Dissecting Speech Errors: A Psycholinguistics Study of Joe Biden's Disfluent Speech

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Abstract

Speech errors occur in nearly everyone's speech, especially when speaking in front of a large audience and under the spotlight. A thorough analysis of these speech errors in a person's language especially that of a public figure like Joe Biden gives us insight into the mechanisms that underlie language processing and production. The present study employs the mixed-method approach to psycholinguistically examine President Biden's speech and identify the types of errors by using the Clark and Clark (1977) theory as the research framework. The researcher transcribed several videos from YouTube to collect data for said analysis. In addition, the current study determines which speech errors have the highest and lowest occurrence rate in President Joe Biden's spoken language. Lastly, this research provides the causes for hesitation and speech errors in President Biden's speech by utilizing Clark and Clark and Bortfeld et al.'s theories as a framework. The research found the occurrence of each speech error to be as follows (high to low): filled pauses repeats, corrections, unretraced false starts, retraced false starts, and silent pauses. The author found that the potential causes for errors in speech are cognitive reasons, social reasons, situational anxiety, demographic factors, and speaking style. The paper underscores the intricate relationship between linguistic imperfections and political communication, offering a nuanced perspective on the challenges of public representation. The findings can inform strategies to improve political leaders' communication authenticity and effectiveness in an era of pervasive media coverage and public scrutiny.

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INTRODUCTION

The persuasiveness and eloquence in the speeches of political leaders, especially the elected ones, have long been of substantial interest to scholars, journalists, and the public. How these leaders communicate their ideas and policies can sway public opinion and influence the course of political discourse. One aspect of this communication that has garnered attention is disfluent speech and the occurrence of speech errors- deviations from the idealized smooth flow of speech. These disruptions, ranging from 'ums' and 'uhs' to more notable lexical and grammatical errors, provide invaluable insights into the cognitive and communicative processes at play during their public appearances, especially during their TV interviews where they answer some random and uninformed questions. The present research examines the occurrences of speech errors within the disfluent speech of the current president of the United States of America, focusing primarily on his televised interviews. By analyzing the nature and frequency of these speech errors, the present research intends to reveal the potential reasons and underlying factors that drive their emergence.

The study of psychology and neurology with language is called psycholinguistics. The discipline formerly emerged in the 20th century with the introduction of structuralism, advocated by Leonard Bloomfield, and behaviorist psychology, pioneered by Burrhus Frederic Skinner. Moreover, Noam Chomsky's work and emphasis on the significance of cognitive processes in language comprehension and production played a valuable role in developing psycholinguistics as a field of study (Seuren, 1998). However, the formative achievements of Wilhelm Wundt and Ferdinand de Saussure laid down the principal foundations for psycholinguistic discipline (Cowles, 2010).

Over the last few years, research concerning the psycholinguistic analysis of disfluent speech has increased. Researchers and scholars aim to explain the speech error types and the reasons for said speech errors. Celebrities, politicians, and other such public figures, along with regular everyday people, are the target audience under analysis. One such public persona is the former vice president and current President of the United States of America, Joe Biden. Recently, the internet and researchers alike have put President Biden under the spotlight for the multitude of errors in his speech. The disfluent speech of Biden has become a subject of extensive speculation and analysis.

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The current research study studies disfluency in Joe Biden's speech. This analysis identifies the disfluency rate in President Biden's speech by finding the speech error types before quantifying the occurrence rate of the errors in speech. In addition, this investigation determines which speech error occurs most frequently while simultaneously providing possible causes for its occurrence. This descriptive qualitative study uses Clark and Clark's (1977) and Bortfeld et al.'s (2001) theories on the types and causes of speech errors as a theoretical framework for its analysis. The study's purpose is to learn more about the mechanisms behind language comprehension and production by using the theories of Clark and Clark (1977) as a theoretical base. Among the objectives are classifying speech errors, calculating their frequency, and looking at the underlying causes of Biden's speech errors. The research questions center on the various speech errors, their frequency of occurrence, and the potential causes for Biden's speech disfluency.

Aims and Obectives

The research objectives of the current study are:

- To classify the various speech error types, present in the disfluent speech of Joe Biden
- To quantify the total number and percentage of each type of speech error to find the most and least frequently occurring speech error in Joe Biden's speech
- To investigate the underlying causes of speech errors in Joe Biden's speech

LITERATURE REVIEW

The current study of speech errors and disfluencies in a Joe Biden's interviews is a crucial avenue for understanding the cognitive and linguistic processes underlying the communication of political leaders. This literature review explores the existing research on the topic, shedding light on the nature of these linguistic phenomena, their potential reasons and implications, and the methodologies employed to analyze them.

In the past few years, there has been an increase in research concerning the psycholinguistic analysis of the disfluent speech of individuals. Researchers and scholars seek to explain the speech error types that occur and the reasons for said speech errors. Along with regular everyday people, celebrities, politicians, and other such public figures are also the target audience under analysis.

Public Figures and Celebrities Making Speech Errors: One such study on errors in the speeches of prominent public figures is descriptive qualitative research by Thoyyibah and Muyassaroh (2022). In their study, the authors analyzed the speech of Aeshnina Azzahra Aqilani, an environmental activist, and identified 28 speech error types using the Clark and Clark (1977) theory of speech errors. The Clark and Clark (1977) theory classifies speech errors into nine types: the slip of the tongue, stutter, interjection, correction, repeat, false start (retraced and unretraced), filled pause, and silent pause. The research aimed to examine the environmental activist's speech, identify the nine types of speech errors and explore possible reasons for these speech errors (Thoyyibah & Muyassaroh, 2022).

The study transcribed and gathered data using videos on the official Plastic Soup Foundation YouTube Channel. The researchers found that silent pauses and stutters are the most and least used speech errors (respectively) in Aqilani's speech, and the potential causes are social, anxiety, and cognitive reasons (Thoyyibah & Muyassaroh, 2022). One of the strengths of this study is its systematic construction. It anchors its argument upon the Clark and Clark (1977) model, used as a theoretical framework. Moreover, this study used a real-life case by using Aeshnina Azzahra Aqilani's speech at the Plastic Health Summit. It can display how stress-inducing environments can cause speech disfluency and advice on what reduces speech errors. One of the drawbacks of this study is that its scope is narrow and limited to Aqilani's speech at a unique event. It makes it challenging to apply the results of this study to other people and scenarios.

Speech Disfluency in Kindergarten Kids: Carolina (2006) conducted a similar study involving analyzing the speech of 4-6-year-old kindergarten students. The study intended to identify errors and

their types in the disfluent speech of kindergartners while the kids describe a picture. The author used the Clark and Clark (1977) model as a theoretical framework for analyzing the types and causes of speech errors. The research at hand employed a qualitative research methodology with a descriptive approach. Specifically, the author utilized a case study approach to investigate and explain each type of speech error (Carolina, 2006).

The researcher employed a purposive sampling technique to gather the participants for her study. All the young participants had to be 4-6 years old, middle-class, and native speakers of the Indonesian language. The research data was obtained by analyzing 5 to 10-minute audio recordings of exchange between the participants and their mothers. In the recordings, the children described pictures of concrete objects and abstract concepts to their mothers. After transcribing the audio, the researcher identified four types of speech errors in the kindergartners' speech: filled pauses, unfilled pauses, false starts, and repetitions.

The data also showed that the most frequently occurring speech error was the unfilled pause (produced 305 times by all three candidates combined) (Carolina, 2006). This research does not consider the other two causes of speech errors suggested by the Clark and Clark (1977) model. However, it does state that speaking about abstract concepts contributes to disfluent speech. Furthermore, the comfort of the participants was prioritized. This aspect of the study is essential because it ensures the participants' comfort and a natural conversation.

The Effect of Situational and Demographic Variables on Speech Fluency: In a notable study of speech errors and disfluencies, Bortfeld et al. (2001) examined the impact of demographic and situational variables on disfluency rates in speech. Their study considered factors such as age, gender, relationship between participants, topic of discussion, and conversational roles in a sample of 48 pairs of participants. Findings revealed that speech errors, primarily repeats, false starts, and fillers, were most frequent, and fluency rates were significantly higher among elderly participants. Moreover, the role of being a director in the conversation and discussing familiar topics contributed to higher disfluency rates, while relationships between participants and gender differences were also explored. This research's innovative mixed factorial design enhances the understanding of psycholinguistic aspects of speech errors by incorporating various contextual variables, although its focus is primarily on structured discussions. The current study uses this study as part of the theoretical framework especially for explaining the reasons behind the speech errors.

Speech Disfluency in Talk Show Hosts: Likewise, another prior study investigated disfluent speech in

a talk show reporter's utterance (Shohiby, 2023). The qualitative descriptive research explored the types of speech errors in the speech of a reporter of an English medium talk show. Moreover, the researchers conducted a content analysis of the video transcriptions available on YouTube to achieve the research objective. The study uses the Clark and Clark (1977) theory of speech errors as a theoretical underpinning (Shohiby, 2023).

The psycholinguistic analysis in this study demonstrated the host of the television program produced eight types of speech errors, namely: the silent and filled pause, false starts, repeats, corrections, interjections, and slips of the tongue. Evidence illustrates that the most recurring type of speech error was the filled pause, which substantiates prior research (Shohiby, 2023). This study is highly organized by incorporating the Clark and Clark (1977) theory as a framework and using descriptive qualitative methods and content analysis for a more exhaustive investigation. However, the limited scope of the study disregards other populations and contexts.

Qualitative Investigation of Speech Errors: Former research by Elizabeth Shriberg (1996) studies the systematic distribution of speech errors in disfluent speech. It is a common misconception that errors in spontaneous speech are nothing more than 'noisy' events. However, Shriberg compiles a large sum of data demonstrating a systematic trend in the occurrences of speech errors. The descriptive qualitative study draws data from three corpora with different speech styles. The study achieved its purpose by finding the total rate of disfluency, amount of edited words, and the rate of types of speech errors (Shriberg, 1996).

The results of the investigation showed that the disfluency rate was higher in human-human interactions as opposed to human-computer interactions. Furthermore, the author found that men produced a higher rate of disfluency than women. Additionally, the length of the utterances had a significant impact on disfluency rates: longer sentences meant an increased disfluency rate. In addition, speech errors were more likely to occur at the beginning of utterances, corroborating that speech errors reflect taking or maintaining turns in a conversation (Shriberg, 1996).

Moreover, the most frequently occurring type of speech error was the filled pauses, especially among men (Shriberg, 1996). This study is heavily nuanced by analyzing three corpora and several factors to determine the systematic distribution of disfluency in speech. Further, the method of analysis is highly sophisticated and statistical, which increases the reliability of the results. Nonetheless, one of the major drawbacks of this research is that though it uses the Clark and Clark (1977) theory of speech errors, it does not explicitly state or mention so. Secondly, the study fails to mention any underlying

causes of reasons for disfluency in individuals' speech.

Speech Disfluency in Simulated Tasks: A study by Sharon Oviatt (1995) finds the rate of disfluency in spontaneous speech production by creating a simulated system to help participants with a couple of tasks. The researchers assigned the participants two types of tasks: verbal-temporal (where participants had to set up a rental car for their coworker) and computational-numeric tasks (where participants had to do calculations related to personal banking and science. The research involves the participation of forty-four white-collar, native speakers of English, with an even number of males and females. These individuals are also diverse in their ages, ranging from 20 to 60-year-olds (Oviatt, 1995).

Aligning with the other studies, the results found that filled pauses were the most common speech errors in disfluent spoken conversations. Additionally, the researcher found self-correction to be a frequently occurring speech error in written communication (Oviatt, 1995). What sets this study apart from other studies on speech disfluency is that it analyzes speech disfluency in both written and spoken forms of communication. Furthermore, this study establishes a speech disfluency predictability model (Oviatt, 1995). For instance, it proposes that we can predict a speech error if the length of the utterances is longer or increases. However, the limited study scope restricts the generalizability of the findings to other individuals and contexts. In addition, the researcher disregards the varying disfluency rates among males and females.

A review of the selected work shows that disfluent speech has been the focus of many studies. Many of these studies use Clark and Clark's work as their framework. The current study fills in the gap in the literature and investigates interviews with Joe Biden to contribute to the already existing work.

METHODOLOGY

Nature of the Study

This study employs the mixed-method approach, examining qualitative and quantitative data. The mixed method approach is adequate for research that explores socio-cognitive and behavioural phenomena (Cresswell, 2014). The mixed-method approach renders a detailed, systematic, and comprehensive understanding of the research findings necessary for analyzing and interpreting complex phenomena like speech errors and their causes. This approach allows for qualitative examination of subjective perspectives while also calculating the numerical facts through quantitative analysis. The present research conducts a qualitative analysis of the intricate phenomena of speech disfluency and speech errors in addition to computing and quantitative examining the occurrence rate of each speech error in the disfluent spoken language of Joe Biden.

Data Collection Sources and Methods

The present study uses the transcriptions of three videos. The videos are accessible on the online video-sharing platform known as YouTube. The videos are of Joe Biden giving public interviews. These videos serve as a primary source of data collection for the current research study. First, the researchers first collect the videos and then transcribe the interviews verbatim, including all speech disfluencies and errors, to create a comprehensive dataset.

Data Analysis

For analysis first, we developed a coding scheme to categorize and quantify various types of disfluencies, such as filled pauses (e.g., "uh" and "um"), repetitions, corrections, and lexical/grammatical errors. The scheme is developed by taking help from the Clark and Clark's (1977) study.

Next, the frequency and distribution of disfluencies and errors are calculated. The study determines the percentage of each type of speech error by using the following formula: $\frac{(occurrence\ rate\ of\ speech\ error)}{(total\ number\ of\ speech\ errors)} \times 100$. This descriptive study quantifies speech disfluency by determining the total number and percentage of each type of speech error that occurs in Joe Biden's disfluent speech. The percentage of each error in speech is found by dividing the occurrence rate of each speech error type by the total number of speech errors in Joe Biden's speech and multiplying it by 100.

Further, potential causes for errors in spoken language are also listed. In addition, the current study analyzes the disfluent speech of Joe Biden to find what causes underlie the speech errors that tend to arise in his disfluent speech. The research uses Clark and Clark's (1977) and Bortfeld et al.'s (2001)

theories as a theoretical framework for analyzing speech errors and their causes in President Joe Biden's disfluent speech.

Theoretical Framework

The theoretical foundation of this study is the Clark and Clark (1977) speech errors theory. It is explained comprehensively below:

Speech Errors: Speech errors are "disruption in the ideal delivery" (Clark and Clark 1977, 262) of speech. The ideal delivery of speech means that speech which is executed fluently without errors (Clark and Clark, 1977).

Types of Speech Errors: Clark and Clark (1977) identified several types of speech errors, namely silent and filled pauses, retraced and unretraced false starts, repeats, and corrections.

Hesitation Pauses: According to Clark and Clark (1977), one of the frequently occurring disruptions in the ideal speech delivery is the hesitation pause. The authors further divide hesitation pause into two types: the filled and silent pause. A filled pause is when the speaker uses filler words, such as um, uh, ah, and err, in the short gap between utterances (Clark and Clark 1977). The symbol [...] represents a filled pause. As the name implies, when the speaker takes a brief speechless break between utterances, it is called a silent pause. The break only lasts a few milliseconds to a second (Clark and Clark 1977). The symbol [//] represents a silent pause.

Repeats: The type of speech error in which there is a repetition of one or more consecutive words by the speaker is called repetition (Clark and Clark 1977). The symbol [/] shows this type of speech error.

False Starts: Retraced False Starts and Unretraced False Starts: Another type of speech error is the false start, which occurs when the speaker corrects a speech mistake (Clark & Clark 1977). Clark and Clark (1977) further divide false starts into two distinct subtypes: retraced and unretraced false starts. When the speaker repeats the words that precede an incorrect word or phrase before the correct one, it is referred to as a retraced false start (Clark & Clark 1977). On the other hand, a false start is when the speaker does not repeat the words preceding the wrong one before saying the correct one (Clark & Clark, 1977). The symbol [\\] represents an unretraced false start, whereas the symbol [\] shows a retraced false start.

Corrections: Another type of speech error is called corrections. This speech error type is similar to false starts, except the speaker utters correction phrases, such as 'I mean,' 'that is,' or 'rather,' before the correction. The speaker uses corrections to clarify that s/he knows and is trying to correct the error in speech (Clark & Clark 1977). The symbol [-] represents the correction.

ANALYSIS AND DISCUSSION

The table below (Table 1) shows the percentage of occurrence rate for each speech error in the spoken language of President Joe Biden.

Table 1

S.no	Speech Error Type	Occurrence Rate	Percentage %
1.	Filled Pauses	41	28.28 %
2.	Repeats	37	25.52 %
3.	Corrections	32	22.07 %
4.	Unretraced False Starts	18	12.41 %
5.	Retraced False Starts	16	11.03 %
6.	Silent Pauses	1	0.69 %
Total:		145	100 %

Occurrence Rate and Percentage of Each Speech Error Type

As with prior studies, the above table demonstrates that filled pauses are the most frequently occurring speech errors when Joe Biden is speaking. A reason for this could be the dialogue communication style, where the speaker indicates the wish to continue speaking by using words such as um, uh, ah, and err. Next, repeats follow closely with an occurrence percentage of 25.52 %. Corrections constitute 22.07 % of the total number of speech errors following repeats. Subsequently, retraced and unretraced false starts have an occurrence percentage of 11.03 % and 12.41 %, respectively. Lastly, with a 0.69 % occurrence, silent pauses are the least frequently occurring speech error type in the spoken language of President Joe Biden. All of these are explained in the following sections.

Hesitation Pauses: Filled and Silent Hesitation Pauses

As explained, hesitation pauses are the frequently occurring disruptions in the ideal speech delivery (Clark & Clark, 1977) like the data the current study analyses. The study also finds these filled and silent hesitation pauses in the data as shown in Table 1. However, most of the hesitation pauses are filled one rather silent one (see Table 1).

For instance, in the late-night show Jimmy Kimmel Live, when the host asks President Biden why his administration has not strived to control gun violence, Biden answers with several filled pauses, mainly the 'uh' hesitation word in his speech. Below is an illustration of that particular moment:

i. "I think *uh* ... a lot of this intimidation by the NRA. And look, this is not your father's Republican Party. This is a MAGA party."

The disfluency in Joe Biden's speech has a silent pause as well, which occur less frequently than the other speech error types. For example, in the CNN exclusive interview, the interviewer asks President Joe if he is willing to meet Vladimir Putin, the President of Russia, in the G20. In response to this controversial question, Biden says the following with a silent pause while responding:

ii. "I mean, it would depend. But I can't imagine // look, we've taken a position."

In the above excerpt, the President takes a brief silent pause when explaining his response to the interview host.

Repeats

President Biden has multiple instances of repeating words while speaking. For example, a journalist asks the president about Russian President Vladimir Putin's plans to invade Ukraine. Biden's response contains multiple repeats. The instance is given as follows:

iii. "I think it is not irrational if he wanted *to / to* talk about dealing with strategic doctrine and dealing with force structures in Europe and *in / in* the European parts of Russia, but I don't know whether he's decided he wants to do that or not so far in the three meetings we've had OSCE anyway *have / have* not produced anything."

Biden repeats the words, "to," "in," and "have," in the above example.

False Starts: Retraced False Starts and Unretraced False Starts

In Biden's conversations with the TV hosts, there are multiple occurrences of unretraced false starts. For example, the interviewer asks the US President how feels about most of his voters asking for a new nominee for 2024 because of Biden's old age. Biden addresses the question with an extensive response and several unretraced false starts. A snippet of that is as follows:

iv. "And so *I just \ it's a matter of* can you do the job? And I believe I can do the job."

In the instance given above, Biden does not retrace the words that occur before the correction in his speech.

Retraced false starts are an often occurring characteristic of the disfluency in President Biden's speech. For example, the interviewer asks Joe Biden if there is a rational way of leaving Ukraine without seizing territory in Vladimir Putin's mind. In response to this question, Joe Biden makes a retraced false start along with several other speech errors. The utterance is as follows:

    v.   "The idea that he's been able to convince *the significant Russian American \ the Russian people* that this is something that he thought made sense. But now he's accomplished what he wanted to do."

In the above excerpt, the President of the United States retraces the words preceding the correction in his language.

Corrections

The transcription of the interviews reveals that when President Joes Biden speaks, he often makes corrections by using the 'well' and 'I mean' correction phrases. On one occasion, when the host of Jimmy Kimmel Live asks Vice President Biden why his government has not prioritised reducing gun violence by enforcing strict background checks, Biden responds with many instances of corrections, primarily the 'well' and 'I mean' phrases. An example of that exact moment is provided below:

    vi.   "And guess what? Crime went up significantly three times. *I mean* - so there is a direct correlation between the kinds of weapons that can be had."

In the above excerpt, President Biden utters the correction phrase, "I mean," to indicate a correction within his disfluent language.

Causes of speech errors

This part of the study examines the potential causes for errors (as proposed by Clark and Clark 1977; and Bortfeld et al., 2001) in the speech of Joe Biden.

Cognitive Reasons

Prior research established that talking about an abstract subject renders a higher disfluency rate than speaking about a topic related to a concrete entity (Taylor, 1969). In addition, the studies found that individuals have a higher rate of errors in speech when they explain something rather than describe it (Goldman-Eisler, 1968). This discrepancy arises because it causes a delay in two levels of language planning: constructing sentence structures and choosing the right words for each component (Clark & Clark, 1977).

In the interviews analyzed in this research, there are many instances where President Joe Biden was making errors while speaking because he was thinking of selecting the appropriate words for his sentence. For example, in an interview with Jimmy Kimmel, when President Biden is talking about his experience of communicating with Xi Jinping via an interpreter because of the mutual unintelligibility, Biden makes several speech errors, suggesting taking time to pick the proper sentence structure.

vii.   "And I'd always be \\ and I travelled from 17,000 miles"

In the above excerpt, President Biden begins the sentence by saying, "And I'd always be," before correcting himself and saying, "and I travelled..." It appears to be a moment where Biden experiences a delay in the sentence planning structure and errs before selecting the correct words for his sentence.

Furthermore, while answering a journalist's question during an interview, the President's speech is riddled with corrections, filled pauses, and repeats. A potential reason for this could be that he is speaking about abstract ideas like solidarity, cyber-attacks, and national interest.

viii.   "Well - we can respond the same way with cyber. They have FSB people in Ukraine now trying to undermine uh ... the solidarity within Ukraine about Russia and to try to promote Russian interest um ... but it's very important that uh ... that we keep everyone in NATO on the same page and that's what I'm spending a lot of time doing and there are differences / there are differences in NATO as to what countries are willing to do depending on what happens."

The overhead quote has many speech errors, such as corrections ("well -"), repeats ("there are differences / there are differences") and filled pauses ("uh ... the solidarity").

Social Reasons

Another possible reason for speech errors is social reasons. The speaker must show through their language that they are not finished and want to continue talking. If they take an extended pause while speaking, the other person in the conversation will take over by assuming that they are done speaking. So, the speaker makes speech errors, such as filled pauses, to show that they wish to continue talking (Clark & Clark, 1977).

President Biden's speech is full of filled pauses that indicate his wish to continue speaking, especially in talk show interviews. For instance, in the excerpt below, Biden utters a sentence that might seem like he is finished talking. However, he uses a filled pause to show that he is still speaking.

ix.   "I think he's committed war crimes, um //. And uh ... so I don't, I don't see any rationale to meet him."

Here, Joe Biden used the word 'uh' to denote his wish to continue.

Situational Anxiety

Another suggested cause of errors in speech is situational anxiety (Clark & Clark, 1977). The disfluency

rate in speech is higher when the speaker talks about a subject, they feel nervous about (Mahl, 1956). A disruption in the language planning and delivery stages causes this speech disfluency. Moreover, the subject's difficulty level also contributes to errors in language because it makes the speaker feel anxious. In addition, speakers have a higher frequency of speech errors when speaking about abstract concepts. The reason is that the individuals take longer to select the appropriate words for their sentences (Clark & Clark, 1977).

During the chat with Jimmy Kimmel on the Jimmy Kimmel Show, the host asks President Biden about Beau Biden's possible tax crimes and illegal weapon purchases. In his reply, the President makes numerous blunders in his speech.

x.   "They have FSB people in Ukraine now trying to undermine *uh* ... the solidarity within Ukraine about Russia and to try to promote Russian interest."

The high rate of speech errors can potentially be that this is a sensitive topic for President Joe. Talking about his son's alleged crimes is unnerving and harms Biden's reputation in the upcoming mid-term elections. Because this question puts Biden under significant stress, he makes several errors in his speech.

Demographic Reasons

In a study, the researchers took many demographic factors when examining speech errors in the research participants. Two variables that saw a discrepancy in the speech disfluency rate were age and gender. Based on age, the researchers split the participants into three groups: young, middle-aged (aged 40), and elderly (aged 50-60). Additionally, the participants were an even number of males and females. The results demonstrated that the elderly group of participants produced a higher rate of fillers, repetitions, and restarts in their language, corresponding to young and middle-aged participants. Further, although the men and women produced a similar word count, the males had a higher rate of filled pauses in their speech (Bortfeld et al., 2001).

In all of the videos investigated in this research for speech errors, Joe Biden is well over 70 years of age. Hence, his spoken language is full of errors. This finding corresponds with Bortfeld et al.'s (2001) study results, which found an increased rate of speech errors in older individuals rather than in the young and middle-aged group. Furthermore, another reason for the high rate of speech errors in President Biden's speech could be attributed to his male sex, which corroborates with Bortfeld et al.'s (2001) conclusions.

Speaking Styles

The speaker takes more filled pauses in dialogue style (Rochester, 1973) and silent pauses frequently in a monologue speaking style (Levin and Silverman, 1965). In all the videos of Joe Biden speaking, there is only one instance of him taking a silent pause between utterances. The low occurrence rate could be because his speaking style was mostly a dialogue instead of a monologue. Since the hosts, interviewers, and journalists continuously interrogated him, Biden could not silently pause to formulate his responses properly. Otherwise, the second person in the interview would have assumed that President Biden finished talking and taken his/her turn. As a result, the number of filled pauses is significantly higher than silent pauses.

DISCUSSION

The research investigation found repeats, false starts, hesitation pauses, and corrections in President Joe Biden's spoken language. The investigation concluded that the most frequently occurring speech error type is the filled pause, corroborating with past studies. The filled pauses in the spoken language of President Joe Biden have an occurrence rate of 41 times. On the other hand, the least occurring speech error is the silent pause, which has an occurrence rate of only one time. The discrepancy in occurrence rate exists because, during an interview, the participants in a conversation have a dialogue instead of one person speaking in a monologue. Filled pauses occur in the dialogue style of speaking. Since the data of President Biden's speech is mostly from interviews (thus dialogues), there is a significantly higher rate of filled pauses than silent pauses.

Other speech errors, such as retraced and unretraced false starts, repeats, and corrections, occurred in Biden's spoken language. The occurrence rate of unretraced false starts, retraced false starts, corrections, and repeats are 18, 16, 32, and 37 times, respectively. To sum it all up, there were 145 speech errors in Joe Biden's speech. It means that the President made 2.69 errors in speech per 100 words.

CONCLUSION

In closing, the current research studies disfluency in President Biden's spoken language to determine the occurrence rate and causes of types of speech errors. The research found the occurrence rate of each speech error to be as follows: filled pauses (41 times, 28.28 %), repeats (37 times, 25.52 %), corrections (32 times, 22.07 %), retraced false starts (16 times, 11.03 %), unretraced false starts (18 times, 12.41 %), and silent pauses (1 time, 0.69 %). The potential causes for errors in speech are cognitive reasons, social reasons, situational anxiety (Clark & Clark, 1977), demographic factors, and speaking style (Bortfeld et al., 2001). The investigation found that the speech error with the highest occurrence rate in the speech of President Joe Biden was the filled pause, which occurred 41 times. A potential reason for more filled hesitation pauses in Biden's spoken language could be the dialogue talking style where the speaker has to indicate, through language, their desire to continue speaking. If the speaker hesitates silently for longer than necessary, the other participant in the conversation will take over. In addition, the speech error type with the lowest appearance rate in President Biden's speech was the silent pause. Joe Biden hesitated silently only one time. A reason for a low occurrence rate of silent hesitation pauses could be that the communication style was not a monologue, which has a high potential for silent pauses.

In conclusion, the present research underlines the intricate interplay between disfluency and speech errors in elected political leaders' speech and the multidimensional factors contributing to these speech errors. Being able to articulate ideas with cogency and coherence in a public setting with large audiences is a complicated challenge, affected by cognitive, social, situational, demographic, and stylistic factors.

Recognizing the causes of these disfluencies and speech errors is a crucial step that brings scholars and linguists closer to a more thorough comprehension of political communication and discourse. The findings from this investigation underscore the human element of political leadership and deliver a nuanced viewpoint on the challenges and problems that come with the public representation of elected political leaders.

With the evolving state of political communication in an age of extensive public scrutiny and media coverage, the findings of this research serve as a valuable resource for policymakers, speechwriters, and media professionals aiming to improve the effectiveness of political discourse. Furthermore, the current study adds to the more comprehensive discourse on communication, underscoring the intersection of language, psychology, and politics- and the convoluted dynamics that influence public perception of political leaders.

The comprehensive examination of speech errors in Joe Biden's spoken language significantly contributes to comprehending disfluency and errors in the spoken language of elected political leaders. The present research provides a substantial basis for further inquiry and serves as a stepping stone for future academic investigations concerning speech production and fluency.

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