

A Case Study: An Appraisal Analysis of President Joe Biden's Speech on Sustainable Development Goal 13 'Climate Change' on the Aftermath of Hurricane Ida

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ABSTRACT

This case study examines the appraisal resources of Sustainable Development Goal 13 (SDG13) on Climate Change in the presidential speech of the American President Joe Biden on the aftermath of Hurricane Ida after his tour of the storm damage in New Jersey and New York, adopting an appraisal analysis method. Following Martin and White's (2005) Appraisal Model with special focus on the three systems of attitude, engagement, and graduation, this qualitative study aims to reveal how Joe Biden engages with the American audience in his climate change speech in alignment with the United Nations (UN) agenda for sustainable development. For this purpose, the transcript of President Biden's speech on the aftermath of Hurricane Ida was obtained from a New York Times media source to identify the main Appraisal systems that dominate his speech on climate change and to reveal how his speech contributes to enhancing SDGs awareness as far as climate change is concerned. Key findings showcase that President Biden relies heavily on the Attitudinal Resources (namely, Affect of insecurity and dissatisfaction) to convince the public that climate change is everybody's crisis, oscillates between two engagement choices (dialogic contraction and dialogic expansion) to sound objective, and incorporates the Graduation system under Force, employing lexicalization and repetition to convince the public that the worst is imminent, bold actions should be taken, and public co-operation is urged.

Keywords: Appraisal, Attitude, Climate Change, Engagement, Graduation, Presidential Speeches, Sustainable Development Goals (SDGs).

1. INTRODUCTION

On September 25, 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development, outlining 17 ambitious global goals to be achieved by the year 2030 (United Nations, 2015). These goals, known as the Sustainable Development Goals (SDGs), aim to promote fairness and sustainability across a broad spectrum of human and environmental issues, spanning from planetary biosphere health to local community well-being (Morton, 2017). Almost all countries have committed to improving both the planet and the lives of their citizens by 2030 (United Nations, 2021).

This study focuses on Sustainable Development Goal 13 (SDG 13), which addresses the critical issue of climate change. The official statement of this goal is to "Take urgent action to combat climate change and its impacts" (United Nations, 2015). Climate change has been the most significant environmental issue since the late 20th century (Rahman, 2013), with countries across the globe acknowledging its profound effects.

Climate change refers to long-term shifts in weather patterns and temperatures, which can occur due to natural processes but are primarily driven by human

activities, such as the burning of fossil fuels like coal, oil, and gas (United Nations, 2016). The consequences of climate change now include extreme droughts, water scarcity, severe wildfires, rising sea levels, floods, melting polar ice, and catastrophic storms (United Nations, 2016).

Despite the clear and present danger posed by climate change, there remains a significant portion of the American public that denies its existence (Biden, 2021). This disconnect has prompted urgent calls for the U.S. government to launch climate change awareness campaigns that inform citizens about the crisis and empower them with the knowledge, skills, and values needed to take action. Accordingly, this study examines how presidential discourse can persuade the public of the urgency of the climate crisis. While SDG 13 has been addressed in numerous scientific studies (Baliram, 2020), the analysis of public speeches from the perspective of Appraisal Theory is a novel contribution to the discourse.

The primary objective of this study is to conduct an appraisal analysis of President Joe Biden's official discourse delivered in 2021 following his tour of the storm damage in New Jersey and New York. As the climate change crisis intensifies, Biden's speeches aim to convince the public of its severity and foster national solidarity. This study will explore how Biden utilizes appraisal resources to communicate the gravity of the climate crisis and encourage collective action. Additionally, this study offers a foundation for future research, as the methodology can be replicated to analyze other public speeches through the lens of Appraisal Theory.

1.1 Research Questions

The overarching question the study addresses is:

How does President Joe Biden employ Appraisal Resources to convince the public about the gravity of the climate change crisis in relation to the United Nations Sustainable Development Goal 13 to foster national solidarity?

To answer this question, the researchers address these three sub-questions:

1. Which appraisal resources does Joe Biden utilize in his speech discussing the impact of Hurricane Ida?
2. What is the primary appraisal system prevalent in Biden's speech following Hurricane Ida?

3. How does Biden's speech contribute to raising awareness of the Sustainable Development Goal related to climate change and promoting sustainable development?

2. LITERATURE REVIEW

2.1 Appraisal Theory

James Martin, a linguistics professor at Sydney University, introduced the Appraisal System in the early 1990s, which quickly gained significant attention from scholars. The primary contributors and advocates of this system are Martin (1992, 1995, 2003) and White (1998, 2003). Like any theory, it is not static or fully developed, and ongoing proposals and considerations for amendments and updates are prevalent. The theory primarily focuses on how speakers express their emotions and incorporate additional voices in their discourses (Martin & White, 2005). Appraisal Theory revolves around the speaker's perception and recognizes that individual variability leads to different reactions to the same event. Within Appraisal Theory, three sub-systems—Attitude, Engagement, and Graduation—are utilized to analyze speeches and explore various areas of interest (Martin & White, 2005). Martin & White's (2005) system of Appraisal Theory helps the researchers to analyze the data that have been collected for this study.

2.2 Attitude System

"The attitude semantic system is concerned with the linguistic expression of positive (+) and negative (-) attitudes" (Painter, 2003: 184). It can also be inscribed (explicit), or evoked (implicit). Attitude is further divided into three semantic regions: Affect, Judgment, and Appreciation.

2.2.1 Affect

Affect, as discussed by Martin and White (2005), pertains to the emotions and feelings expressed by the speaker or writer in their discourse. It encompasses both positive and negative emotions, such as pleasure, happiness, sadness, and admiration (Martin & White, 2005: 42). Affect can also be conveyed through nouns representing mental processes, such as grief, admiration, fear, sorrow, and so on. Affect can be classified into three major categories which are related to un/happiness, in/ security, and dis/satisfaction (Martin & White, 2005).

Resources of happiness and unhappiness pertain to internal emotions, including love, happiness, sadness, and hatred. While resources of happiness

are associated with affection and cheerfulness, resources of unhappiness are connected to feelings of misery and antipathy. Resources of security and insecurity are linked to individuals' feelings in relation to their environment. Resources of insecurity involve feelings of unease and surprise, whereas resources of security encompass confidence and trust. Resources of satisfaction and dissatisfaction relate to individuals' emotions stemming from the accomplishment or failure to achieve their dreams and goals. Resources of dissatisfaction encompass feelings of boredom and displeasure, while resources of satisfaction involve feelings of interest and pleasure (Martin & White, 2005).

2.2.2 Judgment

Judgment is related to the evaluation of human behavior and how it compares to social norms. According to different evaluative standards, the Judgment System can be classified into two broad categories, defined as Social Esteem and Social Sanction (Martin & White, 2005). Behaviors within the realm of Social Esteem are evaluated based on widely accepted social expectations and are influenced by conversations and interactions within family social networks. Positive behaviors are encouraged and valued, while negative behaviors are discouraged or criticized. Social Esteem encompasses norms related to normality, capacity, and tenacity, emphasizing what is considered normal, someone's ability to perform tasks, and the quality of being reliable (Martin & White, 2005: 53). In contrast, behaviors falling under Social Sanction are judged based on moral or legal grounds, typically through written texts such as rules, laws, or regulations. Negative behaviors are often condemned as sins or punished as crimes. Social Sanction involves assessments of human actions in terms of their truthfulness and propriety, focusing on the qualities of being honest, trusted, and socially or morally acceptable.

2.2.3 Appreciation

Appreciation accounts for "meanings construing our evaluations of things especially things we make" (Martin & White, 2005: 56). Appreciation can be classified into three sub-types: Reaction, Composition, and Valuation (Martin & White, 2005: 56).

The first sub-type, Reaction, pertains to the effect of things on people and includes words such as captivating, exciting, notable, lively, and fine. The second sub-type, Composition, refers to the balance and complexity of the inner structure of certain phenomena and includes words like unified,

symmetrical, irregular, unbalanced, pure, and unclear, which reflect the speaker's or writer's position towards the composition of certain phenomena.

Finally, the third sub-type, Valuation, is used to appreciate the social significance of things, which can be assessed with words such as creative, authentic, profound, deep, unique, shallow, insignificant, fake, and worthless (Martin & White, 2005: 56).

2.3 Engagement System

The Engagement system, a key component of Appraisal Theory, explores how speakers or writers express their viewpoints and align themselves with or against the positions of others. It examines the ways individuals present their perspectives in relation to other utterances, whether in agreement or opposition (Martin & White, 2005: 93). This system operates through two main strategies: Dialogic Contraction and Dialogic Expansion, which together define how speakers manage the presence of alternative voices in discourse (Martin & White, 2005: 92).

Dialogic Contraction refers to instances where speakers limit the scope for alternative viewpoints, effectively closing the dialogue. Martin and White (2005) describe two main types of contraction: Disclaim and Proclaim. In Disclaim, speakers reject opposing positions, thereby misaligning with the presented utterance and asserting their own authority (Martin & White, 2005: 97). In contrast, Proclaim involves presenting the speaker's viewpoint as widely accepted and reliable, minimizing room for alternative perspectives (Martin & White, 2005: 98). Proclaim strategies include concur, where the speaker expresses agreement or shared knowledge; pronounce, where the speaker explicitly asserts their position, often through intensification; and endorse, where the speaker validates their stance using supporting evidence or references (Martin & White, 2005: 122, 101, 126).

On the other hand, Dialogic Expansion creates space for alternative perspectives, allowing for a more open dialogue. Speakers acknowledge other viewpoints and position their own stance as one among many possible interpretations (Martin & White, 2005: 111). Expansion operates through two primary strategies: entertain and attribute. "Entertain" expressions signal that the speaker's viewpoint is one possibility among many, inviting alternative perspectives. Attribute involves recognizing multiple viewpoints, either by acknowledging other perspectives without necessarily aligning with them or by distancing the speaker from the proposition, indicating a lack of responsibility for

the presented view (Martin & White, 2005: 111-112). While "Entertain" emphasizes the internal perspective of the speaker, "attribution" highlights external voices by associating propositions with specific sources or consensus. Examples include "there is an argument that" or "it is said that" (Martin & White, 2005: 111).

By balancing contraction and expansion, the Engagement system captures how speakers manage their relationship with other voices in discourse, either by asserting authority or fostering dialogue. This dynamic interaction highlights the ways in which speakers navigate agreement and opposition in their communication.

2.4 Graduation System

The third system is Graduation which offers speakers further opportunities to strengthen or weaken their utterances along a scale using two axes of scalability: Focus and Force. Focus is related to strength of feeling and level of commitment to value positions; Force is instead to do with the scalability of the intensity of the evaluation.

2.4.1 Focus

Focus, as discussed by Martin and White (2005), pertains to the level of precision in the meaning conveyed by a text. It involves the use of language to either sharpen or soften the focus of a statement. For instance, the term "real policeman" sharpens the focus by providing a specific and clear meaning, while "a sort of policeman" softens the focus, indicating an intention to diminish the value position.

2.4.2 Force

Force, as the second subdivision of Graduation in Appraisal Theory, enables speakers and writers to convey the intensity of their feelings towards a proposition (Martin & White, 2005). It encompasses two perspectives: intensification and quantification. Intensification can be achieved through various grammatical resources such as isolation, maximization, lexicalization, infusion, and repetition (Martin & White, 2005: 141-143). Isolation involves using an intensifier as a pre-modification of an adjective or adverb, while comparatives and superlatives can also function as intensifiers (Martin & White, 2005: 141). Maximization represents the highest level of intensification. Intensifiers can also be realized through lexical and grammatical resources, like words such as slightly and very, or through figurative implications such as ice-cold and crystal-clear (Martin & White, 2005: 143). Repetition of the same lexeme or semantically related

listing terms can also serve as intensifiers.

Quantification, on the other hand, focuses on scaling the amount, weight, size, strength, and number, which can be either abstract or concrete (Martin & White, 2005:148). Quantifiers are categorized according to different modes, including mass, number, time, and space. Examples of mass quantifiers are small, large, thin, light, and heavy, while number quantifiers include a few and many. Time and space quantifiers comprise near, far, short, and wide (Martin & White, 2005: 150).

2.5 Previous Studies Examining Appraisal Resources

Many studies have attempted to examine Appraisal Resources in several contexts or genres, such as political speeches, digital narratives, and academic writing. These contexts highlight how attitudinal markers like Affect, Judgment, and Appreciation function across different forms of communication, helping to analyze how speakers or writers convey their stance and engage their audience.

Ailan (2017) applies Appraisal Theory to President Obama's victory speech, analyzing the attitudinal resources of Affect, Judgment, and Appreciation. The study finds that Obama's use of positive attitudinal meanings—especially those expressing hope and optimism—helps to rebuild public confidence and mitigate hostility in the aftermath of the election. The cheerful mood throughout the speech reflects a deliberate use of Affect, aimed at fostering a sense of unity and renewal. While this study effectively uncovers the emotional and evaluative strategies used in Obama's speech, it could further explore how these resources of Affect and Judgment interact with the broader political context or how they are tailored to specific audiences. The reliance on positivity as a communicative tool could be contrasted with other leaders who face more divisive or crisis-ridden situations, such as the climate change discourse analyzed in the present study.

Similarly, Elyamany (2020) explores Jay Shetty's digital narratives, focusing specifically on the Buddhist practices Shetty promotes and the strategies he employs to convey his message globally. The emphasis of this study on audio-visual materials and its analysis of appraisal resources, particularly the dominance of Judgment and Appreciation, provides an intriguing look at how speakers in digital media communicate authority and value. The finding that explicit attitudinal meanings are the primary means through which Shetty conveys his stance is noteworthy, as it underscores a deliberate

strategy to make his wisdom accessible and appealing to a broad audience. However, the study does not delve deeply into how these digital narratives engage with varying perspectives or how the interactive nature of digital platforms may affect the reception of such attitudinal markers. This gap presents an opportunity for further exploration, particularly in relation to how public figures, like presidents, use appraisal strategies in more politically charged settings.

Harti (2020) offers a different perspective by analyzing the use of Attitude in students' expository writing on the COVID-19 pandemic. The study finds that Affect dominates the attitudinal markers in the compositions, revealing students' feelings of insecurity and dissatisfaction in response to the pandemic. This focus on personal emotion, rather than broader societal or political evaluations, highlights how different genres elicit different forms of attitudinal expression. While Harti's analysis provides valuable insight into how Affect functions in academic writing, it also opens the door for further exploration into how students balance personal emotion with evaluations of societal responses to crises like COVID-19. The present study, by focusing on presidential discourse, aims to examine how appraisal resources are used to persuade a broader public audience, rather than reflecting individual feelings, thus adding a new dimension to the existing literature.

Muliza's (2018) investigation into Theresa May's speech delivered on July 20, 2018, in Northern Ireland adds another political dimension, but here, Appreciation dominates over Affect, given the political tone required for such discourse. Judgment follows as May appeals to her audience's sense of Tenacity, aiming to unite them around her leadership regarding Brexit. The study effectively uses a descriptive qualitative approach but could benefit from an exploration of how May's use of appraisal compares with her contemporaries. This suggests another potential gap: How different politicians utilize Affect, Judgment, and Appreciation in politically sensitive situations like national crises.

Zhang and Pei's (2018) study provides a comparative analysis of the appraisal resources used by Xi Jinping and Donald Trump in their speeches at the Davos Forum in 2017 and 2018. By focusing on how these leaders express attitudes—particularly Affect and Judgment—the study reveals that both utilize positive language to project a sense of national confidence. Additionally, Zhang and Pei examine the leaders' use of engagement systems, identifying a tendency toward dialogical contraction, where both Xi and Trump generally use language that closes off alternative perspectives, reinforcing their own stances rather

than encouraging negotiation or dialogue. While the comparative approach offers valuable insights into the rhetorical strategies of these two major world powers in high-profile, formal contexts, the focus on formal speeches leaves unexplored how appraisal is handled in more informal or spontaneous settings, such as interviews or press conferences, presenting another opportunity for future research.

3. METHODOLOGY

3.1 Introduction

The purpose of this study is to examine the appraisal systems employed by President Biden during his climate change speech following the aftermath of Hurricane Ida, after his visit to the storm-damaged areas in New Jersey and New York in 2021. The researchers provide a comprehensive description of the research design, data collection methods, and data analysis techniques utilized in this study. This description includes an outline of the qualitative research design employed, as well as the sources of data utilized for the investigation.

3.2 Research Design

The study adopts a qualitative research design, which is appropriate for conducting an in-depth analysis of language and discourse. The choice of a qualitative research design allows for a thorough examination of President Biden's climate change speech following the aftermath of Hurricane Ida and the identification of the predominant systems of appraisal.

3.3 Data Collection

For this study, a specific climate change speech delivered by President Biden in 2021 was carefully selected which aims to investigate the appraisal resources utilized by the president to persuade the public about the pressing climate change crisis within the context of the United Nations Sustainable Development Goal 13. This speech on September 7, 2021, titled "Remarks by President Biden on the Aftermath of Hurricane Ida" holds significance in addressing the topic of climate change, as President Biden discusses his comprehensive plans to tackle this issue and reduce greenhouse gas emissions. Emphasizing that climate change encompasses national security, public health, and economic challenges, President Biden highlights the urgency for the United States to take a leading role. The speech entails a range of policy proposals, such as investing in clean energy infrastructure, generating employment opportunities in the renewable energy sector, and collaborating with other nations to address the global

climate challenge. To ensure the reliability of the transcript, it was sourced from the reputable news outlet, the *New York Times*, which is renowned for its comprehensive coverage and provides dependable transcripts of speeches and interviews with prominent public figures (The *New York Times* Company, n.d.).

The transcript of this speech was downloaded from the *New York Times* website:

<https://www.nytimes.com/2021/09/07/us/politics/biden-speech-transcript-hurricane-ida.html>

3.4 Data Analysis

In this case study, the data were analyzed manually. The researchers have carefully read the transcript of President Biden’s speech and have identified specific phrases or sentences related to climate change appraisal resources like attitude, engagement, and graduation. By examining in what ways these resources were used, the researchers gained insights into the strategies President Biden employs to effectively communicate his message. The transcript was analyzed using a thematic analysis approach, which involves identifying patterns or themes in the data through repeated examination. Themes and patterns

are important in appraisal analysis as they help identify the overarching ideas and how language is used to express attitude, engagement, and graduation towards a particular topic. The researchers have identified specific phrases or sentences in the speech and grouped them into themes. These themes were then analyzed to understand the specific appraisal resources used by President Biden in his climate change speech and how they contribute to the persuasive impact of his message.

4. ANALYSIS AND DISCUSSION

To uncover President Biden’s utilization of appraisal resources in his climate change speech and evaluate their persuasive impact, a tabular format is used. Each theme identified in the speech transcript is presented in a separate table, outlining the theme, corresponding phrases, appraisal resources utilized, and a concise analysis. Subsequently, a comprehensive discussion delves into the analysis of these findings. The identification of themes is based on specific phrases or sentences extracted from the speech transcript, which are then examined through the lens of appraisal theory.

Table 1.

Theme 1	Specific Phrases or Sentences	Appraisal Resources	Brief Analysis
The severe effects of climate change and its consequences.	1. "These waves crashed through the streets here, testing the aging infrastructure and taking lives. More lives were taken here than down in Louisiana." (Lines: 41-42)	Attitude: Affect: unhappiness	The speaker conveys a sense of sadness and frustration about the impact of climate change on the community, particularly through the mention of lives lost due to flooding and the reference to aging infrastructure.
.	2. "People are beginning to realize this is much, much bigger than anyone was willing to believe." (Line: 25)	Engagement: Dialogic Expansion: Entertain, Attribution Graduation: Force: Repetition Attitude: Affect: Insecurity	The speaker engages in dialogic expansion by using entertain and attribution expressions. The phrase "People are beginning to realize" acknowledges other perspectives, while "this is much, much bigger than anyone was willing to believe" challenges previous beliefs. This repetition emphasizes the magnitude of the situation and conveys a sense of insecurity.
	3. "And, folks, the evidence is clear. Climate change poses an existential threat to our lives, to our economy, and the threat is here, it's not going to get any better." (Lines 69-70)	Attitude: Affect: insecurity Graduation: Force: lexicalization and repetition.	The speaker uses Attitude and Graduation systems of appraisal. The negative emotion of insecurity is expressed through Attitude, emphasizing climate change as a significant threat. The Graduation system employs repetition and lexicalization to underscore the urgency and severity of the situation. Through these appraisal strategies, the speaker effectively communicates the seriousness of the issue and encourages action.

	<p>4. "The nation and the world are in peril. And that's not hyperbole." (Line 80)</p>	<p>Attitude: Affect: insecurity Engagement: Dialogic Contraction: Disclaim</p>	<p>The quote "The nation and the world are in peril. And that's not hyperbole." exemplifies Attitude through Affect, particularly highlighting emotions of insecurity and fear. The word "peril" emphasizes a sense of imminent danger, portraying a serious threat. Additionally, Engagement is demonstrated via Disclaim in the phrase "that's not hyperbole," where the speaker denies any exaggeration. This strengthens the assertion by rejecting potential doubts, aligning the audience with the speaker's conviction about the gravity of the situation.</p>
	<p>5. "And I know these disasters aren't going to stop. They're only going to come with more frequency and ferocity." (Lines: 101-102)</p>	<p>Graduation: Force: Maximization</p>	<p>In this quote, President Biden utilizes graduation with the subtype of force through maximization. He emphasizes the seriousness and urgency of the issue by employing words such as "disasters," "more frequency," and "ferocity." The phrase "aren't going to stop" indicates the persistent nature of the situation, reinforcing the gravity of the issue. This encourages the listener to acknowledge the significance of the problem and take necessary action.</p>

President Biden utilizes various appraisal systems to emphasize the severity of the situation and persuade the audience to act on climate change. Through attitude, engagement, and graduation, the speaker effectively conveys the urgency and importance of addressing the issue. For instance, the speaker expresses negative emotions of sadness and frustration regarding the impact of climate change on the community, highlighting the loss of lives and the inadequacy of the aging infrastructure. This evokes a sense of hopelessness, emphasizing the need for immediate investment and updates to enhance resilience.

In terms of engagement, the speaker acknowledges varying perspectives and expands the dialogue, recognizing that individuals are increasingly becoming aware of the magnitude of the issue. This demonstrates the speaker's intention to unite people and foster a shared understanding of the significant impact of climate change. The repetition of the phrase "much, much bigger" emphasizes the urgency and seriousness of the situation, aiming to encourage action.

In another quote, President Biden combines attitude and graduation to convey the seriousness of climate change. Through attitude, the speaker expresses insecurity and anxiety, describing climate change as an existential threat to lives and the economy. The use of

the phrase "poses an existential threat" intensifies the gravity of the issue. Through graduation, the speaker employs lexicalization and repetition, emphasizing the severity of the threat and motivating the audience to act. Furthermore, the speaker emphasizes the urgency of the situation through attitude, conveying a sense of insecurity and fear by stating that the nation and the world are in peril. The use of the phrase "that's not hyperbole" underscores the accuracy and seriousness of the statement.

In terms of graduation, President Biden uses maximization to highlight the urgency and severity of climate change. Words such as "disasters," "more frequency," and "ferocity" emphasize the intensity of the situation. The phrase "aren't going to stop" implies the ongoing nature of the issue and reinforces the need for immediate action.

The attitude and graduation systems are the primary focus in this theme. The attitude system conveys the speaker's emotional response, particularly the feelings of insecurity and fear. On the other hand, the graduation system is employed to highlight the seriousness and urgency of the issue through techniques like repetition and maximization. These strategies effectively persuade the listener to acknowledge the gravity of the situation and take immediate action.

Table 2.

Theme 2	Specific Phrases or Sentences	Appraisal Resources	Brief Analysis
Government Response and Assistance	1. "The group I have standing with led by Chuck Schumer and your congresswoman I want to thank her personally for her gumption, the way she's fought and hollered and fought so hard for all the people in this alley. I really mean it. Thank you, thank you, thank you." (Lines: 11-14)	Attitude: Affect: Satisfaction and happiness Graduation: Force: Repetition	President Biden expresses positive emotions of satisfaction and happiness towards Chuck Schumer and the congresswoman in this quote, using the Attitude system under Affect. The repeated phrase "thank you" reinforces his positive attitude and appreciation for their efforts. Additionally, there is graduation under force through repetition, as the repetition of "thank you" emphasizes the speaker's sincere gratitude for their contributions.
.	2. "The New York Fire Department, the New York Police Department, the Sanitation Department and other first responders, they're leading with incredible, incredible courage." (Lines: 66-68)	Graduation: Force: lexicalization and Repetition Attitude: Affect: Satisfaction	President Biden persuades the listener to recognize and admire the bravery of the first responders through his use of the Graduation system, specifically the subtype of force involving lexicalization and repetition. The phrase "incredible courage" highlights the exceptional bravery of the responders, and the repetition of "incredible" strengthens the speaker's admiration. Furthermore, this quote reflects the President's satisfaction with the first responders' work.
	3. "If you need help, please go to disasterassistance.gov . Or call 1-800-621-FEMA. 1-800-621-3362. We can get you help now." (Line: 99) Note: FEMA stands for Federal Emergency Management Agency.	Engagement: Dialogic Contraction: Proclaim: Endorse	The quote belongs to the Proclaim category in the engagement system, specifically the technique of Endorse. The inclusion of specific numbers, such as "1-800-621-FEMA" and "1-800-621-3362," enhances the credibility of the statement and emphasizes the availability of immediate assistance.

President Biden expresses his gratitude and satisfaction towards Chuck Schumer, the congresswoman, and the first responders in different quotes. He repeatedly thanks them for their hard work and dedication, demonstrating his positive attitude. The President also emphasizes the bravery and courage of the first responders, using the words "incredible courage" and "incredible" to highlight their extraordinary qualities. Additionally, he provides specific numbers

to access immediate help, adding credibility to his statements. Overall, President Biden's messages convey appreciation, admiration, and urgency. The main appraisal systems employed in these quotes are positive attitude under affect and forceful graduation through repetition. They highlight the speaker's satisfaction and admiration for the work being done to assist those in need.

Table 3.

Theme 3	Specific Phrases or Sentences	Appraisal Resources	Brief Analysis
Perspectives on Climate Change: Denial and Awareness.	1. "And the whole segment of our population denying this thing called climate change. But I really mean it." (Line: 25)	Attitude: Affect: Dissatisfaction	Biden expresses dissatisfaction towards climate change deniers, emphasizing his sincere evaluation of the situation.
.	2. "The people who stand on the other side of the fences who don't live there, they don't understand." (Lines: 38-39)	Engagement: Dialogic Contraction: Disclaim	In this quote, Biden engages in dialogic contraction through disclaim by rejecting the perspective of those who "stand on the other side of the fences." He asserts that their understanding of the situation is limited because they don't live in the same situation.

	<p>3. "This is everybody's crisis, we're all in this." (Line: 124)</p>	<p>Graduation: Lexicalization</p>	<p>Force: This quote highlights the importance of collective responsibility and unity during a crisis through forceful language using Lexicalization. The phrase "This is everybody's crisis" emphasizes that the crisis impacts everyone and emphasizes the need for everyone to contribute.</p>
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Biden's quotes address climate change denial and awareness. One quote expresses his dissatisfaction towards climate change deniers, emphasizing his sincere evaluation and negative emotions. Another quote rejects the perspective of those who do not understand the situation due to their detachment. The quote highlights a division and implies the speaker's expertise, and it falls under dialogic contraction. Additionally, a quote emphasizes collective responsibility and unity during the crisis, emphasizing that it affects everyone. The use of "we" reinforces the idea of shared responsibility.

Overall, in the theme of Climate Change Denial and Awareness, the three appraisal systems are employed through the powerful technique of lexicalization in Biden's discourse. His language underscores the gravity of the climate crisis and advocates for collective responsibility. By using lexicalization, Biden effectively conveys the urgency and significance of the issue, compelling a unified response to this critical challenge.

Table 4.

Theme 4	Specific Phrases or Sentences	Appraisal Resources	Brief Analysis
Urging for Action and Change	<p>1. "We are determined, we are determined that we are going to deal with climate change and have zero emissions, net emissions by 2050." (Lines:55-56)</p>	<p>Graduation: Force: Repetition</p>	<p>This quote shows the speaker's strong determination to address climate change. The repeated phrase "we are determined" emphasizes his commitment and makes it memorable. It reflects his firm resolve to take significant action.</p>
	<p>2. "We've got to move. And we've got to move the rest of the world. It's not just the United States of America." (Lines:57-58)</p>	<p>Graduation: Force: Repetition Engagement: Dialogic Expansion: Entertain</p>	<p>This quote combines graduation under force through repetition and engagement under dialogic expansion through entertain. The repeated phrase "we've got to move" emphasizes the urgency and importance of acting on climate change collectively. The use of "we" highlights the shared responsibility and willingness to work together. Additionally, the phrase "it's not just the United States of America" underscores the global nature of the issue and promotes international collaboration.</p>
	<p>3. "I'm going to be heading from here to Glasgow, Scotland, for the COP meeting [United Nations Climate Change Conference], which is all the nations of the world getting together to decide what we are going to do about climate change." (Lines: 49-50)</p>	<p>Attitude: Judgment: Social Esteem: Capacity and Tenacity</p>	<p>The quote showcases the speaker's capacity to address climate change by actively participating in the COP meeting and collaborating with other nations. This demonstrates his ability to act and contribute positively to a global issue. Additionally, the quote highlights the speaker's reliability and tenacity as a leader by engaging in discussions and encouraging others to join his efforts.</p>
	<p>4. "I think of one word when I think of climate change: jobs. Good paying jobs. We can put the economy back on a path to real growth." (Lines: 117-118)</p>	<p>Engagement: Dialogic Expansion: Entertain</p>	<p>The quote engages the audience using Entertain expressions, inviting dialogue and diverse perspectives on the relationship between climate change and the economy. The speaker's use of "I think" encourages open discussion. Additionally, the phrase "one word" simplifies the message, while "good paying jobs" expands the conversation to include economic considerations alongside climate change.</p>

President Biden's quotes about climate change demonstrate a mix of attitude, engagement, and graduation systems. He expresses a sense of urgency and determination to address the issue, emphasizing the need for global collaboration. In one quote, he repetitively emphasizes the determination to achieve zero emissions by 2050. Another quote highlights the urgency to act and involve the rest of the world,

stressing that it is not just the responsibility of the United States. Biden's commitment is evident through his attendance at international conferences like the COP meeting. Lastly, he connects climate change to the economy, emphasizing the importance of good-paying jobs and sparking a conversation about the positive outcomes of addressing climate change.

Table 5.

Theme 5	Specific Phrases or Sentences	Appraisal Resources	Brief Analysis
Working Together for Common Goals	1. "Sometimes some very bad things happen that have a tendency to bring out the best in a people and a country." (Line:27)	Attitude: Judgment: Social Esteem: Capacity Appreciation: Normality Graduation: Force: Intensification	This quote exemplifies the social esteem norm of judgment through capacity, reflecting a belief in people's ability to rise to challenges and showcase their best qualities. The phrase "bring out the best" highlights this belief, demonstrating appreciation (normality) for the resilience and strength of individuals and nations. Additionally, there is a use of graduation via intensification, as the phrase suggests a strong effect of tough situations, emphasizing the significant response to challenges.
	2- "The great thing about America, every time we end up with a problem, going into a serious circumstance we come out better than we went in that is because we are so diverse. That's America be proud of it." (Lines: 7-8)	Attitude: Affect: Satisfaction Force: Graduation: Force: Lexicalization Appreciation: Normality	The quote combines the attitude system under affect and appreciation with the graduation system under force through lexicalization. The speaker expresses satisfaction with America's diversity and its resilience in overcoming challenges. The phrase "be proud of it" emphasizes this satisfaction, showcasing appreciation (normality) for the country's strength and adaptability. Additionally, the speaker highlights the pattern of improvement that occurs every time a problem arises, indicating that challenges can lead to progress.
	3. "We have to take some bold action now to tackle the accelerating effects of climate change." (Line: 48)	Engagement: Dialogic Expansion: Entertain Graduation: Force: Lexicalization	The quote demonstrates engagement under dialogic expansion through entertain, as the speaker urges immediate action to address climate change. The phrase "we have to take some bold action now" invites the audience to actively participate and emphasizes the urgency. Furthermore, the speaker uses strong words like "bold" and "accelerating" within the graduation system to underscore the need for decisive measures.

President Biden's statements in theme 5 incorporate various appraisal systems. In the first quote, he suggests that challenging circumstances can bring out the best in people and countries, highlighting their capacity for resilience. The second quote emphasizes satisfaction towards America's diversity and its ability to overcome problems. It also expresses the belief

that challenges lead to improvement. The third quote urges urgent action on climate change, engaging the audience and highlighting the need for bold measures to address the accelerating effects. Overall, Biden's statements showcase his ability to connect with the audience and convey his ideas effectively.

Table 6.

Theme 6	Specific Phrases or Sentences	Appraisal Resources	Brief Analysis
Caring and Support for Communities in Need.	1. "I wish every American could walk down this valley with me to see and talk to the people who have been devastated." (Lines: 3-4)	Attitude: Unhappiness Dissatisfaction	Affect: and In this quote, the speaker conveys unhappiness and dissatisfaction regarding the situation in the valley. The word "devastated" highlights the suffering of the people, while the word "wish" underscores the speaker's desire for improvement.
	2. "You all saw the harrowing images of stories and families trapped in flooding basements and struggling to survive." (Lines: 43-44)	Attitude: Unhappiness Graduation: Lexicalization	Affect: Force: In this quote, Biden combines the attitude and graduation systems. He expresses unhappiness through the description of distressing images and families facing challenges. Additionally, he uses strong words like "trapped" and "struggling" to emphasize the seriousness of the situation and the urgency for action.
	3. "My message to everyone grappling with this devastation is: We're here, we're not going home till this gets done. I really mean that. We're not leaving. We're going to continue to shout as long as it takes to get real progress here." (Lines:46-47)	Attitude: Social Engagement: Contraction: Pronouncement Judgment: Capacity Dialogic Proclaim:	President Biden confidently asserts his capacity and determination by stating that he will persistently advocate for significant progress. He establishes his position as reliable and challenges opposing views by emphasizing his sincerity with the phrase "I really mean that." Using these techniques, President Biden presents a strong authorial voice and demonstrates his firm stance on the matter.

In President Biden's quotes in theme six, he expresses his dissatisfaction and unhappiness. He utilizes the attitude system under Affect to convey his message. In the first quote, he expresses unhappiness and dissatisfaction with the suffering of people in the valley. He wishes for every American to witness the devastation and calls for change. In the second quote, he expresses unhappiness with distressing images and describes the severity of the situation. He emphasizes the need for immediate action. In the third quote, he demonstrates his capacity and determination to address the issue of climate change. He proclaims that progress will be made and challenges alternative views. Overall, President Biden's quotes highlight his firm stance and the urgency of the situation.

5. CONCLUSION

In analyzing President Biden's speech on climate change on the aftermath of hurricane Ida, it becomes evident that he employs a diverse range of appraisal systems to effectively convey his message. Throughout his statements, the dominant appraisal system utilized is the attitude system under Affect, where he skillfully expresses his negative emotions of unhappiness, insecurity and dissatisfaction. By doing so, he emphasizes the urgency and severity of the situation, compelling his audience to recognize the gravity of climate change.

President Biden also incorporates the graduation system under force, employing lexicalization,

repetition, and maximization to underscore the severe consequences of inaction. Through the careful selection of words and the repetition of impactful phrases, he highlights the immediate need for decisive action and inspires a sense of urgency in his listeners. By utilizing these techniques, President Biden effectively communicates the severity of the issue and motivates individuals to act.

Furthermore, President Biden's speech demonstrates his proficient use of the engagement system through dialogic expansion and contraction. He acknowledges opposing views and aims to foster a sense of collaboration and unity among listeners. By engaging in a dialogue, he encourages a collective understanding of the challenges posed by climate change and emphasizes the importance of working together towards a common goal. This approach helps to bridge gaps in understanding and encourages individuals to actively participate in finding solutions.

Overall, President Biden's skillful employment of appraisal systems in his speech on climate change plays a crucial role in shaping public opinion and driving action. His use of the attitude system under affect, graduation system under force, and engagement through dialogic expansion and contraction effectively conveys his emotions, highlights the severity of the issue, and inspires individuals to join the collective effort towards sustainable development goals. Through his rhetoric, President Biden contributes to raising awareness, motivating action, and fostering a

sense of unity in the face of the pressing challenges posed by climate change.

5.1 Limitations and Implications for Further Research

While examining Biden's speech on climate change following Hurricane Ida yields valuable insights, it is crucial to acknowledge the constraints of this analysis. Firstly, it centers on a solitary speech, which may not fully encapsulate Biden's broader communication patterns or the breadth of issues he addresses. Variations in his speech across other contexts not covered in this study could significantly influence the outcomes. Additionally, the analysis is exclusively focused on the speech content and does not consider how diverse audiences might perceive or react to Biden's language, potentially differing from the researchers' observations.

Despite these limitations, the findings provide valuable perspectives on the application of a diverse range of appraisal systems in political speeches and suggest avenues for future investigation. To expand on this research, exploring Biden's language in other speech formats like debates or interviews could illuminate potential variations across different communication settings. Moreover, comparing Biden's climate change discourse with that of other politicians addressing similar topics might reveal similarities or distinctions in their communication approaches. Furthermore, conducting follow-up studies that incorporate audience feedback through surveys or other methods could offer insights into how various demographic groups perceive Biden's language strategies.

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