Heliyon 8 (2022) e12439

Contents lists available at ScienceDirect

Heliyon

journal homepage: www.cell.com/heliyon

Research article

Deconstructing agency in the G20 leaders' declarations in the last decade: A corpus-assisted discourse study

Shrouq Almaghlouth *

King Faisal University, College of Arts, Department of English, Al Ahsa, Saudi Arabia

ARTICLE INFO

Keywords:
G20
Discourse analysis
Corpus linguistic
Speech acts
Process types
Agency
#LancsBox
Wmatrix

ABSTRACT

Investigating agency has become a pivotal issue in discourse studies, especially organizational discourse. This study aims to identify the controlling agency (who/what) behind G20 leaders' declarations in the last decade and how such agency is constructed. To this end, this study offers a concise examination of relevant literature investigating fundamental concepts like discourse and agency in light of the overlapping relationship between form and function in language studies. Further, an eclectic methodological approach has been devised to arrive at a multi-leveled analysis. Two stages of analysis were designed. First, a corpus of the declarations between 2012 and 2021 was created and analyzed using #LancsBox v.6.x. and Wmatrix. At this stage, *we* was established as a prime agent in the corpus and proven to collocate heavily with agentive speech acts. One sample declaration, Riyadh 2020, was used for minute discourse analysis in the second stage. Inspired by transitivity system, process type analysis, and multivalence frameworks, this stage revealed the profound presence of non-human agency alongside the human one. Nevertheless, further examination demonstrated that this sample still constrains non-human agency due to semantic and textual constraints.

1. Introduction

Since its inception in 1999, the G20 (Group of Twenty) has constantly been focused on major issues relating to the global economy, such as financial stability and sustainable development. As such, the G20 releases a leaders' declaration each year as part of its annual summit. The leaders' declarations usually present some critical economic statements in accordance with changing conditions in the global economy. As their name suggests, these declarations are issued by the leaders of the top economies in the globe; this implies that such statements could exhibit a high level of authority that might not be as evident with other discourses. In particular, organizational discourse – such as these declarations – merits further examination since it offers an interdisciplinary platform where different linguistic (e.g., textual or pragmatic) and non-linguistic (e.g., social and economic) factors interplay.

Such a perspective elucidates how analyses of such discourse have diverse implications across different disciplines. While this type of study has been primarily inspired by linguistic motivations, it could be applied to economic, political, or simply organizational endeavors. This is primarily due to the inherently interdisciplinary nature of agency as a core construct in organizational discourse. Accordingly, research based on organizational discourse and associated with such interdisciplinarity could potentially inform not only the linguistic practices of such organizations, but also their decision-making processes. Agency in discourse has always been a point of interest in discourse studies, including on how agency is initiated, constructed, and distributed among different agents, especially within organizational discourse. The present study examined how agency is presented in G20 leaders' declarations (G20 LD) in the last decade. This was motivated by the lack of discourse analyses examining the linguistic manifestations of agency in the G20 discourse to the best of the present researcher's knowledge. With this in mind, the next paragraphs examine the relevant literature focusing on notions like discourse and agency, and offer a theoretical background for some proposed frameworks to tackle the overlapping and thorny relationship between form and function in discourse.

Drawing on Fairclough (2003, p. 1003), discourses are "ways of representing aspects of the world," combining elements and processes of the "material," "mental" and "social" worlds simultaneously. Such representations vary considerably depending on how people are positioned, constructed, and connected in this world, echoing van Leeuwen's (1996) notion of social actors with varying levels of representation. Consequently, attempting to deconstruct such representations is crucial,

* Corresponding author.
E-mail address: salmaghlouth@kfu.edu.sa.

https://doi.org/10.1016/j.heliyon.2022.e12439
Received 17 March 2022; Received in revised form 15 October 2022; Accepted 9 December 2022

especially if one considers what Putnam and Cooren (2004, p. 324) refer to as discourse's "staying power," which clearly signifies the fundamental impact of discourse on both present and prospective discursive contexts. This also serves to highlight the potential of discourse studies in creating awareness of the varying levels of power and representations assigned to different social agents within the same context.

Accordingly, the concept of action in discourse is fundamental to the above discussion. Cooren (2004, p. 217) defines action in discourse as a "transformation of state-operated by an agent." The two prominent concepts in this definition – transformation and agency – are consistent with the research problem highlighted earlier; transformation signifies how change is achieved within a particular context while agency details the creator of such change. Given the aforementioned rationale, this conception could offer a guideline into linguistically decoding the language-context link as constructed in the G20 LD. Cooren (2006, p. 82) further adds that action in organizational discourse, in particular, is a "hybrid phenomenon," given that it comprises entities with "varying ontologies" (i.e., human and non-human agents). Thus, Cooren (2008, p. 1) has drawn attention to what he frames as a "blind spot" in language studies: non-human textual agency. While it is natural, and perhaps expected, that human agency dominates organizational discourses like G20 LD, attempting to decode how such agency is also ascribed to other non-human agents in text can be quite intriguing. This is supported by the fact that such blind spot, to a certain degree, parallels Kuhn's (2008) statement on the constrained perception of communication in organizational discourse literature. According to him, textual communication is often viewed as a mere neutral carrier in organizational discourse without assigning any constitutional/discursive power to such texts.

However, this has changed tremendously in more recent literature, as many studies examine unconventional constructions of agency from diverse domains, some of which include: personal agency in health care domains as in (Antaki and Crompton, 2015; Backhaus, 2018; Hunter et al., 2015; Jaworska, 2018; Pirhonen and Pietilä, 2018), in educational fields (Yılmaz Yakışık et al., 2019), or agency and leadership in business media (Tessema, 2019). This growing body of research highlights how non-human agency can potentially operate within discourse alongside the human one. However, despite the various disciplines investigated using this hybrid take on agency, no studies have analyzed the G20 discourse, be it within its textual/linguistic context or its wider socio-economic one. Given the significance assigned to the G20 organization, along with its expected potential as an international organization, discourses like the G20 LD merits further scrutiny. The current research fills this gap by providing potential insights into how different agents interact within a discourse controlled by the world's most powerful economic leaders.

This significance is heightened if one considers the vital role of discourse in organizations. For instance, Putnam and Cooren (2004, p. 326) highlight the vitality of texts, in particular, in organizational discourses. In so doing, texts participate in "constituting organizations," which evidently highlight their discursive contribution as non-human agents in transforming context. This goes hand in hand with Alvesson and Karreman's (2000, p. 1127) perception of discourse as a "powerful ordering force in organization." Consequently, this establishes the constructionist view of discourse in this paper, which detaches it from classical works of critical discourse studies (CDSs). According to Phillips and Hardy (2002), CDSs are primarily concerned with power distribution and the unbalanced representation of different agents in a given discourse, often associated with Foucauldian take on discourse-, which is not of concern in the current study. As stated above, this paper attempts to investigate how/which agents are present in the G20 LD in the hope that it highlights that human agency cannot be portrayed as exclusively in charge of transformation in discourse.

In most of the reviewed works on agency in discourse, the discussion often revolves around control, transformation, or autonomy. However, as the current study offers a linguistics-based discourse analysis, the primary focus should be on linguistic parameters of action and agency. This, however, is not an easy task. Both agency and action reveal strong interconnections, and the two are closely interwoven in discourse. However, certain considerations need to be highlighted beforehand, since these two are inherently dynamic and have rather fuzzy boundaries. According to Cooren (2008), agency is a semantic category denoting gradable meaning through language use, meaning that it is a fluid concept that could be placed on a continuum. He further contrasts this notion with the rather structural take on action, often decoded in the grammatical notion of voice. From a merely grammatical perspective, voice has a binary meaning, entailing that it can be either active or passive (Cooren, 2008). As a result, trying to encode these two notions under one framework is not straightforward or easily applied for the complexity of decoding such fluid semantic meaning into a binary grammatical categorization. Darics and Koller (2019, p. 218), for instance, present several attempts to examine how agency can be "encoded linguistically" in discourse. Nevertheless, they draw attention to the lack of a "neat fit" between linguistic categories on the one hand and semantic and sociological ones on the other (van Leeuwen, 2008, p. 24). The next paragraphs highlight some of these while justifying their relevance to the current paper.

Perhaps one of the oldest of such attempts is Searle's (1979) well-known work on speech act classification. The basic premise within speech act theory (Austin, 1978) is the connection between language and context through communication, incorporating such theorization within the field of pragmatics. As such, speech act theory lends itself easily to discourse analysis works with a constructionist take, since it offers one conceptualization for understanding the aforementioned complex encoding of linguistic manifestation onto semantic and pragmatic ones. In light of this, language is constructed actively in the communication process, as it performs something by saying it; accordingly, an analysis drawing on this theory could offer more insight in the different agentive actors within G20 LD. In Austin's original framework, a distinction is drawn between a *locution* (referring to what is said), an *illocution* (referring to what is done by such saying), and a *perlocution*, which extends the framework to wider socio-economic contexts as it denotes what has happened as a result. Given the identified rationale of the current paper, its analytical framework could be best directed towards analyzing illocutionary acts. This is primarily because it operates on an understanding of discourse as mediating between language and context (Fairclough, 2013). Searle (1979) categorizes illocutionary speech acts as the following:

- Assertives: in these acts, the speaker expresses beliefs or describes things. These include acts like suggesting, asserting, denying, boasting, or even concluding.
- Directives: in these acts, the speaker attempts to make the addressee(s) do an action. These include ordering, requesting, advising, recommending, or inviting.
- Commissives: these acts commit the speaker to act in the future. These include promising, planning, vowing, taking the oath, or refusing.
- Expressives: these acts express how the speakers feel about a situation. They include thanking, apologizing, welcoming, complimenting, or complaining.
- Declarations: these acts immediately change the state of the world, as in firing, resigning, disowning, abdicating, or nominating.

Many works in discourse analysis have applied speech classification as a pragmatic construct bridging the gap between semantics and the social world (e.g., Ma'yuuf and Abbas, 2021; Putri et al., 2020). However, examining the agency-action encoding above might require further investigation (Darics and Koller, 2019). On its own, speech act theory has been criticized for reducing language to disconnected acts (Barron, 2003). Therefore, other linguistic theorizations have been introduced to revisit the language-context encoding. Drawing on Greimas (1987) and Sbisà (2002), Cooren (2008), for instance, explores a parallel enactment of speech acts which is primarily based on Tesnière's (1965) notion of

dramatization. Each sentence is then analyzed as a mini-drama (expressed in verbs) containing actions and categorized according to the number of actors involved. This yields greater insight into the breadth of agency involved, since it enables the analyst to examine not only action but also the extent to which an action is materialized by different agents. As a result, it offers an expansion of speech act theory while still pertaining to the same core (action as performed by language). Keeping this in mind, it is possible to identify four types of verbs within this model: avalent (no actants at all); monovalent (intransitive: one actant); divalent (transitive: two actants); and trivalent (ditransitive: three actants). By examining these types as linguistics manifestations of action, it may be possible to develop the analysis of the G20 LD further to see if the scope of such action is narrow or wide; which is a fundamental aspect of the agency targeted in this study.

Another analytical framework with a similar vein is evident in systemic functional grammar (Halliday and Matthiessen, 2014), primarily based on Halliday's concept of transitivity. Halliday's transitivity framework has been widely acknowledged for offering a link between "outer experience" and "inner experience" (Halliday and Matthiessen, 2004, p. 174). In this perspective, outer experience often materializes in the form of actions and events, while inner experience refers to the motivation for, reflection on, or responses to such actions. Within such a framework, it is possible to identify three components at the clause level: the process itself, its participants, and its circumstances. Processes, which are the core of this framework, are divided into three main categories (top three) and three secondary ones overlapping between them, as follows:

- Material processes of doing something and causing a change
- Mental processes of sensing
- Relational processes of simply being
- Behavioral processes on the borderline between material and mental ones
- Verbal processes of saying
- Existential processes signify that something exists.

Utilizing this framework could offer more insight into deconstructing agency in a given discourse. Speech act theory allows for some examination of the constructionist perspective of language to take place and the multivalence analysis highlights the extent to which agency is distributed, while process type analysis allows for a more detailed investigation of the nature of such agency. To elaborate, if such processes are placed on a continuum, an agent who is actively participating in a material process, like *hitting* or *building*, is placed higher in terms of agency than an agent in a mental one like *thinking*. This is primarily because there are more immediate transformations in hitting than in thinking, at least within the outer world experiences. Both of these, however, are further up the continuum than a participant in a relational process as expressed in the *be form* in *X is handsome*. Due to its promising potential, this framework has been adopted extensively in discourse studies (see (Koller, 2012) and (Sahragard and Davatgarzadeh, 2010), for instance). However, it can be too extensive when working with larger corpora. Accordingly, only certain aspects of such a framework were adopted in this study, which will be highlighted in more detail in Section 2 below.

Given the above discussion, three research questions were proposed to frame the design of this study and inspire the rationale of its methodology:

1. Who are the primary human agents constructed in the G20 LD? And how are they constructed and distributed?
2. Which non-human agents are constructed in the G20 LD? And how are they constructed and distributed?
3. What linguistic and corpus tools can be used to deconstruct agency in such discourse?

2. Methodology

Based on the research questions, this section documents the methodology of the present study, including the overall design, as well as the details of the data selection, collection, and analysis.

2.1. Design

A mixed-method approach with qualitative and quantitative data was chosen for this study. Two stages were devised, as the data were collected and analyzed. It is common in relevant literature to combine corpus linguistics tools with other methods when designing discourse analysis studies (Partington et al., 2004, 2013; Salama, 2021). Consequently, stage one was wider-scoped and primarily corpus-based with a self-built corpus (G20 LD) which was processed using automatic corpus tools and further checked against Searle's speech act classification (Searle, 1979). Stage two, however, had a narrower scope, with one declaration as its primary point of focus, which was further analyzed using process type analysis (Halliday and Matthiessen, 2014) and a multivalence (Cooren, 2008; Tesnière, 1965) framework.

2.2. Sample

For stage one, the G20 LD consisted of all the leaders' declarations of the summits held in the last decade (2012–2021). It had a total of 65,109 words, including 10 different declarations, one for each year in the specified time span. For stage two, however, one particular leaders' declaration, the G20 Riyadh Summit leaders' declaration from 2020 (Riyadh 2020), was selected as a sample for detailed analysis. This was done because it was evident after the first stage that all the declarations followed the same linguistic patterns with minor differences. This particular declaration was selected for being relatively recent, (the first following the COVID-19 pandemic). As a significant non-human player, examining its linguistic impact on the declaration was intriguing. However, during the final stages of this study, Rome 2021 was released (in November 2021). Hence, it was added to the corpus, and the analysis and discussion were modified accordingly.

2.3. Measures

The corpus used in stage one was created using #LancsBox v.6.x, a software package developed at Lancaster University for language data and corpora analysis (Brezina et al., 2021). G20 LD was analyzed using three fundamental concepts in corpus linguistics: frequency lists, collocations, and concordance lines (Baker, 2006). Three tools within #LancsBox v.6.x. were used *Words*, *GraphColl*, and *KWIC* (key words in context), respectively. In addition, a keyness analysis (as will be explained in more detail in Section 3) was conducted with Wmatrix (Rayson, 2008) and used to compare the G20 LD with two reference corpora, the *BNC Sampler Written* and the *BNC Sampler CG Business*. Stage two was analyzed manually after being transcribed into clauses and inter-checked with another linguist with a PhD in syntax and morphology.

2.4. Procedure

During stage one, the emphasis was on the most frequent words along with their surrounding collocations; a point which stems from a fundamental appreciation in discourse studies of the potential insight of the surrounding linguistic context; see, for instance, Almaged (2021) and Malyuga and Rimmer (2021). Utilizing corpus processed data, it was possible for the analysis to expand over a broader range of texts in a time-saving manner. However, as stated earlier, corpus-based analyses are often carried out in conjunction with other analytical frameworks to

deepen the level of the investigation. At stage one in particular, the results of our corpus analysis are further analyzed using Searle's (1979) classification of speech acts. This was selected since it is introduced in Section 1 as a framework for analyzing the linguistic manifestation of action in discourse in which these speech acts can be viewed as linguistic parameters. It also appeared convenient to be incorporated within corpus-processed data, since this speech act classification can be applied to disjointed sentences, which is consistent with the inherent nature of the concordance lines offered by the KWIC tool. In order to determine how to classify the speech acts identified in the G20 LD corpus, the concordance lines of each case were examined carefully by the researcher as well as another PhD-holding linguist. The findings reported in this study were inter-checked by these two.

This, however, may not suffice for deconstructing agency in the G20 LD; hence, the inclusion of the second stage was of key significance. By incorporating further analytical tools – namely, process type analysis (Halliday and Matthiessen, 2014) and multivalence (Cooren, 2008; Tesnière, 1965) framework – to one particular declaration, the notion of agency was revisited from diverse angles. Therefore, in addition to the self-evident cases of agency explicitly detected by corpus analysis in stage one, the extent to which such agency was constructed as well as the form through which it took place were investigated further in stage two. This multiplicity of analysis was also maintained in the hope that it could detect some subtle linguistic recurrences that could have been overlooked by automatic corpus analysis. In addition to this, works of discourse analyses sometimes run the risk of being subjective (Lee, 2018); thus, by combining empirical data from the corpus analysis (Biber et al., 2012) and the triangulation of analysis using mixed analytical frameworks, linguistic patterns identified in the findings could be more convincing.

Accordingly, Riyadh 2020 was transcribed using a clause-based classification (Al Maghlouth, 2018) and based on Halliday's transitivity theory (Halliday and Matthiessen, 2014). All sentences were numbered (1, 2, 3, etc.), and the main clause (with the main verb in each clause) was identified for each. Subordinate clauses and their verbs were identified whenever they appeared and were indicated alphabetically per main clause (e.g., 1.b, 1.c, and 1.d, given that the main clause is numbered 1.a). After that, the analysis started with classifying the verbs of action in terms of processes and multivalence and identifying who/which agents initiated them. To this end, surface structures like clauses in the passive voice were reconstructed in an active voice, and their agents were identified and classified whenever possible. It is also important to point out here that the procedure presented in this study approached discourse studies with a prime focus on language rather than on wider socio-economic contexts. Phillips and Hardy (2002) differentiate between discourse analyses targeting the broader social context on the one hand and discourse studies, similar to this one, where immediate features of the linguistic context are examined.

3. Results

This section offers detailed analysis of the two stages outlined in the previous section. While the first stage focused primarily on human agency, the second one expanded it to different forms of non-human one. Accordingly, consistency and variation between these stages were identified.

3.1. Corpus analysis

As explained in the methodology section, a corpus of 65,109 words was created from the G20 LD issued in the summits held between 2012 and 2021. Since this study adopted an eclectic approach to deconstructing agency in G20 discourse, this section presents the corpus-based investigation of these declarations and consists primarily of two processes. The corpus was first analyzed using the *Words* tool in #LancsBox v.6.x. A list of 4403 types (word entries) 65,109 tokens (word occurrences) for this corpus was created and organized by frequency. The second process expanded the analysis further, using the *GraphColl* and *KWIC* tools to examine collocations and concordance lines while drawing on Searle's (1979) classification of speech acts. Unsurprisingly, the top of this list is occupied almost exclusively by function words like *the, a*, or *to*; which is the norm is most corpora (Baker, 2006, 2014; Scott, 1999). The first content word, *g20,* did not appear until the fifteenth item on the list. Therefore, function words were excluded from this list as they bear no indication of the primary agents in the G20 LD. Pronouns, however, were the only exception to this due to their strong connection with the take on agency examined in this paper. Table 1 below demonstrates the top fifteen words in the corpus, excluding functions words.

What is rather interesting in this list is that the first-person plural pronoun *we*, with 1926 tokens, comes in fifth place. While it is considered a function word grammatically, *we* takes on particular interest as it establishes agency explicitly since it is positioned grammatically in the subject slot of the sentence. In this sense, *we* differs from the reflexive *ourselves*, which strictly adheres to object positions and occurred only in 20 tokens in the entire corpus. Meanwhile, *us*, another personal pronoun, occurred 19 times. However, grammatically speaking, *us* is the plural first person object pronoun. This means that it does not signify agency unless it has been attached as an agent in a passive sentence such as *X has been created by us*. This has been supported by the *KWIC* tool of # LancsBox v.6.x. since all the concordance lines associated with *us* did not exhibit any cases of agency. This should establish *we* as a primary agent in the G20 LD, and given the semantic features associated with it (Yule, 2020), *we* explicitly denotes human agency.

In order to validate such finding, Wmatrix was consulted in search of the keyness (Baker, 2006; Rayson, 2008) of *we* in the G20 LD corpus. Keyness means that a particular word can be classified as a key word in a particular corpus by highlighting its keyness in comparison with another reference corpus. Of the inbuilt reference corpora in the Wmatrix, the BNC (British National Corpus) Sampler Written was chosen since it is made of written texts from newspapers, academic books and journals, and popular fiction. As such, the BNC Sampler Written corpus is often categorized as a general corpus of written language, a more or less representative sample of modern-day English. Keyness analysis should highlight which linguistic items were of special prominence in the G20 LD based on the LL (a statistical test in corpus linguistics to signal statistical significance) (Baker, 2006). Findings of the keyness analysis revealed that *we* topped the key words in this list with an LL of 4329.67. The remaining keywords topping the list, such as *financial*, *growth*, *sustainable*, and *global,* all signified the business-oriented nature of the G20 LD. Consequently, another inbuilt reference corpus was consulted, but this time with a special focus on business-related texts, the BNC Sampler

Table 1. Top 15 types (content words) in the G20 LD.

No	Type	Frequency (token)	Dispersion
1	we	1962	0.095912
2	g20	461	0.231505
3	global	379	0.142454
4	growth	351	0.454597
5	financial	349	0.318321
6	development	346	0.20510
7	support	301	0.203510
8	including	300	0.241110
9	sustainable	295	0.343239
10	work	289	0.248170
11	countries	288	0.331396
12	welcome	272	0.304224
13	international	270	0.2223639
14	economic	205	0.297589
15	energy	199	0.325026

CG Business. Interestingly, while *we* remained as a keyword in the G20 LD, it came further down on the keyness list (45th place) and had an LL of 207.47. This meant that *we* did, in fact, have more prominence in business-based texts since its keyness in the G20 LD decreased (i.e., when the reference corpus was changed from a more general corpus to a specific one). Consequently, this keyness analysis could be an indication of the significance of *we* in the G20 LD in comparison to general language use. Nevertheless, it also indicates that it appears to be a common feature in business-based corpus like the G20 LD or the BNC Sampler CG Business.

While pronouns were the only function words included in the analysis (since they bear strong connections to the construction of agency in discourse), detailed analysis of the frequency list did not exhibit any other personal pronouns like *you*, *I*, *he*, or *she*. Just like *we*, examining these personal pronouns was relevant since they explicitly denote human agency. Their absence, however, was expected given the genre and the tone of these declarations. The remaining pronoun, *it*, occurred 47 times, but because it did not signify human agency, analyzing it was postponed to stage two, which allowed for more in-depth examination of the wider context of both human and non-human agency. This was necessary due to the wide semantic coverage denoted by *it* as well as its grammatical flexibility (i.e. being in both subject and object positions) (Huddleston and Pullum, 2005; Yule, 2020). The other remaining content words in Table 1 did not highlight any other agents. However, further semantic examination of their content clearly indicates the economic tone of the G20 LD. While other more general words still prevailed in the G20 LD corpus, such as *welcome* or *support*, words pertaining to the world of economy and international business were quite dominant. Again, this is consistent with what was established in the keyness analysis in the previous paragraph and with the strong link identified between the G20 LD and business-based discourse.

Since the top 15 content words exhibited only one agent, *we*, it was necessary to explore the next 150 types of the same list in search of other human agents. This number was chosen as a cutoff point since it was noticed that following the top 150 words, the number of tokens for each type was significantly less in both the frequency list generated by #LancsBox v.6.x. (Brezina et al., 2021) as well as the Wmatrix (Rayson, 2008) keyness analysis. For this stage, the analysis was primarily concerned with human agency, as it was more easily detectable with corpus tools than other forms of agency that could be better identified using the other implemented frameworks. Further examination of the top 150 types in this list showcased another human actor, *ministers*, coming in 104th place with 89 tokens. However, due to the grammatical neutrality of *ministers* (i.e., regarding the occupation of the position of the subject or object in the sentence) the *KWIC* tool was consulted to examine the concordance lines of these 89 appearances. The majority of its lines followed the same pattern, in which *ministers* came after a process initiated by the more dominant and authoritative agent, *we*, preceding another process as an agent but of a secondary power. Consequently, *ministers* in such a pattern is in a grammatical object position, in relation to *we*, but simultaneously is a grammatical subject to the following process (Huddleston and Pullum, 2005). This is evident in lines 23, 28, and 29 below (Figure 1). Such pattern represented a trivalent process involving three actants, drawing on the multivalence framework. The other lines revealed *ministers* as a solely grammatical subject in the sentence (including in the passive voice) or occasionally as pre-modifiers of other nouns like *meetings*.

While the most frequent words and concordance lines can hint slightly to agency in discourse, examining other content words highlighted the presence of many verbs. As a result, another #LancsBox v.6.x. tool was applied – *GraphColl*. As a prime agent in this corpus, *we* occurred so often that examining its concordance lines would be efficient in revealing more about its agency and yielding more profound evidence of its corresponding processes. To do this, the left span of the nod word – *we* – in the concordance lines was set to zero and the right span to 1, 2, 3, and 4 words, respectively. This process provided a more comprehensive range and was repeatedly applied to look for similar patterns across these four lists. To illustrate, many main verbs initiated by *we* were separated from their subjects by adverbs or auxiliaries, thus expanding the right word span allowed for a broader coverage of these. Figure 2 demonstrates a visualization of the 22 collocates based on a statistic value threshold of 15 occurrences with *we*. This threshold means that a given collocate had to occur at least 15 times within the specified right span in order to be counted as statistically significant. Going with a smaller threshold resulted in a too-busy visualization (with collocates of little relevance).

We, being in a subject position, entails that it precedes a verb (Halliday and Matthiessen, 2004; Huddleston and Pullum, 2005). Therefore, it was expected to see this space taken almost exclusively by verbs – specifically, verbs belonging to the content words class. However, since *will* was at the top of this list and required a following main verb, which might appear later in the sentence, the three other lists of the diverse right spans were consulted. This also holds for *are*, which might occur as the main verb and an auxiliary preceding the main verb in the present progressive tense. Thus, in addition to the 20 verbs selected from the one-word-to-the-right span, another four verbs were common in the 2-4-words span lists. Table 2 presents this with their frequencies in each of the four lists.

As explained earlier, this deconstruction of the agency is concerned with who the agents are in the G20 LD corpus and their assigned agency level. One of the tools implemented in this study is the examination of the speech acts associated with these verbs. Drawing on Searle's (1979) classifications of illocutionary acts discussed earlier, the 24 verbs identified in Table 2 were classified, and their corresponding concordance

Search ministers **Occurrences** 89 (13.67) Texts 9/10 **▼ Corpus** G20 LD **▼ Context** 7 **▼ Display Text**

Index	File	Left	Node	Right
22	12 Los Cabos.txt	to provide a progress report to Finance	Ministers	in November. We support the operationalization of
23	12 Los Cabos.txt	support for the poorest. We ask Finance	Ministers	to report back by the next Summit
24	12 Los Cabos.txt	practices. 82. An informal meeting of G20	Ministers	of Foreign Affairs was held in Los
25	13 Petersburg.txt	in our economies. We ask our Finance	Ministers	to develop further the comprehensive growth strategies
26	13 Petersburg.txt	of our Labour and Employment and Finance	Ministers	to mobilize, coordinate and integrate, our national
27	13 Petersburg.txt	of our Labour and Employment and Finance	Ministers,	organized for the first time, was a
28	13 Petersburg.txt	and financial policies. We call upon our	Ministers	of Labour and Employment and our Ministers
29	13 Petersburg.txt	Ministers of Labour and Employment and our	Ministers	of Economy and Finance to continue to

Figure 1. Concordance lines for *ministers* using *KWIC* tool.

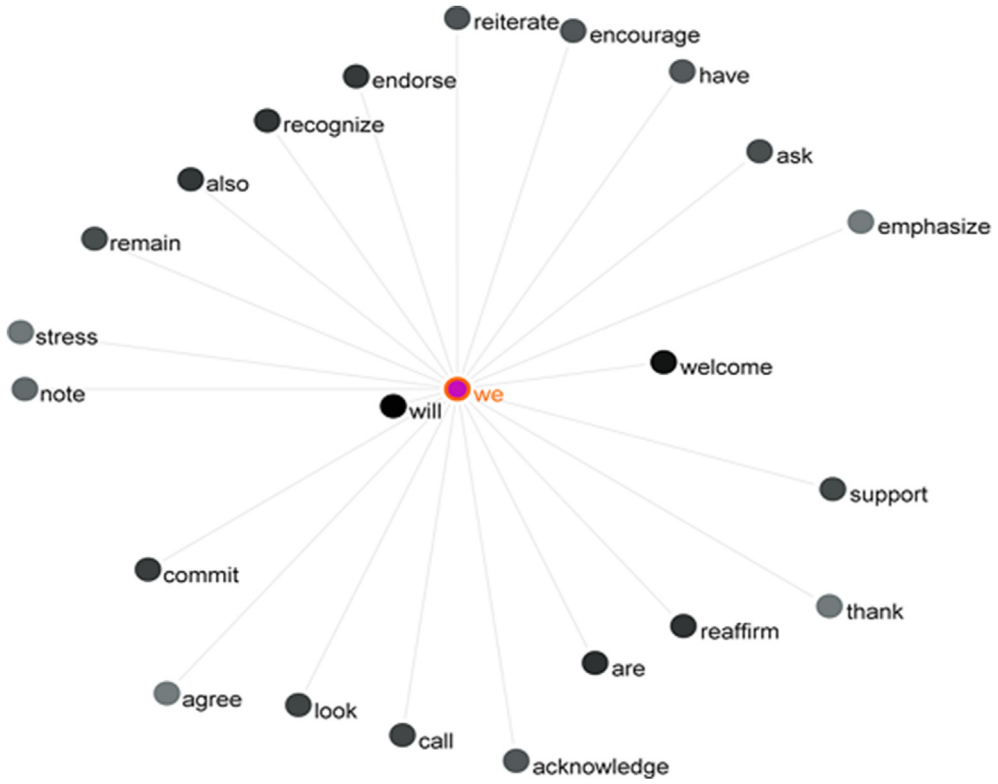

Figure 2. Collocates of *we* based on a one-word-to-the-right span using *GraphColl* tool.

Table 2. Top verb collocates of we in 1–4 right words span using GraphColl tool.

Index	Collocate	Tokens in R1	Tokens in R2	Tokens in R3	Tokens in R4
1	welcome	206	230	230	230
2	are	107	107	107	109
3	reaffirm	96	106	107	107
4	recognize	91	97	97	97
5	endorse	85	99	99	99
6	commit	78	85	85	85
7	look	66	73	73	73
8	call	64	68	71	72
9	support	59	78	90	106
10	remain	53	54	55	55
11	ask	52	58	58	58
12	reiterate	45	46	46	46
13	encourage	43	46	48	51
14	acknowledge	41	47	47	47
15	have	39	39	45	41
16	note	26	43	40	45
17	stress	19	19	19	19
18	thank	18	18	18	18
19	agree	17	17	17	17
20	emphasize	17	17	17	17
21	continue	*	103	116	123
22	work	*	33	62	103
23	promote	*	19	23	37
24	take	*	19	24	29

lines were examined carefully using the *KWIC* tool. The recurrent examination of each verb's concordance lines was necessary, since assigning a speech act classification required a deliberate examination of the textual context surrounding each verb. . This was even more accurate in the case of verbs with more general meanings, such as *have* or *take*. Table 3 summarizes these findings.

Table 3. Searles' speech act classification of the top verb collocates of we.

Assertives	reaffirm – recognize – remain – reiterate – acknowledge – note – stress – emphasize
Directives	call – ask – encourage
Commissives	reaffirm – recognize – remain – reiterate – agree – work
Expressives	welcome – look (forward) – support – remain – thank – promote
Miscellaneous	are – have

Some verbs were quite straightforward in their meaning, lending themselves easily to classification as they were examined individually in their surrounding linguistic contexts using the *KWIC* tool. This was evident in cases of *call* and *ask*, which were explicitly directives in the examined concordance lines. With *encourage*, however, it was less explicit; nevertheless, given the semantic features of *we* as an agent (Yule, 2020) and the pragmatic and discursive authority expected in the G20 LD corpus, it was considered a directive in the its examined concordance lines as well. *Promote*, on the other hand, which bears some semantic resemblance to *encourage*, did not show the same directive pattern. When in its concordance lines, *promote* fell within the category of expressives, along with *welcome*, *thank* and *support*. Similarly, *look* in all of its tokens was followed by *forward*, except for one case only followed by *ahead*. As a result, it fell within this category as well.

Assertives were quite common in the G20 LD too, with verbs like *recognize*, *acknowledge*, *note*, *stress* and *emphasize*. However, two more verbs classified under the category of assertives merit further discussion. Starting with *reiterate*, many of its concordances could be classified as assertive acts Nevertheless, slightly fewer than half of these lines collocated *reiterate* with *our commitment*; thus, changing these from assertives to commissives. Similarly, another verb fell in the gray area between

assertives and commissives – *reaffirm*. However, *reaffirm* occurred far more often in commissives, since it too collocated with *our commitment* in more than 80% of its occurrences. *Commit* was another explicit example of commissives. Two more verbs, *agree* and *work*, appeared in this corpus in more or less explicit commissive acts. The verb *remain* seemed to act like a commissive since it was followed by *committed* in the vast majority of its occurrences; yet it also revealed instances of assertives along with some expressives when followed by *deeply disappointed*. Due to its occurrences in three or more classifications, it was classified under "miscellaneous." Similarly, *take* and *continue* appear in diverse acts in this corpus as they were used metaphorically and literally, widely. Perhaps the most illustrative examples of this miscellaneous category were *are* and *have*. Grammatically, these verbs can occur as either main verbs or as auxiliaries (Huddleston and Pullum, 2005), especially with their being the only function words on this verb list. Now, upon further examination of *are* in this corpus: both cases – main verb or auxiliary – occurred repeatedly with *we*. While this was the case with *we*, *have* appeared only as an auxiliary preceding the past participle form in all of its concordance lines.

On a final note, this concise examination of speech acts as expressed on the top *we*-verb collocates revealed no cases of declarations at all. In sum, the above section demonstrates how *we* was proven to be a prominent agent in the G20 LD corpus. Such agency was further intensified by its collocations with many commissives, assertives, expressives, and (less often) directives. This was unsurprising, given the nature of the G20 LD corpus. However, it should be understood in light of what could be achieved using corpus linguistics tools alone. Finding patterns within this corpus to make generalizations with regards to agency in G20 LD discourse appeared to be constrained and rather somewhat expected by merely relying on what such software could offer. Therefore, the second stage was conducted more conventionally (i.e., going back to the classics with discourse analysis).

3.2. Sample analysis of one declaration: Riyadh 2020

Unlike the first stage of the analysis in which a larger corpus was created in search of patterns, the second half took a more specific approach, examining one particular leaders' declaration as a sample in detail. Using the aforementioned clause-based transcription (Al Maghlouth, 2018) and based on Halliday's transitivity theory (Halliday and Matthiessen, 2014), the G20 Riyadh leaders' declaration was thoroughly analyzed to determine who (or what) can be identified as an agent and what level of agency is assigned thereto. Such deconstruction required identifying all the agents involved in generating agency in discourse. Accordingly, and unlike to first stage, which examined human agency as the most salient and identifiable form of agency using corpus tools, the second stage incorporated in more detail the non-human one as well.

3.2.1. Human agency

Within any discourse, human agents are often more likely to take the lead in possessing higher authority and expressing relatively more agency than other agents, be it social or textual. Therefore, it is not surprising that of the 633 cases of agency examined in the Riyadh 2020 LD, more than half, 55%, are directly and explicitly initiated by human agents. The vast majority of such inclusions were linked to the first-person plural pronoun *we*, which echoed the findings of the corpus-based analysis discussed in the first stage. The remaining 22 cases, were initiated by human agents expressed through textual labels that only humans can fulfill, such as *women*, *children*, and *ministers*. This was based on an understanding of their semantic features (Yule, 2020), which clearly categorized them under the human domain.

Figure 3 shows that nearly half the process types examined under this category were material processes (Mat), denoting the highest level of power to their agents. The following Example (1) demonstrates a mobilization process that required both literally and metaphorically the moving of other actors, be it troops in the military or measures to facilitate the financing of the war against the pandemic. Again, the vast majority of these were associated with *we*; and in the very few cases of inclusion of human agents in material processes other than those expressed through *we*, the materialization of their action was often secondary to a previous one. To illustrate, in Example (2), the material action associated with *children, youth, and adults* was prospective, potential, and subject to realization only upon the realization of the previous action of providing the needed skills.

Example (1) *We have **mobilized** resources to address the immediate financing needs in global health to support the research, development, manufacturing, and distribution of safe and effective COVID-19 diagnostics, therapeutics, and vaccines.*

Example (2) *It is the foundation of personal development as it provides children, youth, and adults with the knowledge, skills, values, and attitudes necessary to **reach** their full potential.*

In fact, for this particular type of agents, most of their inclusion cases were through mental (Men) process types. Example (3) highlights a case of such, where human agents – who were expressed through titles that could

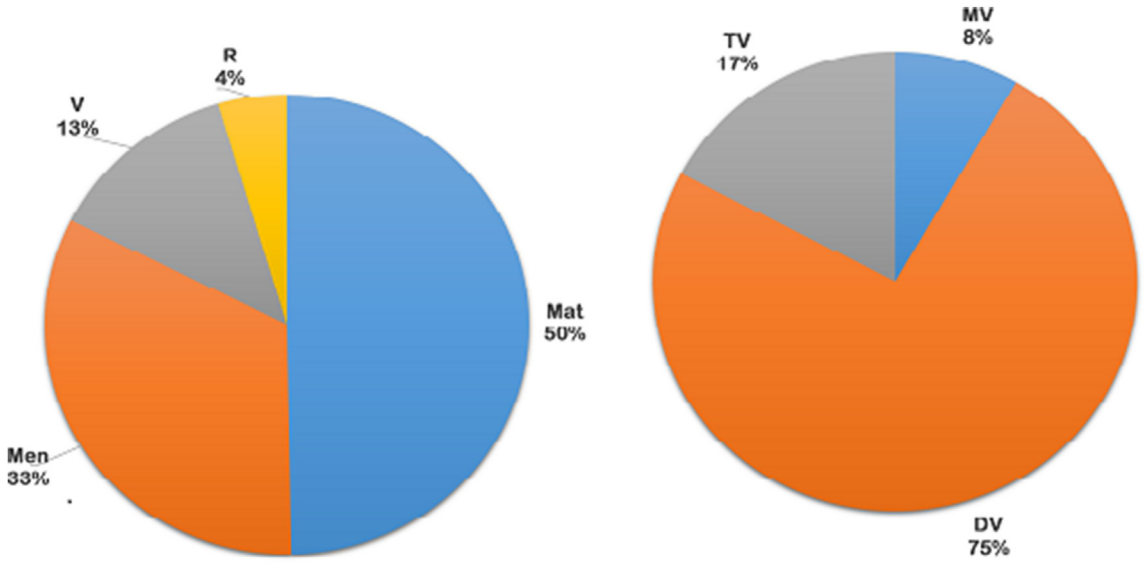

Figure 3. Distribution of process types and multivalence for human agency.

only be associated with humans – depicted the mental process of examining. This should not be mistaken for the lack or scarcity of mental processes associated with the first-person plural pronoun. The analysis revealed plenty of such cases, especially considering that *we* initiated more than 93.7% of all the cases in this category. Example (4) illustrates a mental process, 'recognize,' which preceded several material ones. However, it is interesting to compare between the 50% of human agency cases associated with material processes and the nearly 33% involved in mental ones.

Example (3) *Our Finance Ministers and Central Bank Governors will examine by the time of the 2021 IMF/WBG Spring Meetings if the economic and financial situation requires further extension of the DSSI by another 6 months, which is also agreed by the Paris Club.*

Example (4) *In this regard, we recognize the importance of utilizing the widest variety of fuels and technology options, according to national context, and leading energy transitions to realize the "3E + S" (Energy Security, Economic Efficiency, and Environment + Safety).*

The remaining cases initiated by human actors were distributed between 13% in verbal (V) processes and 4% in relational (R) processes. Drawing on Koller (2012), and her utilization of process types analysis as a linguistic manifestation of power distribution in discourse, this particular distribution between material, verbal, and relational processes revealed the level of authority and power associated with humans in this particular text. This was not surprising, given the type and genre of the text. However, what was somewhat unexpected was the relatively small number of verbal cases, given that this was a declaration. In Example (5), there is a verbal case; and as with many verbal cases, more than two actants were involved.

Example (5) *We express our gratitude to and support for health and other frontline workers as we continue to fight this pandemic.*

Drawing on multivalence framework, *express* in Example (5) demonstrates a trivalent (TV) action with three actants involved; *we*, *our gratitude* and *support*, and *health and other frontline workers.* While trivalent actions are not strictly and exclusively associated with verbal processes, the findings of this analysis revealed strong correlations between them. However, looking at the bigger picture, trivalent processes occur in only 17 % of cases. On the contrary, divalent (DV) processes (i.e., with two participants only) tended to be the norm, amounting to a vast majority of 74% of cases; and leaving only 9% in monovalent (MV) processes.

In sum, this section demonstrates how agency, which has been long associated with human agents, is strongly and primarily ascribed to them in this text. In particular, *we*, initiating the vast majority of these processes, took its normal, and even expected, position in controlling power and distributing action within this discourse. However, the remaining 45% of processes were directly linked to non-human agents that might be utilized by humans but were initiating the agency in their relevant cases through their non-human power. The following section examines in detail these cases with a dual-fold perspective.

3.2.2. Non-human agency

To understand how non-human agents were initiating processes, this category was divided into two sub-categories. This was motivated by a challenge recurrent in relevant literature: the complexity of articulating clear boundaries between different agents. Jansen (2016), for instance, suggests that agent identification can be somehow arbitrary, with a rather too wide take on the concept of agents. This is especially more accurate in case of the non-human agency discussed here. While the semantic features (Yule, 2020) of the different agents in a given text might directly signify human agents, non-human agency is rather more discrete and subtle. Consequently, the first sub-category examined the institutions/organizations which had been mobilizing action in discourse such as banks and international bodies. One the other hand, the second sub-category referred to generic non-human nouns that are not classified as organizational institutions yet still serve to initiate processes in discourse. With this in mind, another motivation for this sub-categorization emerged, given that each sub-category denotes a different level of power. To elaborate, through the linguistic process of metonymy (Lakoff and Johnson, 1980), such institutions/organizations were allowed agency just like humans; therefore, it was necessary to differentiate them from other non-human agents, which do not have the same access. This is primarily because in metonymy, a concept is often defined or identified in terms of another concept closely associated with it. In case of the G20 LD corpus in particular, a metonymical connection was created, between the leaders as human agents and institution and organizations as non-human ones. Most of the non-human agents in this section fell under the second sub-category (a total of 77% of non-human cases).

3.2.2.1. Organizational non-human agency. Institutions and organizational bodies naturally lent themselves to agency in G20 LD for the reasons explained in the previous subsection. Detailed analysis of the text reassured such patterns in the distribution of process types under this sub-category. To illustrate, material action took the lead with 49 cases of the 66 total. With more than 74%, roughly three-quarters of this sub-category, it appeared that when ascribed to a particular institution, more action was assigned to agents. Example (6) below demonstrates this case where international financial institutions and relevant international organizations were represented in the material act of continuing to provide.

Example (6) ……. *while ensuring that the international financial institutions and relevant international organizations continue to provide critical support to emerging, developing and low-income countries.*

In second and third places were mental and verbal processes, respectively; with the first occupying only 18% of their cases, and the second just under 8%. Almost no relational processes were assigned to this sub-category, which was somehow consistent with the dominance of material processes initiated by these non-human agents. Example (7) demonstrates a mental process with *examine*. Nevertheless, considering this should be done with reference to the non-human semantic features of the FSB in the same example. This meant that when such a process was initiated by humans, no semantic tension was created because humans were cognitively able to examine it as an internal mental and psychological event. However, since it was not assigned to humans, a different perspective of such events was needed. This semantic tension did not manifest itself as such when it came to verbal processes. Going along the same line of thought, similar to material processes and in contrast to mental ones, verbal processes were considered external events; albeit internally motivated, they resulted in more tangible outcomes, whether a change of state or an expression of statements.

Example (7) *The FSB is continuing to examine the financial stability implications of climate change.*

When applying the multivalence framework, similar patterns were detected in this particular sub-category. Just like human agents, institutional agents were initiating divalent verbs in most of their occurrences. With nearly 79% of cases, most institutional agents were involved in divalent actions with two actants; the remaining cases were divided equally between monovalent and trivalent processes.

3.2.2.2. Generic non-human agency. This section targets the processes initiated by agents that did not classify as humans nor as institutional or organizational bodies. Therefore, agents stated as common nouns such as *resources* or *challenges* were included under this category, with particular attention to the pandemic as a critical factor in this particular era. Figure 4 shows that processes initiated by these agents were more than three times those initiated by institutional/organizational actors. Considering the total number of processes in the entire G20 Riyadh leaders' declaration, 633, more than the third was assigned to this particular sub-category. This is more than the agency assigned to institutional non-human agents, which might be presumed to mobilize more agency, inherently and organizationally.

Some similar patterns detected earlier were present at this section. Starting with process type analysis, the vast majority of processes

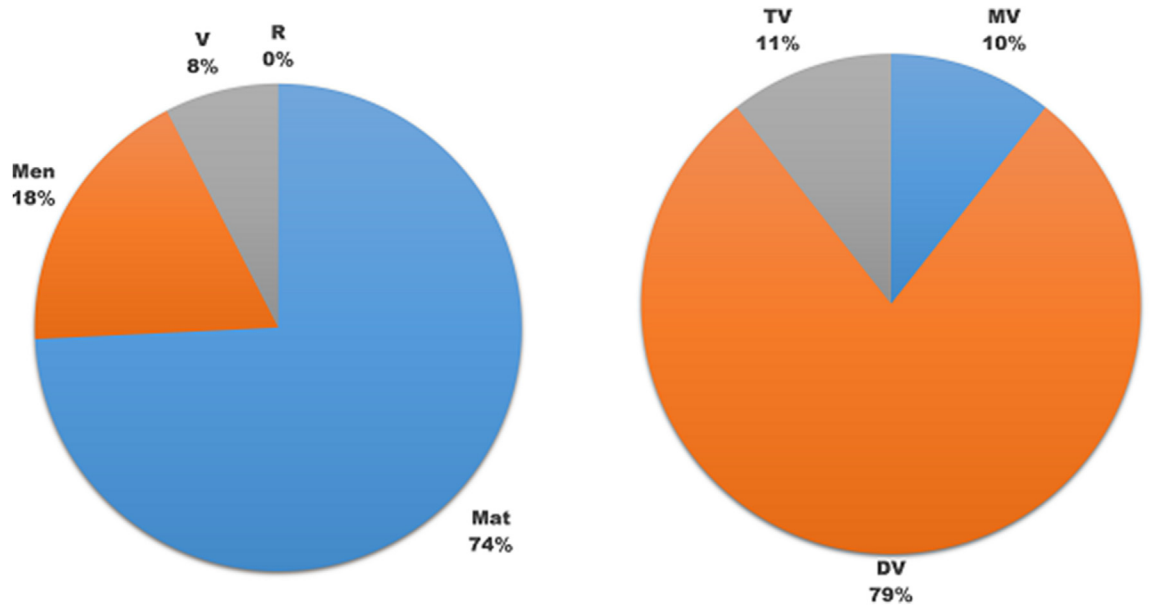

Figure 4. Distribution of process types and multivalence for non-human organizational agency.

initiated by these agents were material, reaching nearly 74% of cases. This high percentage of material action was consistent with the findings of the non-human agents in the previous section and was relatively higher than those initiated by human agents. *Affecting* in Example (8), for instance, demonstrates a case where *issues and challenges* were controlling agency regarding private investments in infrastructures.

Example (8) …….. *which reflects investors' view on issues and challenges affecting private investment in infrastructure and presents policy options to address them.*

However, within the processes assigned to agents in this section relational processes came in second place with more than 19% of cases, unlike the previous two. This was relatively higher than the other sections. With slightly more than 4% with human agents and almost no cases with institutional agents, this 19% indicated a weaker perception of agency. However, it should not undermine the power and action established by the profound presence of material processes in this section. Example (9) demonstrates this case as it combines many material processes, all of which were stated as gerunds in a list and followed by attributive features. Mental process came in third place, accounting for less than 6% of cases. It was evident that this section revealed a similar pattern to the previous one. Engaging profoundly in mental processes, in particular, appeared to be a feature that required human semantic features in rather strict terms. This might apply to verbal processes as well, as they were proven to be very few in this declaration.

Example (9) *Environment, Energy, Climate: Preventing environmental degradation, conserving, sustainably using and restoring biodiversity, preserving our oceans, promoting clean air and clean water, responding to natural disasters and extreme weather events, and tackling climate change are among the most pressing challenges of our time.*

Another area where this section revealed some differences in the patterns established in the previous two is the multivalence framework. Indeed, divalent processes were predominantly present here, at slightly more than 72%, which was consistent with previous findings. However, more monovalent processes were detected here, accounting for roughly

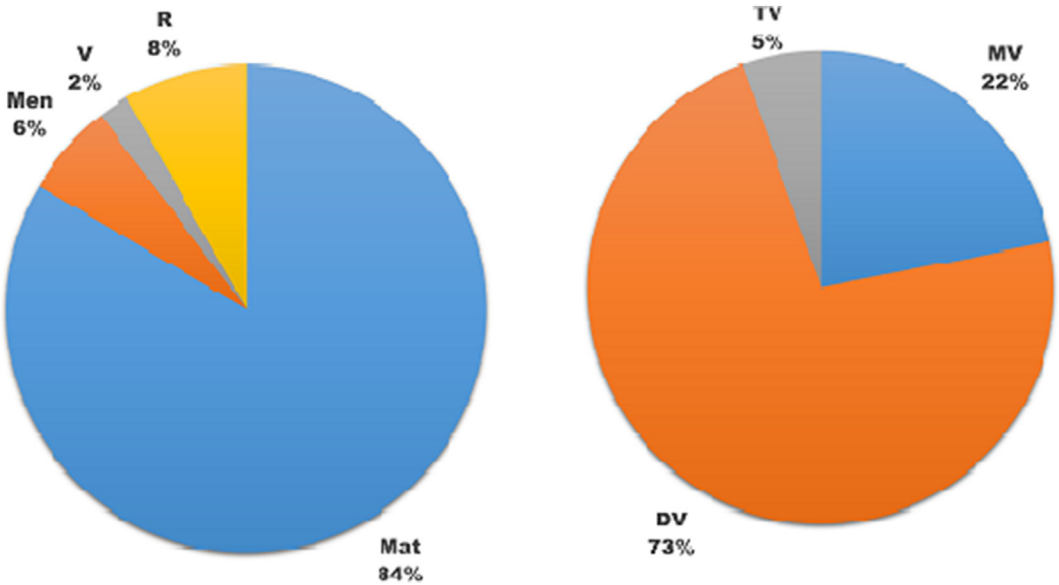

Figure 5. Distribution of process types and multivalence for generic non-human agency.

22% of occurrences in this section. This went hand in hand with the remark made earlier regarding the relational processes and their relative increase with this particular sub-category.

Before concluding this section, special attention was given to one non-human agent, which is shown in Figure 5. Given the time this declaration was released, COVID-19 as a non-human agent merited further examination.. To elaborate on this, the Saudi presidency of the G20 group took place during 2020, a year when the tragic and devastating implications of COVID-19 were realized most intensively, and the drastic measures to overcome and contain it were taken worldwide. Surprisingly, of the 633 processes examined in this declaration, only 10 were initiated by COVID-19 (nearly 1.5% of cases). Not surprisingly, however, all of these were material ones except for one case in which COVID-19 was included for the first time in this document, as in Example (10). Throughout these processes, it was referred to as *The COVID-19 pandemic* once, *the pandemic* three times, *COVID-19* once, *crisis* three times, and *shock* twice:

Example (10) *The COVID-19 pandemic and its unprecedented impact in terms of lives lost, livelihoods, and economies affected, is an unparalleled shock that has revealed vulnerabilities in our preparedness and response and underscored our common challenges.*

4. Discussion

It is evident from this detailed analysis – at both of its stages – that human agency, primarily the leaders', was constructed extensively in the G20 LD, an inevitable finding considering the nature of this corpus. Not surprising, the very act of producing such texts with formal power, "authorship," is a clear representation of agency (Hardy, 2004, p. 420). Offering factual information (Lwin et al., 2020), accessing resources, and producing texts are all aspects of such authorship agency. This is consistent with some findings in recent literature highlighting this authorial agency even in non-human agents. Accordingly, in addition to human agents like the G20 leaders in the dataset at hand, such authorship could possibly be assigned to non-humans. Kennedy (2009), for instance, highlights this issue as she investigated how bots, for instance, produce texts on their own in Wikipedia. This goes hand in hand with the recurrent discussion of the distribution of human versus non-human agency in discourse discussed in the Introduction above.

Analysis of the G20 LD offers a valid documentation of human agency as intensified with the repeated use of *we*. Using the first-person plural pronoun to initiate action represents the most effective and explicit way to claim agency in discourse. Being profoundly correlated with more powerful processes, *we*, in the G20 LD, highlights the prominence of the leaders' formal and authoritative power. Such construction mirrors what Flowerdew (2002) reported. It could also be an identifying feature of organizational and business-oriented discourse. This was documented in the keyness analysis in comparison with the BNC Sampler CG Business, as well as some other corpus-based discourse studies (Almaghlouth, 2022). In her investigation of institutional branding in higher education, *we* was found to be a recurring agent in the business-oriented recently-revised official identity of a governmental university. In addition to this, the recurrent use of *we* before action processes presents the agent in a "dynamic and authoritative light" (Flowerdew, 2002, p. 216). This is, of course, along with other functions of *we* as a powerful discursive and textual tool in other discourses; either to indicate inclusiveness and solidarity as in (Antaki and Crompton, 2015) and (de la Ossa, 2016), to differentiate between ingroup and outgroup members (Brewer and Gardner, 1996) or even in academic discourses in correspondence with some recent trends in signaling authorship in academic writing (Wang et al., 2021).

Slightly fewer than half of the analyzed processes in the sample revealed the extensive presence of non-human agency. Ascribing agency to non-human agents has been identified repeatedly in recent works, including texts (Cooren, 2010; Lehtinen and Pälli, 2021), genres (Jahn, 2018), rituals (Koschmann and McDonald, 2015), documents and smart technologies (Xenitidou and Gunnarsdóttir, 2019), mediated self-care applications (Jones, 2018), euthanasia declarations (Brummans, 2007), hashtags (Yang, 2016), digital bots (Kennedy, 2009), natural world (Toivonen and Caracciolo, 2022), or even memes (Al Zidjaly, 2017). This study adds to this rich body of literature on non-human agency in the sense that it signifies such non-humanness even in the most authoritative human-dominated discourses. However, an intriguing finding of the present study is that organizational non-human agents were not as agentive as the generic non-human ones. However, given that the G20 LD was explicitly and deliberately loaded with human agency in the form of *we*, ascribing agency to not-as-agentive organizational non-human agents was not necessary. To illustrate, what is present in this particular corpus is what Bencherki and Cooren (2011, p. 1580) call a "possessive constitution," in which the organization (non-human) conducts and possesses its actions through its members (human) and vice versa. As most of the action is expressed explicitly through human agents, allocating more agency to many non-human organizational agents did not occur. Going along the same line of thought, Bowden (2015, p. 60) suggests that non-human agency is a kind of agency that "subtends the humans," making drawing a distinction between human and non-human agency a rather tricky task. Consequently, it might be better to visualize these two kinds as occasionally overlapping instead of having crystal clear boundaries. In fact, such overlap has been highlighted in relevant literature as a concern that should be approached cautiously (Dürbeck et al., 2015; Jansen, 2016).

While generic non-human agents were constructed far more than the organizational non-human agents in the present study, it is worth noting that ascribing agency to non-human agents, both kinds, does not allow them the same capacities associated with humans. This agency is constrained in that it is also very often linked to only what a non-human agent can do; that is, create change in the outsider world but only as they are devised and produced by humans so that these non-human agents work in their names. This process is a form of imbrication as humans appropriate their surroundings to mediate or initiate function (Taylor, 2011). Nevertheless, such imbrication or appropriation cannot be extended to the inner psychological world. This is evident in the distribution of mental processes in non-human agents compared with humans.

Regarding the third research question concerning the feasibility of diverse methodological tools in examining agency in discourse, the eclectic approach adopted in this study allows for a multiplicity of analyses. To illustrate, utilizing different tools yielded different findings which could not have been be achieved using a single approach (Partington et al., 2013). The corpus analysis allowed for a breadth of investigation that was further deepened by conjoining it with insights from speech act theory. Doing so, it offered an empirical basis for the analysis (Biber et al., 2012), while reducing the risk of subjectivity of qualitative analysis (Lee, 2018). However, as corpus-based studies sometimes risk superficial investigation, the sample-based analysis at the second stage allowed for a closer examination of action dynamics as expressed clearly in the declaration. Both process type and multivalence analyses consistently revealed more variation between human and non-human agents, shedding further light on the diverse manifestation of agency in discourse.

Given the theory, rationale, and methodology adopted in this paper, some limitations were inevitable. For instance, while this paper attempted to collect declarations from 2012 to 2021, examining diachronic variation across this corpus was not feasible. This was primarily due to the multiplicity of the approaches presented in this study, which would have made adding a contrastive diachronic perspective to the design a bit too broad. Consequently, further research should investigate this with a contrastive perspective. In addition to this, due to the eclectic approach adopted in data analysis, certain elements of the implemented frameworks had to be excluded due to space constraints. While this eclectic core has proven to be fruitful in data triangulation, other works might choose to work exclusively on one single framework.

5. Conclusion

In sum, this study was motivated by an interest to examine how agency is constructed and circulated between diverse agents in the G20 LD corpus. Being inherently loaded with human agency, the analysis revealed the extensive presence of non-human agents along with human counterparts. The first-person plural pronoun *we* was used heavily in the corpus, constructing a recurrent authoritative pattern peculiar to these kinds of declarations within organizational discourse. Detailed examination of the sample declaration also revealed how agentive/active these diverse agents were, with varying distributions whose implications were discussed systematically. The analysis also revealed that non-human agents, despite their recurrent and repeated agency, still exhibit a constrained perception of agency due to semantic and textual constraints. Put briefly, even within discourses controlled by the most powerful economic leaders of the world, non-human agents still existed and were assigned agency repeatedly. However, it appears rather hard to separate human and non-human agency completely and exclusively in text as they both share agentive connections in between.

Declarations

Author contribution statement

Shrouq Almaghlouth, Ph.D: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Funding statement

This work was supported by the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Saudi Arabia [GRANT No. 1682].

Data availability statement

Data are available upon request.

Declaration of interest's statement

The author declares no competing interests.

Additional information

No additional information is available for this paper.

References

Al Maghlouth, S., 2018. Virtual communities and social change: intertextuality in Saudi English-language blogs. In: The 10th International RAIS Conference on Social Sciences and Humanities, Princeton, NJ.
Al Zidjaly, N., 2017. Memes as reasonably hostile laments: a discourse analysis of political dissent in Oman. Discourse Soc. 28 (6), 573–594.
Almaged, S., 2021. Disseminating knowledge: a discourse analysis of terrorism in TED talks. Heliyon 7 (2).
Almaghlouth, S., 2022. Institutional branding in higher education: a linguistic analysis of King Faisal University Identity. In: International Conference on Communication, Language, Education and Social Sciences, Malaysia.
Alvesson, M., Karreman, D., 2000. Varieties of discourse: on the study of organizations through discourse analysis. Hum. Relat. 53 (9), 1125–1149.
Antaki, C., Crompton, R., 2015. Conversational practices promoting a discourse of agency for adults with intellectual disabilities. Discourse Soc. 26 (6), 645–661.
Austin, J.L., 1978. How to Do Things with Words, second. ed. Oxford University Press.
Backhaus, P., 2018. Reclaiming agency in resident–staff interaction: a case study from a Japanese eldercare facility. Discourse Stud. 20 (2), 205–220.
Baker, P., 2006. Using Corpora in Discourse Analysis. Continuum.
Baker, P., 2014. Corpus linguistics in sociolinguistics. In: Holmes, J., Hazen, K. (Eds.), Research Methods in Sociolinguistics: A Practical Guide. John Wiley & Sons, pp. 107–118.
Barron, A., 2003. Acquisition in Interlanguage Pragmatics: Learning How to Do Things with Words in a Study Abroad Context. Benjamins.
Bencherki, N., Cooren, F., 2011. Having to be: the possessive constitution of organization. Hum. Relat. 64 (12), 1579–1607.
Biber, D., Reppen, R., Friginal, E., 2012. Research in corpus linguistics. In: Kaplan, R. (Ed.), The Oxford Handbook of Applied Linguistics, second ed. Oxford University Press, pp. 548–570.
Bowden, S., 2015. Human and nonhuman agency in Deleuze. In: Roffe, J., Stark, H. (Eds.), Deleuze and the Non/human, pp. 60–80. London.
Brewer, M., Gardner, W., 1996. Who is this "We"?: levels of collective identity and self representations. J. Pers. Soc. Psychol. 71 (1), 83–93.
Brezina, V., Weill-Tessier, P., McEnery, A., 2021. #LancsBox v. 6.x [software package].
Brummans, B., 2007. Death by document: tracing the agency of a text. Qual. Inq. 13 (5), 711–727.
Cooren, F., 2004. Textual agency: how texts do things in organizational settings. Organization 11 (3), 373–393.
Cooren, F., 2006. The organizational world as a plenum of agencies. In: Cooren, F., Taylor, J.R., Every, E.J.V. (Eds.), Communication as Organizing: Empirical and Theoretical Explorations in the Dynamic of Text and Conversation. Lawrence Erlbaum Associates, NJ, pp. 81–100.
Cooren, F., 2008. Between semiotics and pragmatics: opening language studies to textual agency. J. Pragmat. 40 (1), 1–16.
Cooren, F., 2010. Action and agency in Dialogue: Passion, Incarnation, and Ventriloquism. Benjamins.
Darics, E., Koller, V., 2019. Social actors "to go": an analytical toolkit to explore agency in business discourse and communication. Bus. Profess. Commun. Q. 82 (2), 214–238.
de la Ossa, A., 2016. Talk, listen, think: discourses of agency and unintentional violence in consent guidance for gay, bisexual and trans men. Discourse Soc. 27 (4), 365–382.
Dürbeck, G., Schaumann, C., Sullivan, H.I., 2015. Human and non-human agencies in the Anthropocene. Ecozon 6 (1), 118–136.
Fairclough, N., 2003. Analysing Discourse: Textual Analysis for Social Research. Routledge.
Fairclough, N., 2013. Critical Discourse Analysis: the Critical Study of Language, second ed. Pearson.
Flowerdew, J., 2002. Globalization discourse: a view from the East. Discourse Soc. 13 (2), 209–225.
Greimas, A.J., 1987. On Meaning : Selected Writings in Semiotic Theory. Pinter.
Halliday, M., Matthiessen, C., 2004. An Introduction to Functional Grammar, third ed. Routledge.
Halliday, M., Matthiessen, C., 2014. An Introduction to Functional Grammar, fourth ed. Routledge.
Hardy, C., 2004. Scaling up and bearing down in discourse analysis: questions regarding textual agencies and their context. Organization 11 (3), 415–425.
Huddleston, R., Pullum, G., 2005. A Student's Introduction to English Grammar. Cambridge University Press.
Hunter, J., Franken, M., Balmer, D., 2015. Constructions of patient agency in healthcare settings: textual and patient perspectives. Discourse, Context Media 7, 37–44.
Jahn, J.L.S., 2018. Genre as textual agency: using communicative relationality to theorize the agential-performative relationship between human and generic text. Commun. Monogr. 85 (4), 515–538.
Jansen, T., 2016. Who is talking? Some remarks on nonhuman agency in communication. Commun. Theor. 26 (3), 255–272.
Jaworska, S., 2018. 'Bad' mums tell the 'untellable': narrative practices and agency in online stories about postnatal depression on Mumsnet. Discourse, Context Media 25, 25–33.
Jones, R., 2018. Mediated self-care and the question of agency. J. Appl. Ling. Prof. Pract. 13 (1–3), 167–188.
Kennedy, K., 2009. Textual machinery: authorial agency and bot-written texts in Wikipedia. In: Smith, M., Warnick, B. (Eds.), The Responsibilities of Rhetoric. Waveland Press, pp. 303–309.
Koller, V., 2012. How to analyse collective identity in discourse–textual and contextual parameters. Crit. Approaches Discourse Anal. Across Discip. 5 (2), 19–38.
Koschmann, M., McDonald, J., 2015. Organizational rituals, communication, and the question of agency. Manag. Commun. Q. 29 (2), 229–256.
Kuhn, T., 2008. A Communicative theory of the firm: developing an alternative perspective on intra-organizational power and stakeholder relationships. Organ. Stud. 29 (8–9), 1227–1254.
Lee, J.F.K., 2018. Gender representation in Japanese EFL textbooks – a corpus study. Gend. Educ. 30 (3), 379–395.
Lehtinen, E., Pälli, P., 2021. On the participatory agency of texts: using institutional forms in performance appraisal interviews. Text Talk 41 (1), 47–69.
Lwin, M.O., Lu, J., Sheldenkar, A., Cayabyab, Y.M., Yee, A.Z.H., Smith, H.E., 2020. Temporal and textual analysis of social media on collective discourses during the Zika virus pandemic. BMC Publ. Health 20 (1), 804.
Malyuga, E., Rimmer, W., 2021. Making sense of "buzzword" as a term through co-occurrences analysis. Heliyon 7 (6).
Ma'yuuf, H., Abbas, I., 2021. Bullying in trump's tweets through Covid-19: a pragmatic perspective. J. Lang. Ling. Stud. 17 (3), 1582–1597.
Partington, A., Duguid, A., Taylor, C., 2013. Patterns and Meanings in Discourse: Theory and Practice in Corpus-Assisted Discourse Studies (CADS). John Benjamins.
Partington, A., Morley, J., Haarman, L., 2004. Corpora and Discourse. Peter Lang.
Phillips, N., Hardy, C., 2002. Discourse Analysis: Investigating Processes of Social Construction. SAGE Publications Inc.
Pirhonen, J., Pietilä, I., 2018. Active and non-active agents: residents' agency in assisted living. Age. Soc. 38 (1), 19–36.

Putnam, L., Cooren, F., 2004. Alternative perspectives on the role of text and agency in constituting organizations. Organization(London, England) 11 (3), 323–333.
Putri, R., Sartini, N., Fajri, M., 2020. The analysis of illocutionary acts of judges' comments in America's next top model and Asia's next top model competitions: a cross-cultural pragmatic study. J. Lang. Ling. Stud. 16 (4), 1885–1898.
Rayson, P., 2008. From key words to key semantic domains. Int. J. Corpus Linguist. 13 (4), 519–549.
Sahragard, R., Davatgarzadeh, G., 2010. The representation of social actors in the Interchange third edition series: a critical discourse analysis. J. Teach. Lang. Skills 29 (1), 67–89.
Salama, A., 2021. A methodological synergy of dramatistic discourse analysis and corpus linguistics: from the discourse of US Presidents to Trump's 2016 Orlando speech. J. Lang. Ling. Stud. 17 (2), 752–772.
Sbisà, M., 2002. Speech acts in context. Lang. Commun. 22 (4), 421–436.
Scott, M., 1999. Wordsmith Tools Help Manual. Oxford University Press.
Searle, J.R., 1979. Expression and Meaning: Studies in the Theory of Speech Acts. Cambridge University Press.
Taylor, J.R., 2011. Organization as an (imbricated) configuring of transactions. Organ. Stud. 32 (9), 1273–1294.
Tesnière, L., 1965. In: Élements de syntaxe structurale, 2. rev. et corr. ed. Klincksieck.
Tessema, K.A., 2019. Primacy of the leader, obscuration of followers: the discourse of leadership in the business media. Discourse, Context Media 29, 1–9.
Toivonen, H., Caracciolo, M., 2022. Storytalk and Complex Constructions of Nonhuman agency: an Interview-Based Investigation. Narrative Inquiry.
van Leeuwen, T., 1996. The representation of social actors. In: Caldas-Coulthard, C., Coulthard, M. (Eds.), Text and Practices: Reading in Critical Discourse Analysis. Routledge, pp. 32–70.
van Leeuwen, T., 2008. Discourse and Practice: New Tools for Critical Discourse Analysis. Oxford University Press.
Wang, S.-p., Tseng, W.-T., Johanson, R., 2021. To we or not to we: corpus-based research on first-person pronoun use in abstracts and conclusions. Sage Open 11 (2), 1–18.
Xenitidou, M., Gunnarsdóttir, K., 2019. The power of discourse: how agency is constructed and constituted in discourse of smart technologies, systems and associated developments. Discourse Soc. 30 (3), 287–306.
Yang, G., 2016. Narrative agency in hashtag activism: the case of #BlackLivesMatter. Media Commun. 4 (4), 13–17.
Yılmaz Yakışık, B., Fişne, F.N., Yangın Ekşi, G., 2019. Sense of professional agency in ELT practicum: comparison of Polish, Portuguese, and Turkish contexts. J. Lang. Ling. Stud. 15 (4), 1317–1331.
Yule, G., 2020. The Study of Language, seventh ed. ed. Cambridge University Press.