		39,5		44,0		19,8		30,6		8,3		32,2		29,8		-13,0	
GB	462,4	283,3	4361,3	3053,3	16,4	9,9	2802,7	2232,1	1014,2	678,2	361,6	327,9	2347,6	1983,2	67,4	56,6	6,3	8,5
% diff	63,2		42,8		66,6		25,6		49,5		10,3		18,4		19,1		-26,3	
IE	409,9	306,9	4900,0	3643,6	11,2	9,0	2693,3	2126,7	798,8	606,4	286,5	304,7	2016,8	1775,4	56,1	45,8	2,8	6,6
% diff	33,6		34,5		25,0		26,6		31,7		-6,0		13,6		22,5		-57,9	
AU	610,2	461,1	4394,7	3204,7	10,2	7,6	2425,3	2114,9	955,7	803,9	365,1	347,0	1867,2	1681,6	62,7	54,1	4,0	8,1
% diff	32,3		37,1		34,6		14,7		18,9		5,2		11,0		15,9		-51,0	
NZ	412,8	262,1	4679,2	3359,5	11,1	8,4	2342,2	1853,8	1018,4	703,0	446,8	346,5	2511,3	1698,7	76,1	54,5	3,6	5,6
% diff	57,5		39,3		33,2		26,3		44,9		28,9		47,8		39,7		-35,2	
IN	348,4	261,7	3866,9	3658,7	32,6	18,1	1928,4	1769,5	880,5	773,5	188,9	192,5	1209,1	1230,0	137,9	150,3	5,7	10,3
% diff	33,1		5,7		79,7		9,0		13,8		-1,9		-1,7		-8,3		-44,4	
LK	594,6	428,1	3745,4	3107,6	57,2	44,7	1975,1	1521,9	1228,0	938,4	147,9	113,4	1444,2	1131,6	92,7	92,1	9,8	14,1
% diff	38,9		20,5		28,0		29,8		30,9		30,4		27,6		0,6		-30,5	
PK	444,9	389,1	4115,6	3418,1	40,2	20,9	1491,0	1520,2	1082,7	1166,5	161,1	165,2	1191,6	1252,9	145,1	189,0	2,7	9,8
% diff	14,3		20,4		92,7		-1,9		-7,2		-2,5		-4,9		-23,2		-72,8	
BG	453,7	348,0	3948,2	3593,3	42,3	27,6	1719,7	1549,5	821,5	728,9	260,8	219,5	1272,1	1262,9	140,7	204,2	2,5	6,8
% diff	30,4		9,9		53,6		11,0		12,7		18,8		0,7		-31,1		-63,6	
MY	621,6	462,3	4216,6	3508,0	30,3	21,2	2167,3	1837,0	1009,5	794,1	209,0	180,5	1712,3	1554,7	67,4	71,7	10,1	10,4
% diff	34,5		20,2		43,3		18,0		27,1		15,8		10,1		-6,0		-2,8	
SG	425,6	266,8	4195,6	3568,5	24,3	12,3	2306,8	1958,7	990,7	673,9	282,4	243,7	1425,2	1308,3	84,1	85,2	6,5	9,6
% diff	59,5		17,6		98,2		17,8		47,0		15,9		8,9		-1,3		-32,8	
PH	400,2	273,8	4277,7	3666,2	24,1	16,1	1840,7	1684,5	821,2	679,2	214,0	211,4	1316,7	1298,7	47,3	51,2	4,1	9,1
% diff	46,2		16,7		49,3		9,3		20,9		1,2		1,4		-7,6		-55,2	
HK	475,9	345,1	3485,1	3215,5	18,6	12,5	1753,7	1722,2	916,4	774,9	296,5	237,0	1405,2	1191,2	117,9	102,7	6,8	9,0
% diff	37,9		8,4		48,8		1,8		18,3		25,1		18,0		14,8		-25,0	
ZA	664,6	487,9	4320,3	3722,0	20,7	22,7	2069,1	1884,5	987,9	869,8	243,6	234,1	1506,1	1620,4	96,6	91,7	4,9	7,7
% diff	36,2		16,1		-8,8		9,8		13,6		4,1		-7,1		5,3		-37,0	
NG	743,0	651,6	3417,0	3240,9	16,7	15,6	1787,7	1773,1	1176,0	1161,7	176,4	154,1	1191,4	1403,5	93,4	112,3	27,5	56,1
% diff	14,0		5,4		7,1		0,8		1,2		14,5		-15,1		-16,8		-51,0	
GH	718,2	558,8	3959,1	3911,1	21,2	17,4	1649,8	1754,4	1010,6	1015,2	182,3	179,0	1377,1	1515,7	85,3	109,9	14,8	30,0
% diff	28,5		1,2		21,8		-6,0		-0,4		1,8		-9,1		-22,4		-50,7	
KE	512,3	427,6	3934,5	4061,8	31,2	20,9	1737,9	1726,7	895,6	914,7	171,5	171,4	1085,0	1304,1	101,5	136,3	5,3	12,4
% diff	19,8		-3,1		48,9		0,7		-2,1		0,0		-16,8		-25,5		-57,1	
TZ	582,9	350,7	3884,3	3711,5	40,0	26,1	2012,7	1537,4	1262,1	891,9	220,2	127,6	1274,9	897,1	95,3	90,4	7,6	9,9
% diff	66,2		4,7		53,3		30,9		41,5		72,5		42,1		5,4		-23,3	
JM	611,0	532,1	4931,8	4356,2	29,0	21,1	1790,8	1683,2	629,7	811,9	86,9	151,1	951,1	1224,5	28,2	50,2	12,5	10,1
% diff	14,8		13,2		37,5		6,4		-22,4		-42,5		-22,3		-43,7		23,6	

A horizontal reading of Table 5 also shows some quite unsystematic behaviour. The inner-circle varieties, all of which followed essentially the same pattern for D4 markers, are very heterogeneous in terms of F7. The only varieties that exhibit the expected behaviour are GB and IE, in which all 10 features are less frequent in CC than in NOW; by contrast, US and NZ both exhibit a very different tendency, with the hypothesis in these cases confirmed only in three and four markers, respectively. Asian varieties are also very heterogeneous, with IN and PK exhibiting lower frequencies in eight markers, and LK and HK at the other extreme (only the adverb *pretty* is less frequent in CC than in NOW). As for African varieties, this is the region where we find the most consistent pattern, with ZA, GH and KE all exhibiting lower frequencies in seven (out of ten) features, followed by NG (five). However, TZ behaves in quite an unexpected way, since none of the F7 features follows the expected pattern. The only Caribbean variety, JM, is most similar to GB and IE, following the expected pattern in nine markers.

The high degree of heterogeneity among F7 markers in the different varieties must have to do with their pragmatic values, which makes them very likely to be influenced by socio-cultural factors. In the present case this would include issues such as how to communicate the unprecedented restrictions that were placed on whole populations worldwide during the COVID-19 pandemic. That said, an individual analysis of each variety is necessary. Due to space restrictions, all 20 varieties in CC cannot be discussed in detail here, and instead we have chosen five, the selection according to (i) whether they belong to the inner or the outer circle, and (ii) the anti-COVID-19 strategy adopted in each territory, as shown in Table 7.

Table 5. Top ten Factor 7 markers in the *Coronavirus Corpus* and in *NOW*. Normalized frequencies per million words and percentage difference between the two corpora.

FACTOR 7	PRETTY[*]		QUITE		SEEM		APPEAR		MAYBE		PERHAPS		RATHER		BARELY		KIND OF [v*]		SORT OF [v*]	
	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW
US	102.17	104.72	92.53	92.98	242.8	242.4	255.6	227.2	125.9	110.3	82.4	83.5	137.98	121.86	19.86	18.84	48.6	38.5	16.7	11.6
% diff	-2.4		-0.5		0.2		12.5		14.1		-1.4		13.2		5.4		26.3		43.0	
CA	86.91	108.69	99.26	105.67	195.2	220.4	345.5	233.1	101.0	99.4	66.9	79.8	114.39	116.7	16.43	17.73	37.3	36.3	14.0	10.5
% diff	-20.0		-6.1		-11.4		48.2		1.6		-16.3		-2.0		-7.3		2.7		32.6	
GB	64.88	91.65	158.92	192.73	249.2	297.9	247.8	274.6	65.7	89.8	94.4	124.9	189.21	210.19	17.99	25.23	11.4	14.8	6.6	8.4
% diff	-29.2		-17.5		-16.3		-9.8		-26.9		-24.4		-10.0		-28.7		-22.6		-22.1	
IE	58.05	84.64	144.55	169.62	210.8	253.6	336.7	448.0	89.1	111.1	81.0	93.0	152.13	158.37	13.36	17.9	15.7	19.8	5.9	7.6
% diff	-31.4		-14.8		-16.9		-24.8		-19.8		-13.0		-3.9		-25.4		-20.5		-22.3	
AU	117.24	153.39	150.89	170.52	214.8	259.0	531.1	482.9	76.2	102.9	98.1	110.7	174.83	184.52	21.47	23.51	16.9	21.5	13.8	14.1
% diff	-23.6		-11.5		-17.1		10.0		-26.0		-16.0		-5.3		-8.7		-21.3		-2.6	
NZ	142.31	159.62	217.97	213.19	358.9	275.5	214.6	292.8	133.0	99.6	128.3	100.7	249.94	194.85	25.92	23.73	14.8	19.3	11.1	13.3
% diff	-10.8		2.2		30.3		-26.7		33.5		27.4		28.3		9.2		-23.2		-16.5	
IN	20.38	38.82	101.1	129.54	169.9	209.5	167.4	191.8	32.3	38.4	53.4	68.9	93.16	111.51	17.08	20.59	4.9	5.9	2.8	3.3
% diff	-47.9		-22.0		-18.9		-12.7		-15.8		-22.5		-16.5		-17.0		-17.9		-15.9	
LK	10.35	18.67	102.08	90.69	233.8	172.8	226.1	240.7	37.9	25.7	119.7	82.5	150.96	121.52	12.4	10.42	2.1	2.1	1.7	1.5
% diff	-44.6		12.6		35.4		-6.1		47.3		45.2		24.2		19.0		0.0		16.6	
PK	18.3	29.15	77.59	115.09	164.6	224.4	148.5	211.3	25.1	36.9	55.3	80.9	108.95	149.18	11.31	14.35	2.9	4.5	2.2	2.2
% diff	-37.2		-32.6		-26.6		-29.7		-32.0		-31.6		-27.0		-21.2		-35.6		-0.9	
BG	20.99	28.97	74.28	108.42	162.0	175.4	158.9	173.4	39.3	44.1	52.2	70.3	118.52	130.58	20.99	19.12	5.5	4.1	3.0	2.5
% diff	-27.9		-31.5		-7.6		-8.4		-10.8		-25.8		9.8		34.7		34.7		18.9	
MY	31.95	47.94	95.26	105.26	156.4	197.3	129.6	177.3	75.8	64.1	79.3	77.1	125.67	123.94	13.81	14.92	4.0	4.9	2.4	2.7
% diff	-33.4		-9.5		-20.7		-26.9		18.3		2.8		1.4		-7.4		-18.9		-10.4	
SG	32.47	50.76	102.06	115.3	158.8	181.3	230.5	289.5	43.9	53.7	64.3	71.3	123.36	124.74	15.12	18	7.3	8.8	3.5	4.1
% diff	-36.0		-11.5		-12.4		-20.4		-18.2		-9.8		-1.1		-16.0		-17.1		-14.0	
PH	29.02	63.77	60.9	82.97	122.9	159.7	122.3	164.4	65.7	82.1	56.7	70.5	79.67	89.12	16.24	19.83	9.6	14.3	3.2	4.2
% diff	-54.5		-26.6		-23.0		-25.6		-19.9		-19.5		-10.6		-18.1		-33.2		-25.1	
HK	22.22	26.26	93.88	94.13	223.8	192.7	246.4	226.8	37.3	40.0	116.5	100.6	204.76	175.82	20.18	16.57	6.9	5.3	3.8	2.4
% diff	-15.4		-0.3		16.1		8.7		-6.7		15.8		16.5		21.8		29.4		57.5	
ZA	33.42	52.53	111.43	133.86	204.6	222.9	180.0	269.2	53.5	67.1	87.8	102.7	164.2	181.11	13.94	20.02	7.2	8.1	5.0	4.7
% diff	-36.4		-16.8		-8.2		-33.1		-20.4		-14.5		-9.3		-30.4		-11.5		7.5	
NG	8.86	15.59	75.81	79.08	116.2	126.5	140.7	180.2	33.2	43.8	55.2	54.7	134.5	147.53	27.4	29.8	2.4	3.8	1.0	1.8
% diff	-43.2		-4.1		-8.2		-22.0		-24.1		0.8		-8.8		-8.1		-38.0		-41.5	
GH	20.08	26.75	68.02	87.47	130.2	161.5	164.5	214.2	52.1	65.9	49.3	68.5	165.02	196.59	17.24	26.42	4.0	4.7	2.3	2.4
% diff	-24.9		-22.2		-19.4		-23.2		-20.9		-28.1		-16.1		-34.7		-15.7		-3.8	
KE	11.56	21.85	63.99	83.11	130.1	160.1	134.1	183.0	37.7	50.2	51.7	55.2	89.42	98.13	28.23	34.91	1.5	3.6	1.7	1.8
% diff	-47.1		-23.0		-18.7		-26.7		-24.8		-6.5		-8.9		-19.1		-58.9		-2.3	
TZ	13.46	9.48	67.64	59.06	155.7	107.8	124.6	100.4	30.4	27.3	63.2	44.1	153.92	110.49	24.16	14.73	3.8	2.5	5.2	2.5
% diff	42.0		14.5		44.5		24.1		11.2		43.2		39.3		64.0		55.1		107.2	
JM	16.48	26.88	66.64	109.12	53.5	173.6	55.7	155.5	27.5	47.0	22.7	68.9	49.79	86.11	4.39	11.17	4.0	6.4	2.9	2.2
% diff	-38.7		-38.9		-69.2		-64.2		-41.5		-67.0		-42.2		-60.7		-37.3		32.6	

Table 6. Other F7 markers in the *Coronavirus Corpus* and in *NOW*. Normalized frequencies per million words and percentage difference between the two corpora.

FACTOR 7	THOUGH		SOMEWHAT		SLIGHTLY		IN SPITE OF		MILDLY		ALTHOUGH		ALMOST		PARTIALLY		LESS		DESPITE		NEARLY	
	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW	CC	NOW
US	327.9	269.4	30.18	24.89	52.25	37.63	5.8	4.6	2.72	1.91	178.9	129.3	209.07	161.63	27.31	13.63	373.11	247.33	227.6	141.3	311.49	174.63
% diff	21.7		21.3		38.9		27.4		42.4		38.4		29.4		100.4		50.9		61.1		78.4	
CA	227.7	208.4	25.1	22.29	46.16	31.74	6.6	6.1	2.43	1.85	161.6	139.3	193.76	222.37	41.5	13.88	290.22	223.14	200.5	136.9	206.47	132.65
% diff	9.2		12.6		45.4		9.1		31.4		16.1		-12.9		199.0		30.1		46.4		55.7	
GB	227.3	281.7	19.83	23.26	56.2	55.16	7.3	6.4	2.52	2.83	233.4	219.2	263.33	225.88	16.89	9.57	320.48	246.65	298.1	226.0	138.21	106.55
% diff	-19.3		-14.7		1.9		14.1		-11.0		6.5		16.6		76.5		29.9		31.9		29.7	
IE	200.4	240.5	23.44	27.77	46.78	48.07	7.4	6.3	1.95	2.16	181.0	183.7	238.56	220.58	15.14	8.46	255.07	206.77	244.7	207.5	122.74	88.94
% diff	-16.7		-15.6		-2.7		17.6		-9.7		-1.5		8.2		79.0		23.4		17.9		38.0	
AU	217.0	242.0	23.42	25.62	46.35	45.07	3.9	4.2	2.59	2.06	169.4	160.0	273.42	227.91	16.42	9.6	316.74	261.47	296.0	222.6	143.17	103.35
% diff	-10.4		-8.6		2.8		-8.0		25.7		5.8		20.0		71.0		21.1		33.0		38.5	
NZ	234.2	221.6	33.83	25.59	65.08	54.91	7.5	5.4	2.84	2.38	202.3	192.3	259.53	214.5	16.55	10.96	401.68	273.35	261.4	201.5	140.47	115.49
% diff	5.7		32.2		18.5		36.9		19.3		5.2		21.0		51.0		46.9		29.7		21.6	
IN	236.																					

4.2. Great Britain

The way in which Great Britain managed the COVID-19 crisis has been the subject of a great deal of commentary on a wide array of forums, not least because the British cabinet, headed at the time by Prime Minister Boris Johnson, did something that no other country did: it changed its position when the Prime Minister was himself hospitalised with the virus (De Rosa et al. 2021, 37; Wodak 2021, 332). Whereas initially he and his cabinet chose not to follow all the advice of experts, they did subsequently adopt the kind of containment strategy common to most of Europe (a notable exception being Sweden, which evolved a different strategy consisting of interpersonal trust aimed at protecting only vulnerable people; see Bergenfalk 2020: 33; Wu et al. 2021). In the case of Great Britain, the containment strategy consisted of a series of measures that curtailed individual liberties, such as lockdown, masks, and curfews. These measures were eased when the incidence of infections was lower, but would be implemented once again when a new wave of the virus put the healthcare system in jeopardy (Institute for Government Analysis 2022).

The initial denial of the crisis by the Prime Minister, added to the unprecedented nature of these measures, demanded assertive, persuasive communication in every wave of the virus. In this scenario, it is quite telling that the D4 linguistic features explored in CC seem to undergo different waves, as shown in Figure 1, which shows the pmw of all the D4 features mentioned above (Table 4) diachronically, from January 2020 to December 2021. The first notable finding in Figure 1 is that all features exhibit parallel development, confirming that their increasing or decreasing use reflects the same communicative needs (overt expression of persuasion, in terms of Biber 1988). The second remarkable aspect in Figure 1 is that there are three very salient peaks in the frequency of use of the linguistic features: (1) Spring 2020 (20-03 to 20-06), (2) Autumn 2020 (20-11 to 21-01) and (3) Spring 2021 (21-04 to 21-06). Interestingly, the first two peaks coincide with the first COVID-19 wave (the first lockdown was declared on 23 March 2020) and the second lockdown (imposed on 5 November 2020), which were justified by the high incidence of new daily cases observed in Figure 2 on those dates.⁴ The third peak in the frequency of D4 markers in Figure 1, however, is not associated with the imposition of any new restrictions or with a rise in new daily cases (incidence was very low on that date, as shown in Figure 2). This peak in D4 markers in Spring 2021 in fact correlates with the progressive lifting of restrictions that began on March 2021 (Institute for Government Analysis 2022). It seems plausible, then, that the roadmap for lifting lockdown announced by the Prime Minister at that time required detailed communication of what could be done again and what remained prohibited (e.g. reopening of schools, maximum number of people at indoor and outdoor gatherings, the opening of non-essential services, as seen in Institute for Government Analysis 2022). In communicating such new guidelines effectively, the use of D4 markers such as *will*, *must* and *can* is needed, just like when restrictions were imposed. It could be said, then, that our H1 is confirmed for GB.

As for our second hypothesis, that the hedging devices in Biber's (1988) F7 would be lower in critical moments, the data are not so clear. To begin with, no systematic behaviour was found for the major F7 features (shown in Table 5), each of which exhibits ups and downs at different times. For this reason, and with the aim of identifying a minimal pattern, we isolated those F7 features whose frequencies move in parallel, as shown in Figure 3, which in the case of GB are: *rather*, *quite*, *maybe* and *perhaps*. The fact that these four downtoners exhibit parallel developments should be indicative of some particular pragmatic value which, according to our H2, would be less frequent in the most critical moments of the pandemic. However, Figure 3 has a surprisingly similar shape to Figure 1, with three identifiable peaks in frequency: (1) Spring 2020 (from 20-03 to 20-06), (2) Autumn 2020 (from 20-11 to 21-01), and (3) Spring 2021 (from 21-04 to 21-07). Thus, the only observable pattern of F7 linguistic features matches perfectly that described for D4 features, which clearly refutes our H2: (these) downtoners show a counter-intuitive tendency to rise in frequency when persuasion is demanded. This coexistence of markers of overt persuasion and hedging devices probably requires a pragmatic interpretation related to crisis communication, since the two objectives in such situations are (i) to satisfy stakeholders' informational needs, and (ii) to provide positive messages for the public (Kaschner 2021, 69-70). While D4 markers are directed at satisfying the first of these aims, F7 markers may contribute to the second by describing a foreseeable future in which life might return to normal. In addition, the use of hedging might reflect the ongoing democratization of the language, in this case on a micro level as the public discourse on COVID-19 developed and matured (Farrelly and Seoane 2012).

⁴ Note that in Figure 2, December 2021, the data effectively trace the surge of the omicron variant, which was higher than any previous wave. Indeed, it was accompanied by the re-introduction of mandated mask-wearing (Institute for Government Analysis 2022), and this might explain the slight rise in the use of D4 markers in GB public discourse in December 2021 (Figure 1).

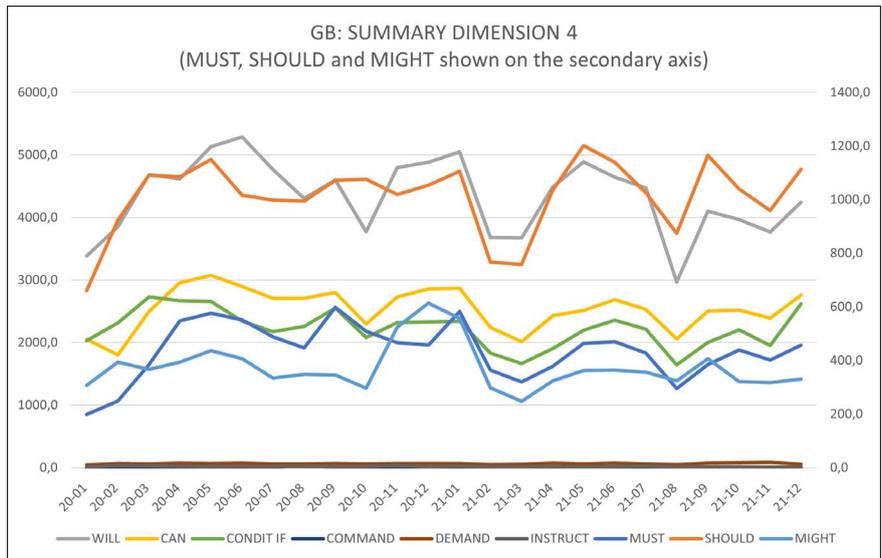


Figure 1. Frequency (pmw) of Dimension 4 markers in GB.

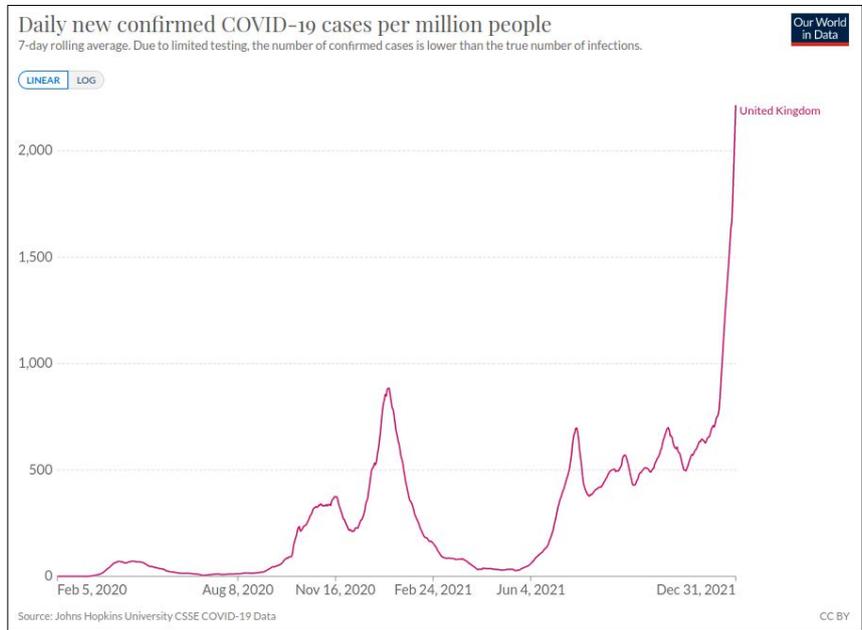


Figure 2. New confirmed daily COVID-19 cases per million people in GB (from Mathieu et al. 2020-).

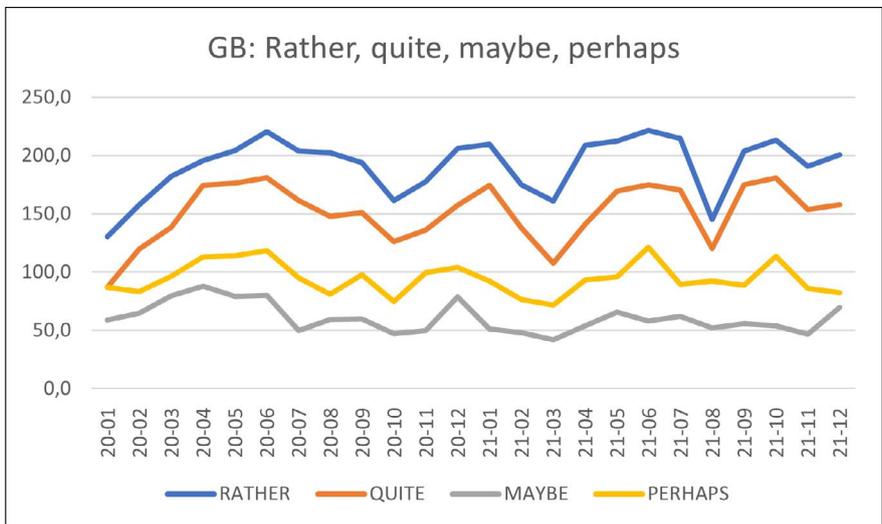


Figure 3. Frequency (pmw) of the only patterned markers of Factor 7 in GB.

4.3. United States

The way the United States managed the COVID-19 crisis was marked by the attitude of President Donald Trump, who “consistently underplayed the messaging of experts with regard to social distancing and the wearing of face masks” (Boin et al. 2020, 196). Thus, the US first declared the COVID-19 outbreak a national emergency on 12 March 2020 and called for “15 days to slow the spread” on 16 March 2020 (finally extended to 30 April 2020; US Department of Defense 2022), which consisted of recommendations, rather than restrictions, such as staying at home when one feels sick (The White House 2020). After that date, only travel restrictions were implemented, particularly from places where there was a surge of COVID-19 cases (US Department of Defense 2022). Other than that, Trump’s administration is often described as having “denied and trivialised the danger caused by the pandemic” (Wodak 2021, 332).

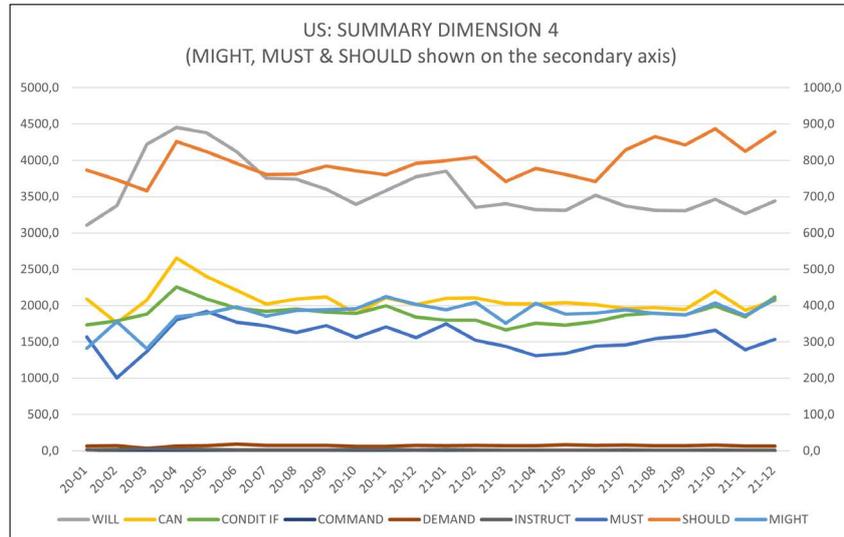


Figure 4. Frequency (pmw) of Dimension 4 markers in the US.

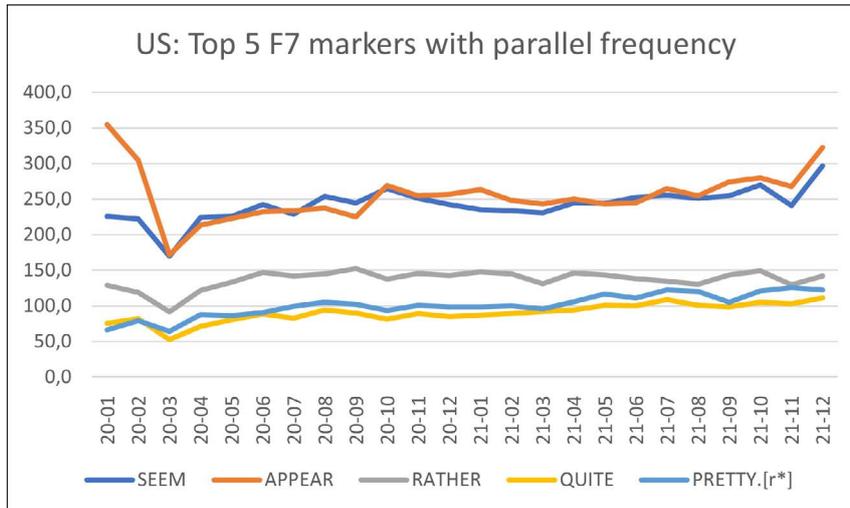


Figure 5. Frequency (pmw) of the only patterned markers of Factor 7 in the US.

Therefore, it is expected that the language used by the media would reflect this non-urgency, and this is indeed what we observe in Figure 4, in which some D4 features undergo an increase in Spring 2020 (*should*, *will*, *can* and conditional *if*, from 20-03 to 20-05). After June 2020 frequencies in the use of all D4 markers are quite stable, with no sharp changes in tendencies. In a way, then, we might say that the tendency exhibited by D4 markers here correlates with the declaration of measures to manage the COVID-19 crisis, and that their increased use is limited to the period March-May 2020. This finding would confirm our H1. However, there are two D4 features that exhibit a sharp decrease in frequency in February and March 2020 (*must* and *might*, respectively). While this goes against the expectations, it must also be recalled that these two modal verbs do not only convey deontic meanings such as the ones required in the overt expression of persuasion, but also epistemic meanings relating to inference or probability. The ambivalent nature of these two modals could explain why they undergo this sharp decline in the weeks adjacent to the declaration of a national emergency. In fact, this hypothesis gains ground if we compare *must* and *might* to the linguistic features in F7.

As was the case with the GB data, the top ten F7 features in the US do not show any clear tendency. However, we isolated those that do seem to follow a single pattern, as shown in Figure 5, which in this case include *SEEM*, *APPEAR*, *rather*, *quite* and the adverb *pretty*. These five features undergo a sharp decline in use in March 2020 and return to quite stable values after that date, in the same way that *must* and *might*, and contrary to the behaviour of all the other D4 features. Thus, the US data would confirm our H2: the use of hedging devices declines when the overt expression of persuasion is required.

4.4. New Zealand

The way New Zealand managed the COVID-19 crisis has been praised worldwide. Engaging in “quasi-dialogue with their citizens” (Wodak 2021 340), Jacinda Ardern became the most popular Prime Minister of the century (Boin et al. 2020, 196). The elimination strategy adopted in this country was aimed at attaining zero COVID (WHO 2020), rather than keeping it at reasonable levels to avoid saturating the healthcare system. For this reason, the action taken by the NZ Government involved (1) the declaration of a state of national emergency on 25 March 2020, which remained in force until 13 May 2020 (Government of New Zealand 2022); and (2) a four-level alert system was introduced to determine the measures that would be taken depending on the risk level (Government of New Zealand 2021), this lasting until 2 December 2021. New Zealand abandoned its elimination strategy in October 2021 (Menon 2021), which resulted in the replacement of the alert system with a COVID-19 Protection Framework, based on minimizing the impact of the virus and providing stability for people and businesses (Government of New Zealand 2022).

With this scenario in mind, the relative frequencies of the D4 linguistic features in CC are shown in Figure 6. There is a slight tendency for the use of markers of overt persuasion to increase between March and May 2020, the first months of the pandemic, when a state of national emergency was in force and when many New Zealand territories reached alert level 4 (Government of New Zealand 2022). From this date onwards, D4 features oscillate without a clear pattern or change in tendency, just as in the US. The fact that the US and NZ, with two very different strategies and leaders, exhibit comparable patterns, with a rise of D4 markers between March and May 2020, may seem counter-intuitive, but if we focus on how the crisis was communicated, we can at least tentatively suggest an explanation. The lack of restrictions applied in the US to stop the spread of the virus beyond April 2020 resulted in quite a stable frequency of markers of persuasion, since there was nothing to persuade citizens to do. In NZ, conversely, communication was conducted effectively in the initial months of the pandemic (from March to May 2020), and the dialogue maintained between Prime Minister Ardern with her “team of five million” during that period created the kind of trust that made citizens feel involved in following the measures, and thus it was not necessary to resort to persuasive language every time a new alert level was declared. As Beattie and Priestley note (2021, 3):

Firstly, we suggest that the open, honest and straightforward communication built trust with the audience, which is critical during a crisis where uncertainty is high. Secondly, the use of distinctive and motivational language, as well as expressions of care, framed public health measures as urgent, collective and meaningful, mobilising New Zealanders to provide support for it. (Beattie and Priestley 2021, 3)

Therefore, our H1 would also be confirmed for the NZ data: D4 features undergo peaks in frequency in moments of crisis, which in the case of New Zealand was restricted to the initial weeks of the pandemic.

Moving on to F7, there is not much parallelism between the features here. Again, we isolated the linguistic markers that exhibit comparable, parallel frequencies in the period studied (which in the case of NZ are *SEEM*, *rather*, *quite*, *maybe* and the adverb *pretty*[r*]) and found that they do not show any notable peaks or valleys (Figure 7). Thus, our H2 is not confirmed.

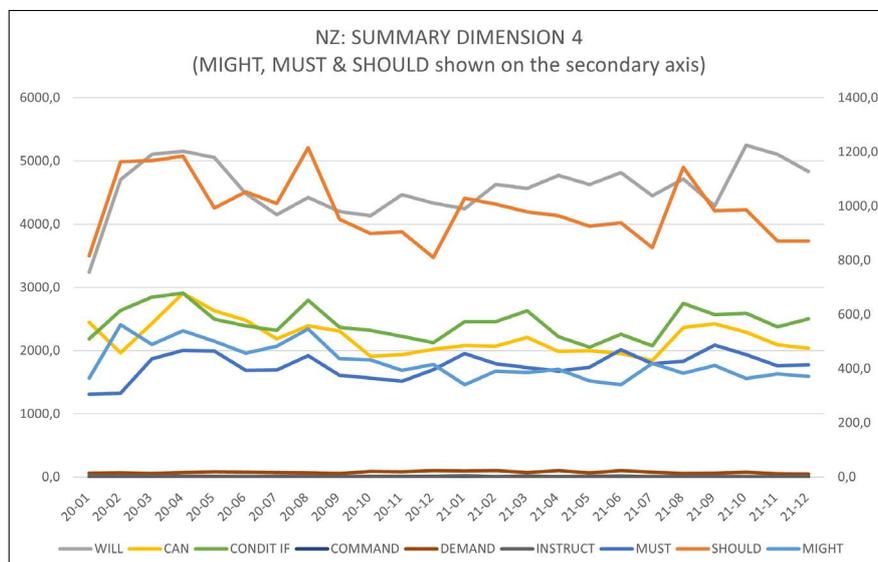


Figure 6: Frequency (pmw) of Dimension 4 markers in NZ.

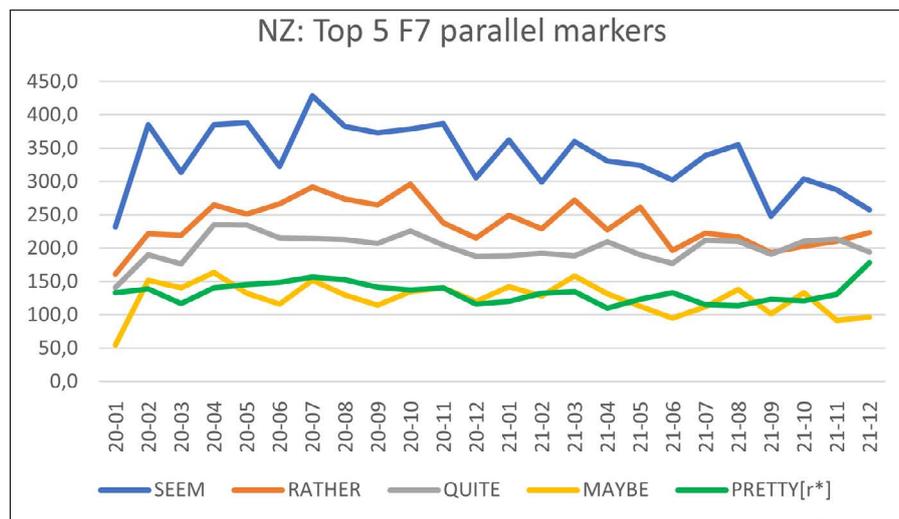


Figure 7. Frequency (pmw) of the only patterned markers of Factor 7 in NZ.

4.5. Singapore

Singapore (together with Hong Kong) was praised for its management of the COVID-19 crisis (WHO 2020), in that it kept the incidence of the virus under control without implementing many restrictions on citizens (Normile 2020). Its previous experience in managing other respiratory viruses (e.g. severe acute respiratory syndrome, SARS, in 2003), plus the small geographical size of the national territory and its limited land borders, allowed the government to manage the crisis in a very different way from most other countries: extensive testing of citizens, hospitalization of those who tested positive (regardless of their symptoms), electronic control of positive cases (with electric wristbands or through their mobile phones), among others (Normile 2020). All of these measures allowed SG to impose far fewer restrictions on uninfected citizens than in the countries we have discussed so far.

In these circumstances, and in light of what we have seen for GB, the US and NZ, it comes as no surprise that the D4 features analysed do not exhibit sharp changes in frequency in the period analysed (Figure 8). The typical jump in frequencies that began in March 2020 in GB, the US and NZ is almost wholly absent in the SG data (with only a slightly increased tendency in the use of *can*, *will* and *must*) and it certainly does not allow us to identify any kind of overt expression of persuasion. If anything, the sharpest change in tendency for any D4 markers is that for *should* between May and July 2021. Because this notable peak is not accompanied by any other D4 marker, its interpretation can only be tentative, but it would not seem unreasonable to consider that it was related to the public encouragement of people to be vaccinated, since, as we see in Figure 9, this was precisely the period in which most Singaporeans were vaccinated.

Regarding the hedging devices in F7, once more no clear pattern is observed; those features that exhibit some sort of parallel behaviour are set out in Figure 10 (in the case of SG, these are *SEEM*, *quite*, the adverb *pretty* and *perhaps*). However, the slightly uneven development of these four features does not provide a sound basis for any hypothesis, and in addition does not correlate directly with any specific measures or restrictions.

So, as far as our two hypotheses are concerned, it is difficult to reach conclusions, in that both of these stated that the frequencies of D4 and F7 markers, respectively, would be affected by crisis communication and hence would exhibit sharp changes in tendencies of use. Since the data in Figure 8 and Figure 10 do not show any clear tendencies here, it at first appears that both hypotheses are proven wrong. An alternative interpretation is that Singapore in fact did not experienced a major crisis during the COVID-19 pandemic, or at least not a crisis that demanded a specific and identifiable use of persuasive communicative strategies. Let us recall that this was not the first virus-related public health emergency that Singaporeans had experienced in recent years, and also that for a variety of territory-specific conditions they were able to manage it in different ways than in most other countries around the world. In SG the decisions taken and the measures adopted did not come in as unprecedented, drastic restrictions, but as just another social challenge, similar to previous ones, such as SARS. As Vernon Lee, Singapore's Minister of Health, said at the time, "[t]his is not a sprint over the next month, it's a marathon that we do not know how long it will last" (Normile 2020). It may be the absence of a sprint-like management of the crisis that meant that Singapore's media did not resort to the kind of persuasive language typical of D4 features. That said, it seems that our hypotheses are impossible to test: if there is no crisis in terms comparable to those seen in other countries, there is no need to persuade the stakeholders of the decisions taken (D4) and there would thus be no effects on the use of hedging devices (F7).

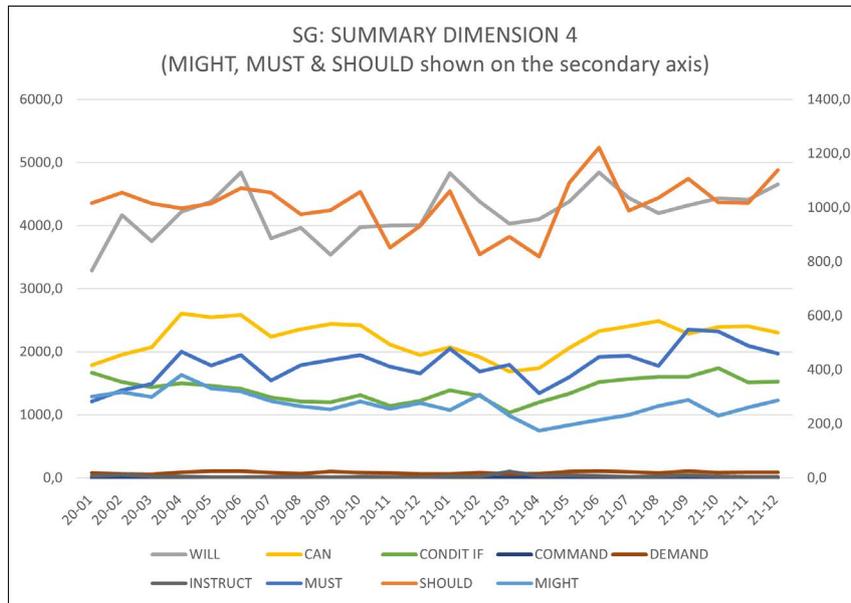


Figure 8. Frequency (pmw) of Dimension 4 markers in SG.

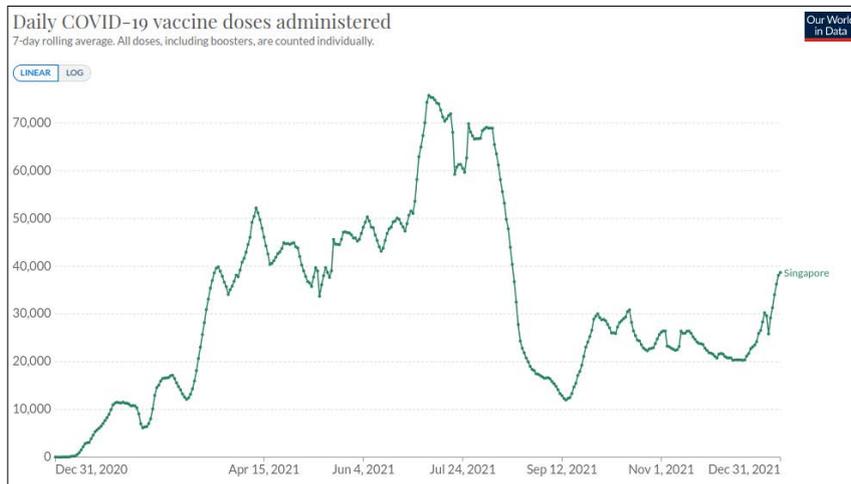


Figure 9. Daily COVID-19 vaccine doses administered in SG (from Mathieu et al. 2020-)

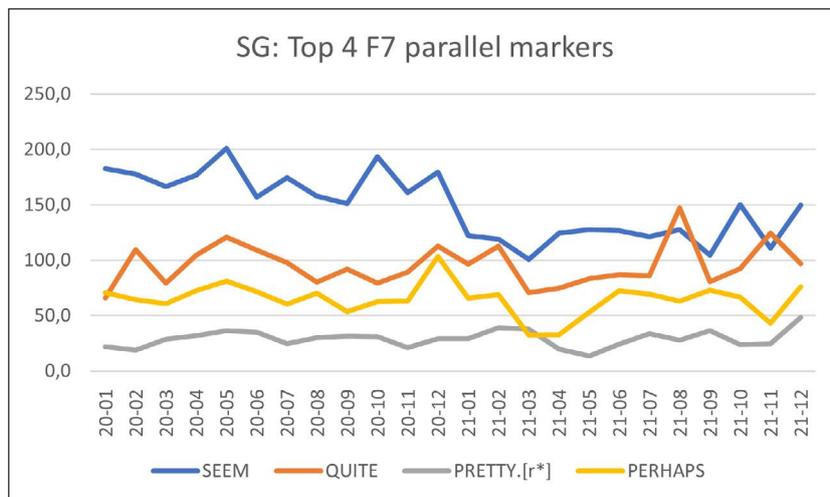


Figure 10. Frequency (pmw) of the only patterned markers of Factor 7 in SG..

4.6. South Africa

South Africa, like Singapore, is a former British colony, and as such the variety of English spoken there falls within the outer circle. However, regarding the country’s response to the COVID-19 crisis, unlike SG, it followed the containment strategy adopted by much of the Western world. The government of Cyril Ramaphosa declared a state of national disaster and introduced a five-level alert system, with measures to be implemented depending on levels of infections, rates of transmission, and the capacity of local health facilities, among others (Government of South Africa 2022). A national lockdown was first implemented on 27 March 2020 (Moonasar et al. 2021, 2), which was initially considered exemplary but subsequently came to be heavily criticized (Naudé and Cameron 2020, 2). These measures led to a strengthening of social and economic inequalities in the country; whenever a higher alert level was announced, poor and privileged sectors of society were affected very differently by the ensuing measures, with the well-off “queueing to stockpile” while “[l]arge numbers of the black population stood in kilometer-long queues for food parcels” (De Rosa et al. 2020, 34).

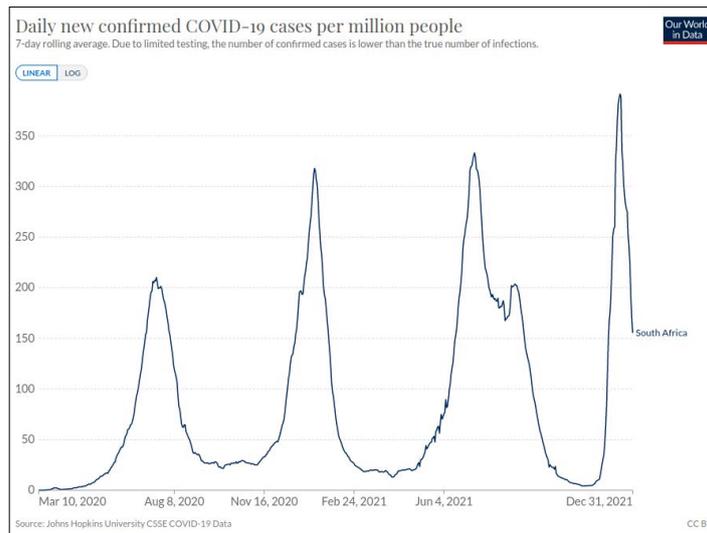


Figure 11. New confirmed daily COVID-19 cases per million people in ZA (from Mathieu et al. 2020-).

In such a situation, every time the country suffered a new infection wave (as seen in Figure 11), it would enter into an alert level that required assertive communication. In fact, the degree of overlap between the waves in Figure 11 and the peaks in frequency of D4 markers in Figure 12 is very notable. To begin with, Figure 12 shows what we now recognise as a familiar jump from March to June 2020, coinciding with the first COVID-19 wave (alert level 4, according to Government of South Africa 2022). The second rise in frequency of D4 markers (particularly *must*, *should* and *will*) occurs between December 2020 and February 2022, coinciding with the second COVID-19 wave (alert level 3, according to Government of South Africa 2022). The third wave in Figure 11, although less clear than the previous two, still shows a slight increase in the frequencies of *should*, *will* and *must* in June 2021 (alert levels 4 and 3, according to Government of South Africa 2022). Finally, the fourth large surge in the virus (December 2021, as seen in Figure 11) has a very small correlate in the frequencies of only *must* and *should* (Figure 12). From what we have learned so far, we might say that our H1 is clearly confirmed for ZA: critical moments, and the resulting restrictions on people’s liberties, are accompanied by a rise in the frequency of D4 markers.

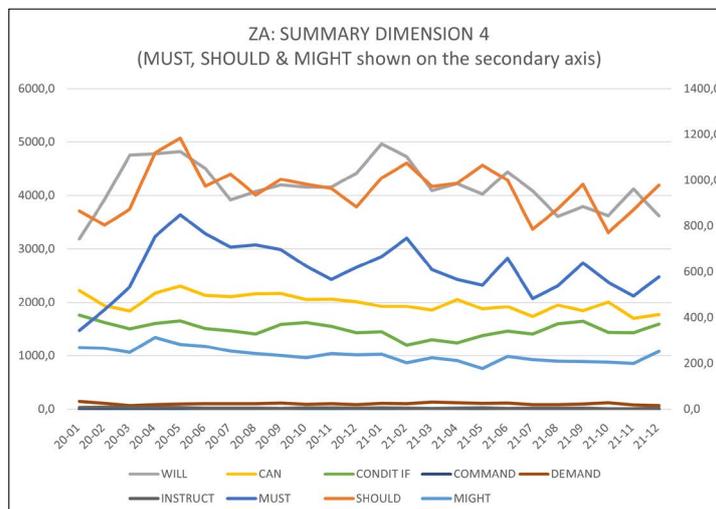


Figure 12. Frequency (pmw) of Dimension 4 markers in ZA.

Regarding the hedging devices of F7, Figure 13 isolates those features that exhibit a somewhat parallel development (in this case, *SEEM*, *rather*, *quite*, *maybe* and the adverb *pretty*) and shows a similar picture to that of the US: a sharp decline in all of them in March 2020, with quite even frequencies in the remainder of the period. Therefore, H2 seems to be confirmed: the use of hedges tends to drop when a critical moment requires unambiguous communication. Nonetheless, this only seems to work for the initial, drastic imposition of unprecedented measures, and is not visible in any other wave (as opposed to the observed behaviour of D4 features).

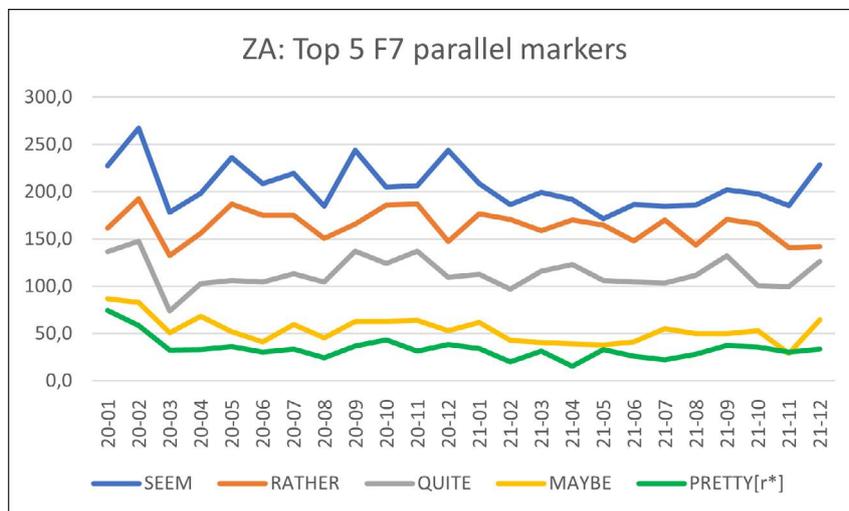


Figure 13: Frequency (pmw) of the only patterned markers of Factor 7 in ZA.

5. Conclusions

This paper has described a qualitative study of crisis communication in World Englishes using linguistic features associated with specific dimensions of Biber's (1988) multidimensional analysis, namely D4 (overt expression of persuasion) and F7 (hedging devices). Taking the context of the COVID-19 pandemic as a case in point, the study has explored changes in the tendencies of use of these features, in order to determine whether, under socially critical circumstances, their frequencies of occurrence varied in the 20 varieties of English included in CC (Davies 2019-), according to the two hypotheses set out in the introduction.

H1 stated that D4 features would exhibit increased frequencies in crisis communication, whereas H2 predicted that F7 features would show the opposite behaviour. By means of an initial comparison between CC and NOW, we showed that this is indeed what happens in broad terms. A closer study of five individual countries represented in the corpus then served to fine-tune this overall situation.

Linguistic features relating to the overt expression of persuasion (Biber's 1988 D4) do undergo peaks in frequency of use at critical moments. This has clearly been shown for GB and ZA, where the different COVID-19 waves correlate with a rise in the frequency of D4 markers (Figure 1 and Figure 12), and also in the US and NZ, where the linguistic evidence shown in Figure 4 and Figure 6 points towards a critical two-month period between March and May 2020, precisely when the pandemic was declared and the initial measures were instigated. From May 2020 neither the US nor NZ show traces of any kind of communication crisis, this for different reasons: in the US the danger of the virus was usually underplayed and no further measures were implemented, while in NZ the more inclusive form of communication used at the beginning of the pandemic required no further kinds of persuasion of the population. SG seems to go against all expectations, in that the linguistic features of D4 do not exhibit any notable changes in frequencies in the period analysed. This has been interpreted as an effect of the strategy adopted by this country, where previous experience with other viruses helped them to manage the crisis without many impositions on the uninfected. So, our qualitative approach to the data has confirmed H1, and we can say that Biber's (1988) D4 can be considered to contain a robust set of linguistic markers of crisis communication.

The hedging devices in F7 do not have so clear a function. Our hypothesis here, that the frequency of use of these features would decline at critical moments (H2), is only borne out for the US and ZA, and exclusively during the initial declaration of the emergency (March 2020). More interestingly, we have also seen how in GB the tendencies in the use of these features in fact parallels those of D4 markers during the different waves, which goes against all expectations. A plausible interpretation is that their pragmatic value makes them perfect candidates for toning down the restrictions expressed by D4 markers, in an attempt to communicate the curtailing of people's freedom without sounding too undemocratic. Other than this, H2 has generally not been confirmed; the features in Biber's (1988) F7 are not, overall, good indicators of any particular kind of communication in crisis management.

An interesting finding of this study is that the classical division between inner and outer-circle varieties of English does not seem to be at work in the expression of persuasion; what seems to be the main factor in the kind of communication used during this crisis is that of localized strategies adopted to stop the spread of the virus. Thus, GB and ZA, which both adopted a strategy of containment, exhibit highly comparable patterns

for D4 (both reflecting the epidemic waves), while NZ and SG (which both adopted an elimination strategy) do not resort to these overt markers of persuasion in the same way. In addition to the strategies adopted, other political decisions also leave their mark on the use of D4 features, as seen in the different patterns shown by the two most central inner-circle varieties, GB and the US. The fact that the US imposed practically no restrictions after May 2020, while GB applied restrictions with each wave and eased them soon after, is clearly reflected in Figure 1 and Figure 4 in terms of the use of D4 markers.

All in all, then, this paper has described a qualitative approach to uncovering patterns of crisis communication in different varieties of English based on a set of linguistic features initially designed to study register variation in inner-circle varieties (Biber 1988), highlighting the relevance of Biber's multidimensional analysis nearly 40 years after its publication. Many other linguistics aspects may be involved in modelling and shaping the public debate in terms of crisis communication, and in the case of the outer-circle some of these are probably variety-specific. Their identification and contribution to public debate in times of crisis will be the subject of future research.

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