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CORPUS-BASED LEXICAL BUNDLES IN AMERICAN PRESIDENTIAL INAUGURAL SPEECHES

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Abstract
This paper aimed to investigate the use of lexical bundles in the inaugural speeches of Democratic and Republican presidents in the United States in order to identify linguistic differences associated with lexical bundles. Drawing on Biber et al. (2004) framework, the study used AntConc software (version 3.5.9; Anthony, 2020) to analyse the lexical bundles used in the speeches. The study found that noun phrase (NP) fragments were the common structural pattern in all speeches. Democratic presidents tended to use NP + of phrase fragments, whereas Republican presidents used prepositional phrase (PP) + of fragments. In terms of the functional classification, both political parties showed a strong priority for referential expressions. These findings point to different linguistic styles associated with each political party, influencing their communication styles in public discourse. Future research is encouraged to look into how linguistic patterns influence political communication and persuasive strategies.

Keywords: functional taxonomy, inaugural speech, lexical bundles, political discourse, structural taxonomy

Introduction
Lexical bundles, or formulaic sequences, are recurring sets of words that appear frequently in a given discourse. According to Biber and Conrad (1999), lexical bundles are "the most frequent recurring lexical sequences, which can be regarded as extended collocations: sequences of three or more words that show a statistical tendency to co-occur" (p. 183).

Recent studies have confirmed the significance of lexical bundles as a major constituent in producing a coherent linguistic output. For example, they are identified as the "building blocks" of coherent discourse (Hyland, 2008, p. 1). In a similar vein, Flowerdew (2015) states that lexical bundles are contiguous sequence[s] of 3 or 4 words identified purely through automatic means using a frequency-based approach (p.105). These bundles are essential for the fluency and coherence of spoken and written discourse. Lexical bundles assist speakers and writers in efficiently communicating intended meaning by providing ready-made language chunks that can be easily inserted into conversation or text.

The structural and functional classifications of lexical bundles

Lexical bundles are categorised in two different ways. The first is the structural classification, and the second involves a classification of lexical bundles based on their function. Biber and Conrad (1999) provide a framework for classifying structural bundles. Their research focuses on recognising recurring word combinations in both written and spoken language. Three structural categories are identified: "NP-based," "PP-based," and "VP-based." The NP-based bundles include any noun phrases with post-modifier structures. The PP-based bundles begin with a preposition and a noun phrase. The VP-based bundles include any word combinations that contain a verb component (Zughyyir, 2011). This framework has been used in corpus linguistics to examine the nature of multi-word expressions. While the structural classification of lexical bundles has been well researched, particularly in written and spoken English genres, more research is needed to determine how they manifest in other discourse genres such as political discourses. Analysing the use of lexical bundles in political discourses is crucial for investigating the rhetorical strategies of politicians.

According to Biber, Cortes, and Conrad (2004), lexical bundles can be classified functionally, focusing on the functions and meanings they convey through language. The taxonomy involves three functional categories: referential bundles, text organizers, and stance bundles (Zughyyir, 2011). While Biber et al.'s (2004) functional taxonomy presents the basis for analyzing linguistic functions in discourse, its application in political discourse is limited. Additionally, examining the variations of these bundles across different political genres is essential.

Lexical bundles in discourse

Several studies investigated the use of lexical bundles in spoken and written discourse. Biber, Cortes, and Conrad (2004) examine lexical bundles in different registers and conclude that these bundles serve a variety of functions, such as stance expressions, discourse organizers, and reference expressions. Their research underscores the extensive presence of lexical bundles in spoken language. They state, "It turns out that different registers rely on different sets of lexical bundles, and that the bundles have important discourse functions that fit the context and purposes of the registers in which they are common." (Biber, Cortes, & Conrad, 2004, p. 69). Moreover, their study detects a relationship between the frequency and distribution of these bundles, highlighting different patterns that are conditional upon the register under examination. However, in a study conducted by Biber and Barbieri (2007), results show that lexical bundles are much more common in non-academic registers as against the results of Biber, Conrad, and Cortes (2004).

Furthermore, Hyland (2008) examines the use of lexical bundles in research writing and highlights their crucial roles in political speeches, in which they serve in asserting authority and fostering unity. In addition, Granger (2018) investigates the accuracy of L1 transfer through lexical bundles, while Nesi and Basturkmen (2006) focus on classifying cohesive devices in spoken academic discourse through the study of co-occurring words. Also, Bal (2010) analyses four lexical bundles to understand their structure and function. In general, studies on lexical bundles have provided insights into language use and acquisition.

Furthermore, Jablonkai (2010) examines four-word lexical bundles (LBs) in an English EU document corpus of over one million words. The results show that noun phrases and prepositional phrases make up most of the bundle types.

Rakang (2021) examines the use of four-word lexical bundles in public debate. The findings show that most of the bundles used in the corpus were classified as stance bundles. They were used to convey intention, prediction, and desires. Furthermore, Pojanapunya and Watson Todd (2011) investigate the functional patterns of lexical bundles in inaugural speeches delivered by U.S.A. presidents. According to their research findings, lexical bundles were used to convey meanings and build connections with audiences. In a similar vein, Ewata (2024, p.68) investigates lexical bundles in inaugural lectures and concludes that the structural patterns of the bundles in the inaugural lectures' corpus consist of noun phrase + of, prepositional phrase + of, anticipatory it + verb/adjective, and that the bundles served as stance and referential expressions, discourse organizers, and honorifics in the lectures. Finally, Uba, Ibrahim, and Ahmed (2016) investigate Nigerian presidential inaugural speeches and deduce that certain bundles were often used, indicating their significance in conveying specific meanings. Their research concludes that lexical bundles have a deep impact on shaping the presidential speeches.

Lexical bundles in political discourse

Political discourse can be defined as the exchange of ideas and arguments within the political setting. Several scholars have shown their interest in studying political discourse. For example, Beard (2000) argues that investigating political discourse helps in understanding how politicians use language to exercise politics. Furthermore, Jegede (2020) claims that political discourse differs from other discourses because it reveals politicians' true intentions.

Akinwotu (2018) argues that political discourse has a distinct language. He argues, "Politicians employ several strategies in communicating their intentions to the electorate. While some are propagandistic in nature, others are purely stylistic and persuasive" (p.3). In addition, Katnić-Bakaršić (2012) affirms that political discourse is described by metaphoricity, whereby the choice of register and vocabulary indicates political positioning (cited in Tepavčević, 2014, p. 94).
Inaugural speech is a formal speech delivered by a newly elected president, typically at the start of his term in office. It allows the president to draft his priorities for his tenure and to set the tone for his administration. Dragojević (2023,p.13) states, "Inaugural speeches frequently set the tone for an administration, motivate citizens, and give leaders a platform to address pressing issues at home, bring people together, and forge a sense of unity around a common goal". Furthermore, Xue et al. (2013, p. 679) state that the inaugural address is critical for the incoming president and his administration. One could argue that the inaugural address, which will have a long-term impact, is the highlight of every presidential inauguration. Akinwotu (2018) claims, "An inaugural speech is a document by which a politician could be made accountable in the future" (p. 1). In this respect, inaugural speeches are used to assess politicians' progress during their tenure. They are considered a political roadmap, allowing citizens to hold them accountable for their decisions and actions during their office.

Despite their distinct linguistic characteristics, inaugurals receive little attention in scholarly works. In this vein, Akinwotu (2018) and Jegede (2020) claim that several research studies have been conducted on inaugural speeches. Political inaugurals, as highly important events in the political picture, necessitate further attention from scholars.

Exploring the features of political inaugural speeches provides insights into the different linguistic techniques used by presidents to catch the attention of their audiences. The purpose of this study is to address the lack of scholarly works on inaugurals. Partington and Morley (2004) indicate that governmental institutions serve as a rich source of data to analyze inaugurals from linguistic viewpoints. Phokanoey (2018) highlights the significance of inaugurals as a worthy corpus, as they include political ideologies and future aspirations of the nation (p. 181).

Research gap

Inaugurals are often investigated through discourse analysis, which examines their linguistic features such as vocabulary, grammar, and textual elements. While research on lexical bundles has thoroughly examined their structural and functional patterns in different fields, there is an evident gap in investigating lexical bundles in political speech (Darweesh & Ali, 2017). This research gap holds importance because the language used in politics has a direct effect on shaping public perceptions. Analyzing lexical bundles in political discourse provides valuable insights into the specific rhetorical techniques employed by politicians to influence audiences.

Research questions

This study explores the use of lexical bundles in the inaugural speeches of U.S. presidents. It aims to examine the structural and functional patterns of these bundles within political discourse. The central research questions are:

1. What are the differences in the structural patterns of lexical bundles in the inaugural speeches of U.S. presidents?
2. What are the differences in the functional patterns of lexical bundles in the inaugural speeches of U.S. presidents?

Method

The study is classified as corpus-driven using corpus linguistic techniques. The analytical component of this study is based on the structural and functional analysis of lexical bundles. This method allowed for an extensive examination of the language patterns present in the collected data. By analyzing lexical bundles in inaugural speeches, the study aimed to uncover underlying rhetorical strategies employed by political leaders to convey their messages effectively to the public.

The corpus of the study

The corpus for this study consists of inaugural speeches given by US presidents at the start of their presidential terms. It contains 37 speeches, 17 by Republican and 20 by Democratic presidents. These speeches were retrieved from the official website, *The American Presidency Project* (https://www.presidency.ucsb.edu/documents/app-categories/spoken-addresses-and-remarks/presidential/inaugural-addresses). The total word count of the corpus

is 88,032, with an average of 2,379.24 words per speech. The total number of sentences is 3,524, with an average of 95.24 per speech. Table 1 provides a summary of the corpus' descriptive statistics.

Table 1. Descriptive statistics of the corpus

	N	Minimum	Maximum	Mean	Std. Deviation
Words	37	360,00	5429,00	2379,2432	1183,75939
Sentence	37	14,00	196,00	95,2432	48,30367
Valid N (listwise)	37				

Data collection

In this study, the analysis of the lexical bundles was conducted using the software AntConc version 3.5.9 (Anthony, 2020). AntConc is a free software for conducting corpus- driven research (Anthony, 2012). This software is a general corpus analysis system, which is used to analyze large data for different linguistic patterns. It also helps in conducting in-depth analysis of large amounts of data. Additionally, AntConc Software offers a user-friendly interface that simplifies the process. Finally, this software is compatible with Windows, Linux, and Macintosh systems.

Data analysis

The data analysis in this research was carried out in three stages. In the first stage, the corpus was uploaded to AntConc in plain text, and the lexical bundles were extracted using the N-grams feature. During the second stage of analysis, the data were refined by excluding all bundles that were incomplete and unnecessary. During the third stage, the remaining lexical bundles were analyzed for structural and functional patterns. To categorize the lexical bundles as structural and functional, Biber et al.'s (2004) taxonomy was used in this study. This framework is considered the optimal choice since the study aimed to discern differences in lexical bundles between Democratic and Republican inaugurals.

Findings and Discussion
Findings

The results of this study are divided into two parts. The first one presents the structural classification of lexical bundles in inaugurals, and the second one presents the results of the functional classification.

The structural analysis of lexical Bundles in the inaugural speeches

The analysis of the collected data indicated that U.S presidents used multiple structural patterns to create lexical bundles during their speeches. The analysis showed that noun phrases (NP) were the commonly used type, with 48 occurrences, then prepositional phrases (19 occurrences), verb phrases (15 occurrences), and finally dependent clauses (4 occurrences). The results demonstrated that U.S. presidents chose noun phrases and prepositional phrases in their speeches because these structural patterns allowed them to convey their ideas. Table 2 presents the results of the analysis of the structural patterns

Table 2. The classification of the structural patterns in US presidential inaugural speeches

Structure	Subtype	Frequency
NP	NP + of	21
	NP (other structures)	27
		4
	VP + that clause	
VP	VP + to clause	6
	VP + that clause	2
	other verb phrases	3
PP	PP + NP	10
	PP + VP	5
Dependent clause	PP + NP	4
Independent clause	DC + VP	4
	IC + VP	2

Nevertheless, examining the structural patterns of the presidents' inaugurals showed some differences in the use of lexical bundles. Analysing the inaugurals using Antconc indicated that the NP + of phrase subtype is the primary structural pattern in the democratic speeches, followed by PP + of phrase. The NP category is represented by noun-heavy expressions mostly used in legal texts, such as "the constitution of" and "administration of the government." These expressions are distinguished by their precision in conveying legal ideas. In addition, lexical bundles such as "in regard to" showed how PP+ structures exactly frame accurate and detailed information.

Table 3. The classification of the structural patterns in the democratic inaugural speeches

Structure	Subtype	Frequency
NP	NP+ of phrase fragment	14
PP	PP + of phrase fragment	3
VP	Passive verb+ Prepositional fragment	1
	Various types	6
Anticipatory it +	Anticipatory it + VP	1
VP/Adjective phrase		2
Other expression		

Nevertheless, the analysis of the Republican inaugurals indicated that the total number of N-Gram types is 20 and the total number of N-Gram Tokens is 117. In addition, the analysis showed a significant predominance of prepositional phrase bundles. When these bundles are classified using Biber et al.'s (2004) taxonomy, one can notice the prevalence of the PP-based phrases (10 bundles), the NP-based phrases (9 bundles), and one VP-based phrase bundle (1 bundle). This reflects a formal and legal linguistic pattern common in political discourse. This structural pattern indicated a deliberate use of language to convey authority. This illustrates a legalistic linguistic pattern commonly found in political discourse, especially in significant ceremonial settings. The findings are depicted in the following table.

Table 4. The classification of the structural patterns in the republican inaugural speeches

Structure	Subtype	Frequency
Prepositional	Prepostion+NP	3
Phrase	Preposition +NP+preposition	3
	Preposition +NP+CC	2
	Conjunction+Adverb+Prepostion	1
	Preposition + Pronoun +relative clause	1
Noun Phrase	Noun+PP	6
	Noun+CC+Determiner	1
	Noun+ CC	1
	Noun+CC+Noun+Prepostion	1
Verb Phrase	Verb+pronoun+CC	1

The functional analysis of lexical bundles in the inaugural speeches

In answering the second research question, the findings indicated that referential bundles (70 bundles) were the most commonly used in the corpus. Stance bundles were the second common bundle type, with 22 bundles, and the discourse organizer bundles were the third, with five bundles in total.

The findings indicated that U.S. presidents frequently use referential bundles to connect with their audiences and convey meaningful ideas. Stance bundles, on the other hand, are used to express the president's beliefs toward specific ideas, and discourse organizer bundles help to structure the inaugurals. Overall, the distribution of these bundles emphasises the strategic use of language by U.S. presidents, enhancing the influence of their inaugurals. Using these types of bundles not only creates a sense of unity but also establishes a strong link between the presidents and the audience. The findings of the functional classification are illustrated in Table 5

Table 5. Functional classification of lexical bundles in US presidents' inaugural speeches

Function	Sub-function	Frequency
Referential expressions	Identification / focus	59
	Time reference	8
Stance bundles		
	Place reference	3
	Epistemic stance	8
	Desire	5
Discourse organizers	Intention	2
	Manner	4
	Formulas	3
	Transition (which indicates continuity in discourse)	5

Analysing the functional patterns of lexical bundles in the democratic and republican inaugurals revealed that the use of referential expressions is the most dominant in the speeches. An examination of the corpus indicated that the identification/ focus subtype is the most common pattern. As seen in Table 6, the analysis of 28 bundles in the democratic inaugurals based on the functional taxonomy (Biber et al., 2004) indicated that referential bundles were the most common category in the target corpus, with a frequency of 17 bundles (15 for

identification/ focus, and 2 for time/place reference). The second most common category was stance bundles, with a frequency of 6 bundles (3 for certainty, 2 for desire/ intent, and 1 for hedging). Finally, the least category is the discourse organizers, with a frequency of 3 bundles.

Table 6. Functional classification of lexical bundles in the democratic inaugural speeches

Function	Subtype	Frequency
Referential expressions	Identification/ focus	15
	Time/ place reference	2
Stance expressions	Desire/ intent	2
	Certainty	3
Discourse organizers	Hedging	1
	Topic Introduction	1
	Specification of conditions	2

Overall, the analysis showed a clear preference for referential bundles in democratic inaugurals, implying a strong emphasis on identification and focus. Furthermore, the low frequency of discourse organizers, which are essential for structuring communication, indicated that these linguistic features are not extensively used in the target corpus. This represented a preference for a direct and straightforward communication style among speakers at democratic inaugurals, possibly due to the need for clear and concise messaging.

According to the lexical function classification, most lexical bundles in Republican inaugurals fell under the referential expression function. To elaborate, 17 bundles fall under referential expression, 15 under identification/focus, and 2 under time/place reference function. Some lexical bundles were classified as discourse organizers (2 bundles). The stance expression function was the least used in the Republican inaugurals (1 bundle). This showed that the Republican speeches were primarily focused on providing information and establishing references, as indicated by the predominance of referential bundles. The findings of the functional classification in the republican inaugurals are presented in Table 7

Table 7. Functional classification in the republican inaugurals

Function	Subtype	Frequency
Referential expressions	Identification/ focus	15
	Time/ place reference	2
Stance expressions	Attitude	1
	Temporal sequence	1
Discourse organizers	Topic elaboration	1

It is important to note that the most commonly used functional subtype is the identification/focus. This subtype is consistent with the formal style used in

political addresses, and it highlights that the Republican inaugural speeches tried to provide clear references.

This study aimed to examine lexical bundles in the U.S presidents' inaugural speeches by analysing the structural and functional patterns using Biber et al.'s (2004) taxonomy. In general, the findings indicated that various types of lexical bundles were found in the corpus. The structural analysis concluded that the noun phrase (NP) is the predominant structural pattern. This predominance reflected a desire for clarity in presidential inaugurals.

Comparing the inaugural speeches of both parties, the analysis unveiled a contradictory pattern. The Democratic inaugural speeches exhibited an extensive use of the NP+ of phrase structures, followed by the PP+ of phrase structures, whereas the Republican inaugurals displayed a thorough use of the PP+ of phrases, followed by the NP+ of phrases. This disparity in the structural patterns implies a difference in the rhetorical strategies used by the two political parties.

Discussion

The findings of this study are consistent with Phokanoey's (2018) study. By analysing lexical bundles in political apology speeches, the results indicated that noun phrase and prepositional phrase structures are the most used bundles. He stated, "The noun phrase lexical bundle structure could be used for the background to an apology since they represent the perpetrator or the speaker or mention the past mistake as a topic to introduce and elaborate upon" (Phokanoey, 2018, pp.170-171).

Nevertheless, the results contradict the results in Biber, Cortes, and Conrad (2004) and Rakang (2021) studies. According to Biber et al. (2004), a conversational register makes use of the verb phrase structures, whereas academic writing makes use of noun phrase and prepositional phrase structures. It is clear that U.S presidents use a written register in their inaugurals since they have a high frequency of noun phrase and prepositional phrase lexical bundles. In addition, Rakang (2021) investigated lexical bundles in public debates and concluded that the lexical bundles found in the analysis incorporate verb phrases, similar to conversational register. Rakang (2021) concluded, "The use of grammatical structures and pronouns in lexical bundles in the Pub-D corpus, which combines spoken and written genres, appears to represent unique characteristics of extemporaneous speech in a public debate, a genre that falls between memorized style and impromptu style" (p.34). In terms of the functional pattern, this study found that the most frequently used functional pattern in U.S. inaugural speeches is the referential expression. This suggests that U.S. presidents tend to rely on providing in their inaugural speeches.

Furthermore, comparing the Democratic and Republican inaugural speeches showed an excessive use of referential expressions. According to the results of the democratic inaugurals, referential expressions are the commonly used lexical bundles, then stance and discourse organizers. However, the results of the republican inaugurals showed that the referential function was the most frequently used, followed by discourse organizers and stance expressions, respectively. This indicated that the consistent use of referential expressions across party lines suggests a common rhetorical strategy in US inaugural speeches.

The results are consistent with Phokanoey (2018). Referring to the findings of his study, he concluded that the most functional pattern found in political

apologies are referential expressions. He argued that in political apology speeches, " the content of speech should be coherent and make use of referential expression lexical bundles to enable the speaker to refer to something and allow the audience or victims to understand the point the speaker refers to" (Phokanoey, 2018, p.171). In contrast, the results contradict Biber et al. (2004), who claimed that conversational register relies on stance bundles and discourse organisers.

The results are inconsistent with Darweesh and Ali's (2017) study. Analysing lexical bundles in political discourse, he concluded that some functions have received less attention. Moreover, the function of imprecision did not appear in his corpus (Darweesh & Ali, 2017, p.63). However, they claimed that the use of referential functions is beneficial in political discourse because it allows for the connection of what is being said to entities (Darweesh & Ali, 2017, p.64). Overall, these functions are critical in shaping the overall communication process and in understanding the message being conveyed.

Conclusion

The aim of this study was to analyse the lexical bundles in the inaugurals delivered by the Democratic and Republican presidents in the United States, focusing on their structural and functional patterns using Biber et al.'s (2004) taxonomy. The findings showed that the frequently used structures are the noun phrase and prepositional phrase structures. In terms of the functional patterns, referential expressions were the most used type in the corpus.

However, it is important to recognise the limitations of this study, especially in terms of generalizability. It was limited to the inaugural speeches delivered by the U.S democratic and republican presidents, which limited the relevance of the findings to other political systems. Future research could be conducted to expand its scope and encompass a diverse range of political speeches and other political parties. Furthermore, conducting other research into the rhetorical effects of lexical bundles could offer insights into the strategic use of language in political communication.

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