STARS

Honors Undergraduate Theses

UCF Theses and Dissertations

2022

Conceptual Complexity and Terrorist Rhetoric: Examining Conceptual Complexity's Role in Political Violence

Westley S. Hunter
University of Central Florida

Part of the Criminology and Criminal Justice Commons

Find similar works at: https://stars.library.ucf.edu/honorstheses

University of Central Florida Libraries http://library.ucf.edu

Recommended Citation

University of
Central
Florida

Showcase of Text, Archives, Rese

CONCEPTUAL COMPLEXITY AND TERRORIST RHETORIC: EXAMINING CONCEPTUAL COMPLEXITY'S ROLE IN POLITICAL VIOLENCE

by

WESTLEY STEVEN HUNTER

A thesis submitted in partial fulfillment of the requirements
for the Honors Undergraduate Thesis Program in Criminal Justice
in the College of Community Innovation and Education
and in the Burnett Honors College
at the University of Central Florida
Orlando, Florida

Spring Term
2022

Thesis Chair: Dr. Kelsey Larsen

ABSTRACT

It is well-documented that leaders' conceptual complexity can affect their decision-making, but what about its broader effects on political violence? While Hermann & Sakiev (2011) and Conway & Conway (2011) have examined terrorists' conceptual complexity before attacks, this study generates a more extensive analysis by examining weapon types and target types. This research explored the connection between a terrorist leader's level of conceptual complexity and the violent attacks their organizations commit, arguing that complexity lowers before an attack and after the 9/11 terrorist attacks. It employed a content analysis of Osama bin Laden's rhetoric from 1999 to 2003 to discern levels of conceptual complexity. Out of more than 150 relevant pieces of rhetoric, 15 speeches, interviews, and statements were hand-coded, then compared to the total number, type, and magnitude of terrorist attacks committed during the correlating time frames using data from the Global Terrorism Database. Results show that bin Laden's conceptual complexity levels rose before an attack and more than doubled after 9/11. The potential impact of this research is notable. At a theoretical level, it supports previous findings on terrorist complexity while providing a new dimension of weapon type and target type. However, it would have an equally significant impact at the professional level by providing a method to implement specific security policies according to identify trends. Thus, giving counterterrorism professionals another potential tool to prevent harm.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

On August 21st, 2021, 182 people were killed at the Kabul Airport from an ISIS-backed suicide bombing (BBC, 2021). This gruesome attack targeted individuals evacuating from Taliban-controlled Afghanistan as well as the U.S. Military personnel assisting them. Terrorism continually threatens people's safety worldwide and is subject to significant governmental funding. The U.S. alone allocated 16% out of its $18 trillion in discretionary spending from 2002 to 2017 to counterterrorism efforts (Stimson Center, 2018). In 2015, France pledged to increase its' counterterrorism spending by €3.8 billion over the following four years (Zucchi, 2020). However, could the rhetoric of terrorists themselves serve as a critical component in counterterrorism?

Existing literature on personality, its influence on decision-making, various measurements of personality, and alternative theories in decision-making have tried in different ways to answer this question, but that answer remains undetermined. This study seeks to fill this gap. It will measure levels of conceptual complexity in the terrorists' rhetoric and, using data from attacks that follow, will examine the existence of any relationship. Conceptual complexity is a trait that details the level of complexity an individual uses when processing information (Hermann, 1983). For example, the use of words like *avoid* or *without a doubt* exemplifies low levels of conceptual complexity in the form of black and white thinking (Hermann, 1983). Common examples of low complexity within the coded terrorist attacks were *any*, *all*, and *no*, while high complexity appeared in words like *almost*, *also*, and *some*.

A potential linkage between conceptual complexity and terrorist attacks would add significant insight to how terrorist attacks are predicted and prevented. Direct security policies

can be implemented by discovering specific weapon types and target types trends. For instance, if an observed conceptual complexity trend points to a potential bombing attack that targets a military location, then explicit action can be taken to heighten security at military locations. Additionally, closer scrutiny could be applied to potential bombing materials and delivery methods, allowing for a dedication of resources that would not have been previously available. Identifying and acting on conceptual complexity trends can add another tool into the toolbox of counterterrorism professionals, hopefully assisting in preventing deadly attacks.

This thesis proceeds in addressing this critical topic by providing a literature review of personality within politics, content analysis methodology, and the intersection of conceptual complexity, terrorist rhetoric, and political violence. Then, it introduces the research design for the project, including the hypothesis that terrorist complexity will lower before an attack. It then explores specific data from a collection of Osama bin Laden's rhetoric and the Global Terrorism Database. Finally, it concludes by offering next steps in the overall research project.

LITERATURE REVIEW

A clear definition of personality is complex and continually evolving (Allport & Allport, 1921). No single form of personality leads to success, nor does any form of personality lead to failure (Allport & Allport, 1921). One way to examine personality is through an individual's traits: small, differentiated measures that combine to show an individual's whole personality (Allport & Allport, 1921). Consistent patterns of behavior, thoughts, and emotions comprise personality traits, which are formed from different genetic, social, and environmental factors (Parks-Leduc et al., 2004). The traditional research of personality traits occurs in isolation of other traits, even though multiple traits are related (Bono & Judge, 2003). For example, a meta-analysis of 127 articles revealed that traits like self-esteem and locus of control were strongly correlated (Bono & Judge, 2003). Additionally, many different traits can be combined to create a broad trait encompassing multiple smaller personality dimensions (Parks-Leduc et al., 2004).

A popular technique to examine personality in the political realm is the Five-Factor Model, used to evaluate U.S. State Legislators, presidential voters, and political party members (Barbaranelli et al., 2007; Caprara & Vecchione, 2018; Dietrich et al., 2012). The Five-Factor Model consists of five overarching properties that generally represent an individual's personality (Ashton & Lee, 2005). The origins derived from Allport and Odbert's (1936) lexical analysis of the 1925 Webster's New International Dictionary and led Costa and McCrae (1980) to identify Neuroticism, Extraversion, and Openness to Experience. However, multiple works in the following years resulted in the addition of the final two scales of Agreeableness and Conscientiousness (Digman & Takemoto-Chock, 1981; Goldberg, 1983). As mentioned earlier in the article, each of the Five-Factor Model dimensions builds upon smaller measurements that

correlate together (John et al., 2008). McCrae and Costa (1999) state that the broad dimensions within the Five-Factor Model are basic tendencies and the core components of human personality. These tendencies; extraversion, openness, neuroticism, etc.; influence the other core components of characteristic adaptations and self-concept (McCrae & Costa, 1999). Measures within the broader trait dimensions influence how susceptible individuals can be to external influences, thus impacting their perceived self-concept (McCrae & Costa, 1999). For example, individuals with a high sub-trait of depression are easily swayed by harmful cultural norms producing a deteriorated self-image (McCrae & Costa, 1999).

Another popular method to examine personality dimensions within the political sphere is one developed by Margaret Hermann. According to Hermann (1980), traits fall into one of four personality characteristics based on their overall impact on a leader's behavior. Within political psychology, four broad personality characteristics are commonly explored: beliefs, motives, decision style, and interpersonal style (Hermann, 1980). Beliefs are the leaders' fundamental assumptions of the world—for instance, the degree of control they feel they have over situations (i.e., their locus of control) (Hermann, 1980). Need for approval and need for affiliation are examples of motives that may explain the leaders' actions (Hermann, 1980). Decision style is the leaders' favored way of making decisions, such as their conceptual complexity—the level of complexity they use in processing information (Hermann, 1980). How policymakers interact with each other is defined as interpersonal style; an example is paranoia (Hermann, 1980). Personality traits do not combine to create a personality characteristic as they define and organize traits into broad categories (Hermann, 1980). Characteristics, as a whole, influence how leaders interpret their environment and the strategies they choose to apply (Hermann, 1980). An identical situation presented to two different leaders with differing trait measurements may result

in entirely different decisions (Hermann, 1980). That occurs because the leaders processed the information differently, assigned different priority levels to events, and preferred differing solutions (Hermann, 1980).

One of the decision styles mentioned above, conceptual complexity, further involves two elements: differentiation and integration (Suedfeld, 2010). Differentiation is the ability to recognize multiple dimensions of a target (Suedfeld, 2010). Integration is the capacity to develop connections among the recognized dimensions (Suedfeld, 2010). Therefore, integration can only be as high as differentiation as undiscovered dimensions cannot be connected (Suedfeld, 2010). Conceptual complexity research has examined the trait in revolutionary settings, unpredictable presidential administrations, and post-civil war parliaments (Hassan & Featherstone, 2021; Ishiyama & Backstrom, 2011; Suedfeld & Rank, 1976;). Hassan and Featherstone (2021) studied President Trump's use of a professed unpredictability doctrine to subvert accountability, which concealed low levels of conceptual complexity. While Trump displayed behaviors of unpredictability, they resulted from his low conceptual complexity (Hassan & Featherstone, 2021). A study by Ishiyama and Backstrom (2011) examined levels of conceptual complexity within Kenyan parliamentary members after a civil conflict. They found that representatives within the party that were the principal protagonists of the civil conflict exhibited lower levels of conceptual complexity than their peers in other parties (Ishiyama & Backstrom, 2011). Suedfeld and Rank (1976) found that revolutionary leaders successfully maintained power until willingly relinquishing it if they exhibited high levels of conceptual complexity after their victorious revolutionary struggle. However, leaders that did not display any deviations from their low levels of conceptual complexity after success eventually lost their positions of power (Suedfeld & Rank, 1976).

Researchers have taken two different approaches to evaluating the efficacy of how personality influences high-level political decision-making (Tetlock, 1981). The first is intensive case studies with a significant amount of detail, though at times complex conceptual and methodological problems have plagued this approach, along with the failure of incorporating situational explanations of behavior (Tetlock, 1981). The second is a systematic approach to assess a political leader's personality traits on a standardized dimension and predict actions and beliefs; however, high-level leaders often do not have the time or willingness to participate in personality measurements (Tetlock, 1981). This is where at-a-distance assessments emerged; at-a-distance analysis sacrifices the tremendous amount of detail case studies have but avoids the methodological weaknesses, and the analysis' predictive power can be statistically tested (Tetlock, 1981). Within this approach, a technique called content analysis is common (Tetlock, 1981). Content analysis allows researchers to measure a leader's personality without having direct access or approval, by using speeches and interviews (Hermann, 1999). Interviews are regarded as the preferred material to use as they are spontaneous and reveal more of a leader's personality than a constructed and fine-tuned speech, though speeches are still suitable units of analysis for content analysis (Hermann, 1999). Different coding schemes exist to then identify and evaluate personality dimensions from those materials—for example, a coding system will mark statements including style words of "cannot" or "absolutely" as indicative of a low conceptual complexity score (Hermann, 1983).

Content and style within conversational environments have different properties and information to communicate (Pennebaker, 2011). Content details what is being said in the text; style details how the text communicates the message (Pennebaker, 2011). Between content and style words, content words make up around 99% of the words within an average person's

vocabulary (Pennebaker, 2011). Therefore, style words, also known as function words, comprise a smaller percentage of words used in daily interactions (Pennebaker, 2011). However, these words account for over half of what we say, write, read, and hear (Pennebaker, 2011). According to Pennebaker (2013), function words are highly social and necessitate social skills to be used and understood accurately. Recent years have yielded promising results when linking the execution of function words with social and psychological processes (Pennebaker, 2011). Pennebaker (2011) explains that single categories and clusters of categories of function words can predict the honesty within a text and the complexity behind the thinking, among other things. For example, honesty is observed in the text through first-person singular pronouns, exclusive words, higher use of positive emotion words, and lower rates of negative emotion words (Pennebaker, 2011). Additionally, Pennebaker (2013) observed that individuals with the highest status within a group use I-words the least; the trend continues as lower rank correlates with more I-words.

The real-world applications of measuring function words are endless, with meaningful opportunities inside terrorist rhetoric. The results of Pennebaker's (2011) study revealed that terrorist organizations each have their unique writing technique similar to a personality; while the groups share similar usage rates of past tense verbs, they all differ in the usage of future tense verbs. Additionally, the study examined the differences between violent and non-violent terrorist organizations (Pennebaker, 2011). The organizations predisposed to violence had carried out violent attacks in the past (Pennebaker, 2011). The violent organizations appeared to use more personal words, displayed higher levels of deception and lower levels of cognitive complexity than their non-violent counterparts (Pennebaker, 2011). Additionally, these findings extend across different forms of content analysis. While analyzing terrorist rhetoric against non-terrorist

groups, Conway & Conway (2011) incorporated multiple content analyses systems to identify a standard terrorist rhetoric style across analytical approaches. Like Pennebaker (2011), terrorist rhetoric builds upon a simple comprehension structure with high emotional subtext and low complexity (Conway & Conway, 2011).

Building upon the collected text dimensions, Pennebaker (2011) examined the dimension's behaviors in conjunction with violent attacks. However, there was a significant barrier as one of the violent organizations had never issued a statement more than six months before an attack (Pennebaker, 2011). Therefore, distinguishing between baseline language usage and pre-attack language usage is challenging to discern (Pennebaker, 2011). Pennebaker (2011) found that honesty 2 to 6 months before was positively associated with an attack, while complex thinking in the month before and after the attack was negatively associated.

Conceptual complexity, terrorist rhetoric, and political violence have not been mutually exclusive within the academic domain. While some studies have just focused on the propaganda of terrorists (Houck et al., 2017), others examined the characteristics of terrorist rhetoric and its proximity to their use of violence (Conway et al., 2011; Hermann & Sakiev, 2011). Surrounding literature around conceptual complexity has demonstrated that it will drop before the use of violence; however, both Conway et al. (2011) and Hermann & Sakiev (2011) determined that terrorists' conceptual complexity rose closer to an attack.

Though assessing the role of personalities in political decision-making has become more common, other significant explanations exist. For instance, environmental barriers and opportunities play a crucial part in leaders' decision-making (Doeser, 2013). Environmental factors either suppress or allow an individual's characteristics in decision-making situations—if a

significant environmental barrier is present, it decreases the chances of specific actions occurring (Doeser, 2013). Alternatively, there are windows of opportunity: when the environment changes and creates a suitable atmosphere for executing a specific political change (Doeser & Eidenfalk, 2013). However, a window of opportunity is not relevant if the political leader has no motivation to enact policy change (Doeser & Eidenfalk, 2013). Additionally, no action may occur if the relevant and preferred window of opportunity does not arise (Doeser & Eidenfalk, 2013). A window of opportunity does not have an infinite timeline; after a specific amount of time has passed, the window becomes expired and no longer plays an encouraging role in the decision-making process (Doeser & Eidenfalk, 2013).

Clearly, understanding the relationship between personality and decision-making in political environments is complex. Personalities have multiple traits and assessment methods while competing with other powerful explanations, like environmental factors, to attempt to explain decisions. However, the complicated nature of personality's relationship with political decision-making does not mean it should not be explored; there are numerous things to discover and understand about personality traits within the political sphere. For instance, the specific trait of conceptual complexity has exhibited markedly different behaviors across speakers. Do terrorists consistently demonstrate lower complexity but show increases before attacks? Are there trends surrounding specific weapon types or target types? By answering these questions, this study aims to drive academic research within the field and illustrate the potential for developing a precise early-warning system for national security decision-makers.

METHODOLOGY

The primary purpose of this study is to examine if levels of conceptual complexity predict the occurrence of terrorist behaviors. The hypotheses for the study follow:

- H1: A drop in the average level of conceptual complexity in terrorist rhetoric will result in an attack.

    - *Conceptual complexity is how an individual processes information; therefore, the perpetrator should become informationally restrictive to protect their justifications closer to the attack.*

- H1A: A higher reduction in conceptual complexity before an attack indicates an impending bombing/explosion attack.

    - *As bombings are significant weapons of harm and destruction, the need for belief in their cause heightens along with limited information intake.*

- H1B: Small reductions of conceptual complexity before an attack signifies that the target is a military location.

    - *With the purposeful conflict military personnel direct toward terrorists, there will be less hesitancy to strike military locations and no need to think one-dimensionally.*

- H2: Following the 9/11 terrorist attacks, the average level of terrorist conceptual complexity will decrease.

    - *The intensive effort devoted to terrorists' destruction resulting from the 9/11 terrorist attacks will force them to engage in quick and straightforward thinking to survive.*

Qualitative analysis in the form of an at-a-distance content analysis will identify levels of conceptual complexity within terrorist rhetoric. Hermann (1983) developed a thematic code for various traits in political psychology, specifically conceptual complexity. The pre-developed code includes a list of words attributed to either high or low conceptual complexity. Whenever a listed word appears in the examined rhetoric, the word will be coded accordingly. An at-a-distance content analysis coded by hand is appropriate for the study as terrorists, eerily like leaders, are unreachable and unwilling to sit down for in-depth personality measurements. However, some exceptions do apply (See Scull et al., 2020). Therefore, performing an at-a-distance analysis is safer and allows various materials collected in different environments to support the resulting conclusions. With technology progressing and becoming more mainstream, content analysis' has recently been conducted by software.

While the field favors computerized content analysis, hand-coding sample data is still used to serve as the foundation for computer-based approaches (Nelson et al., 2018). The computer-assisted content analysis methods examined by Nelson et al. (2018) are dictionary, supervised machine learning (SML), and unsupervised machine learning (UML); these are commonly used within social sciences. Overall, the three different approaches cannot, on their own, replace the use of hand-coding (Nelson et al., 2018). Each computer-assisted technique has different benefits; the dictionary is phenomenal when examining precise phrases. SML and UML can identify complex concepts but require significant hand-coding front-work to be viable. Therefore, due to the preliminary nature of this research project, hand-coding was executed as the primary method, with computer analysis available for future projects. After all, according to Hermann (1983), coding conceptual complexity relies heavily on the context of keywords within the speaker's text. The dictionary method falls short in this regard (Nelson et al., 2018). The

present study involves the analysis of a relatively small amount of text. Per the pertinent literature, hand-coding is an effective analysis method for establishing a baseline for analyzing terrorist rhetoric concerning violent attacks.

This study examined terrorist rhetoric via a compilation of Osama bin Laden's statements collected by the Foreign Broadcast Information Service (FBIS, 2004). The UCF Institutional Review Board approved this research as Not Human Subjects Research. The publicly available FBIS report has rhetoric from 1994 to 2004; however, the study only looked at 1999 to 2003. These years were selected to capture Osama bin Laden's levels of conceptual complexity the two years before 9/11, the year of 9/11, and two years after 9/11. Additionally, the parameters determine if Osama bin Laden's level of conceptual complexity lowered after 9/11. From the FBIS collection, 15 pieces of rhetoric were hand-coded for conceptual complexity. The rhetoric analyzed came in the form of statements, interviews, letters, audio recordings, and poems. Only the exact quote, and no extra text, were coded for conceptual complexity. The complexity observed within each text ranged from 2 to 68, with an average of 20.40 conceptual complexity instances per piece. The Global Terrorism Database (GTD) showed that 16 attacks were related to the coded rhetorical sections.

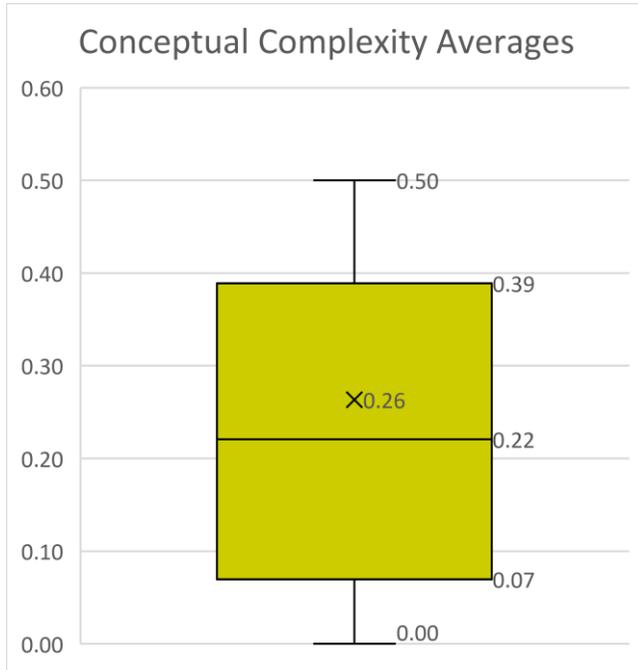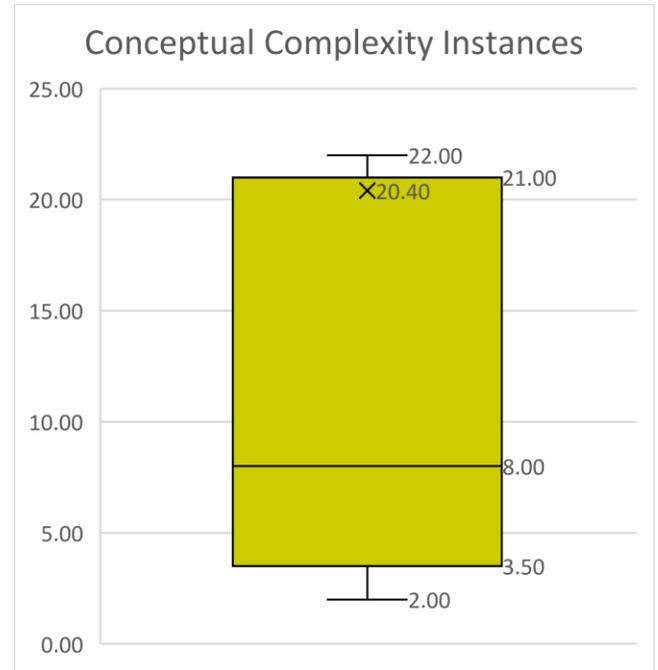*Figure 1: Statistics of Conceptual Complexity Averages*   *Figure 2: Statistics of Conceptual Complexity Instances*

Conceptual Complexity Averages

0.60
0.50 —0.50
0.40 0.39
0.30 ✕0.26
0.20 0.22
0.10 0.07
0.00 0.00

Conceptual Complexity Instances

25.00
20.00 —22.00 ✕20.40 21.00
15.00
10.00
5.00 8.00 3.50 —2.00
0.00

Hermann's (1983) established coding scheme, particularly the lists of complex words, heavily influenced the technique employed. Table 3, shown below, displays a small sample of high and low complexity words within Hermann's (1983) coding scheme. However, this study ventured beyond the exact words Hermann listed by including any words deemed to represent complexity that did not qualify as content words. This added technique expands on a solid word bank that was crafted almost 40 years ago and involves new evolutions of conceptual complexity to be captured. For example, within the sentence, "Any thief or criminal or robber who enters another country in order to steal should expect to be exposed to murder at any time," the words *any* and *expect* were coded to represent low conceptual complexity. After each text was coded, a conceptual complexity score was generated by dividing all high complexity instances by a combination of high and low complexity instances, resulting in a score ranging from 0.00 to

1.00. For example, if a piece had 1 instance of high and 3 instances of low complexity, its' score of 0.25 would be derived by dividing 1 by 4. Thus, to calculate the study's average score of conceptual complexity, all scores were combined and divided by 15, the total number of rhetorical pieces, which produced the number of 0.26.

Table 1: List of High and Low Conceptual Complexity Words Identified by Hermann (1983)

Conceptual Complexity Coding Scheme	
High Conceptual Complexity	Low Conceptual Complexity
admit	above all
almost	absolutely
as far as	avoid
clarify	cannot
circumstances	each
either	false
often	most
perhaps	of course
questionable	surely
tend	whole
various	without a doubt

Table 3 includes only 11 out of 83 high conceptual complexity words and only 11 out of 103 low conceptual complexity words within Hermann's (1983) coding scheme; this study utilized all words across the two lists. However, if any listed word is preceded by "not", or otherwise neutralized, the word becomes negated and will not be factored into the content analysis (Hermann, 1983).

Osama bin Laden founded and led the terrorist organization al-Qaeda (Britannica, 2021). Therefore, measuring attacks from al-Qaeda will determine if conceptual complexity is related to attacks. Additionally, attack type and attack target will be measured to determine correlation

with conceptual complexity. Only the al-Qaeda attacks from 1999 to 2003 are relevant as they will match the range of rhetoric examined. Data from al-Qaeda attacks comes from the Global Terrorism Database (2019), which provides information on all terrorist attacks from 1970 to the present. All terrorist attacks inputted into the Global Terrorism Database (2019) must meet two out of the three of the following conditions:

1. The act must be aimed at attaining a political, economic, religious, or social goal.

2. There must be evidence of an intention to coerce, intimidate, or convey some other message to a larger audience (or audiences) than the immediate victims.

3. The action must be outside the context of legitimate warfare activities.

Furthermore, the Global Terrorism Database (2019) has various factors to filter the inputted attacks, like country, attack type, target type, motive, and weapon type. However, this study will only examine the characteristics of attack and target type of terrorist attacks within the database (Global Terrorism Database, 2019).

Based on the previous literature looking at Conceptual Complexity's correlation to temporal events: this study will employ three different time ranges to determine correlation.

- Attacks occurring 2 months after the rhetoric was released

- Attacks occurring 1 month after the rhetoric was released

- Attacks occurring 1 week after the rhetoric was released

Three different time ranges are suggested to generate direct results and preserve time. When designing analytical time frames, most studies extended out three months before the attack (Conway & Conway, 2011; Conway et al., 2011; Hermann & Sakiev, 2011). However, Suedfeld

& Bluck (1988) examined scores from documents up to five years before the attack. While having a broad time range would be beneficial in generating a complete picture, changes in conceptual complexity seemed to start around two months before the attack and continue into one month before the attack (Conway et al., 2011; Hermann & Sakiev, 2011; Suedfeld & Bluck, 1988). Therefore, selecting time ranges of two and one month(s) before the attack positions this study for concise analysis. Additionally, the one week before the attack parameter will identify any significant, last-minute variations in conceptual complexity.

RESULTS AND DISCUSSION

After coding and calculating individual scores for all 15 documents, the study's average score was approximately 0.26 on a scale of 0.00 to 1.00. Figure 1 and Figure 2 below show examples of complexity found within the coded rhetoric. This average demonstrates that bin Laden displays noticeably lower conceptual complexity when compared to the average world leader's complexity of 0.57 (Yang, 2010). Additionally, 0.26 is the baseline of complexity for bin Laden and allows for determining when and how much complexity strays from the norm. When content was associated with a subsequent attack, it possessed a complexity average of 0.37—illustrating how bin Laden was more receptive and reactive to new information when close to the execution of an attack. This data runs contrary to Hypothesis 1—complexity would lower before an attack—as it seems that terrorists become more informationally open nearing the execution of an attack. The opposite of the hypothesized complexity reductions for weapon (H1A) and target (H1B) types, high and low, was displayed within the data. Bombings were the only type of attack observed, meaning that rhetoric with bombing attacks had an above-average complexity of 0.37. It rejected Hypothesis 1A: bombings would follow content with a higher reduction in complexity. Military locations were the most common target type and exhibited a minimally above-average complexity level, 0.27. The slight difference in averages, 0.01, does not support disproving the notion of a minor reduction in complexity occurring before attacking a military target (Hypothesis 1B), nor does it lend itself to any further elaborations. The observed complexity behavior before and after 9/11 directly disputes the prediction that complexity would lower after 9/11, Hypothesis 2. The strength of the dispute can be seen as the complexity average more than doubled after 9/11. When closely examining the performance of complexity trends closer to an attack, rhetoric with an associated attack within a week has a high complexity

17

average of 0.46. This spike in complexity may demonstrate a heightened state of awareness to

ensure the successful execution of an attack by taking in all information. Of all the pieces

collected, only 46% had at least one attack associated, as the percentage dropped to 20% within

the one-week range. The collected rhetoric is either classified as spontaneous—words expressed

before ample time to contemplate, like interview answers—or prepared content—words

expressed after ample time to contemplate, like speeches. Spontaneous content held 37% more

conceptual complexity examples than prepared content within this study. Additionally,

spontaneous rhetoric held an average of 44.25 occurrences of complexity per piece, while

prepared statements only had an average of 11.73.

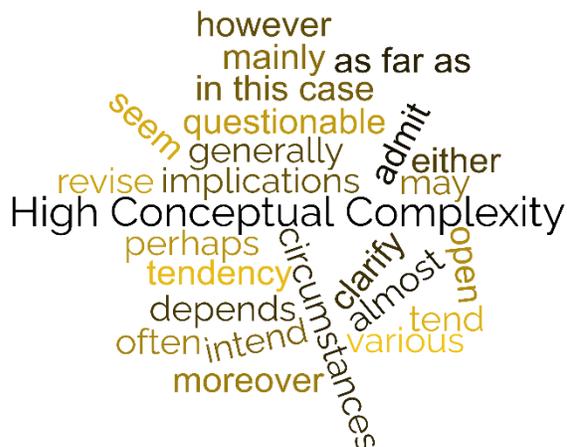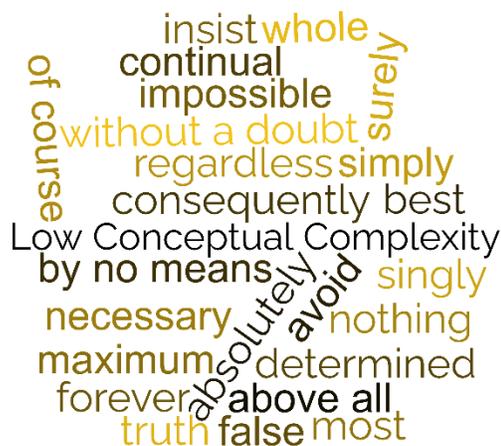*Figure 3: High Conceptual Complexity words found in the data*

Figure 5: Low Conceptual Complexity words found in the data

The results provide ample latitude to identify potential relationships and trends across the

various components. This study gives initial encouragement to the central question of whether

conceptual complexity correlates to a violent attack, specifically when examining complexity

levels across specific times. The aspect of terrorists displaying more complexity before an attack

is curious and supports other studies on this topic but still contradicts the broad literature that

shows how complexity lowers before actions. With the growing amount of data exhibiting this exception, could conceptual complexity's behavior before executing an action be speaker-specific?

Looking deeper into this relationship through analyzing attack characteristics generates meaningful developments. Even with the restricted exploration into weapon types as only bombings occurred, the data illuminates potential points of interest. With only bombings occurring, it holds the same complexity average of 0.37 and prevents any complexity trends from being captured. However, only seeing bombings is noteworthy as it might indicate a preference to employ bombs in all attacks. This preference raises questions about the motivation behind this decision. Is it because bombs are destructively superior, they produce more media attention, or are the required materials easily acquirable? Military sites were the most common target but not enough to indicate any predisposition. The different target types spanned several areas, including government, maritime, aircraft, and religious targets. Lower complexity attached to specific attack targets could indicate strike preferences, like with military locations, but the slight 0.01 difference in averages is not strong enough to support such statements. Initial thoughts on the behavior of conceptual complexity after 9/11 proposed that the extreme efforts directed towards the terrorists' death would create further devotion to their cause and result in lower complexity. However, the heightened levels of complexity could be reasoned as the overwhelming need to survive accomplished through becoming more open. While the study confirmed that spontaneous content is the premier source for measuring conceptual complexity, it is unused as no attack was associated with any spontaneous piece. Yet, only four spontaneous pieces were hand-coded within the study, showing the terrorists' potential efforts to avoid producing this type of content. With an increased commitment to counterterrorism worldwide, engaging in interviews may be

too risky as they hold high chances of revealing critical information about the terrorist

organizations. While spontaneous texts provide a stronger foundation, their limited occurrence

within terrorist rhetoric prevents a more genuine analysis from occurring.

CONCLUSION

This study shows the potential benefits, academically and professionally, of further investigation into the attacks associated with the coded rhetorical pieces. The investigation found that conceptual complexity increased by 0.11 one and two months before an attack. Within a week of an attack, complexity jumped by 0.20. Associated attacks only used bombings, while military locations were targeted 37% of the time. Compared to scores beforehand, complexity more than doubled after the 9/11 attacks. A lack of evidence backing this study's hypotheses supports the previous literature's findings concerning conceptual complexity, terrorist rhetoric, and political violence—terrorist complexity rises before an attack. However, it contradicts the broader literature on conceptual complexity, which states that other speakers exhibited lower complexity before an attack. The significant difference in conceptual complexity behavior across speakers indicates a more complex relationship between complexity and political violence than previously thought. The dynamic of attack characteristics supplies a new dimension to drive further academic explorations. Additionally, novel data points are added into this specific academic realm as the employed collection of Osama bin Laden's rhetoric has not been coded for complexity before. With most content analysis studies using automated coding, implementing a hand-coded technique reinforces the literature with diverse methodological approaches.

With differences across the analyzed attack characteristics, counterterrorism professionals have the opportunity to develop and implement customized safety procedures according to the recent rhetorical mannerisms. For instance, rhetoric that exhibits aspects seen before a bombing attack targeted at a military location allows counterterrorism professionals to take various, direct prevention measures, like applying intense scrutiny around potential

materials for constructing bombs or limiting access to desirable military targets. These actions produce a heightened security stance for prevention without widespread interruption of daily life within the area.

The methods and approaches employed within this study were the best fit for the current context and allowed for practical analysis. However, some limitations followed that future research could mitigate. A limited number of rhetorical pieces were coded for analysis within the study. Expanding and incorporating hand-coded data to around 50 sources would manufacture a stable foundation for the discoveries. While spontaneous content proved to be the preferred text, its limited occurrence and lack of attack associations encourage predominately collecting prepared content and spontaneous content when convenient. Computerized coding techniques are the norm within contemporary studies, and their application in the realm of this study will have significant benefits. In line with limited data points limitation, computerized coding quickly investigates large sets of sources and produces a consistent analysis. Additionally, reexamining the rhetorical pieces in this study ensures the validity of the identified results. Profiler Plus, a text analysis service by Social Science Automation, would be a suitable tool for computerized coding as it incorporates Hermann's (1980) concept of conceptual complexity and updated versions. The most recent rhetoric used in the study is almost 20 years old, including rhetoric as new as methodologically possible qualifies higher practicality of identified results. With the explosion of the internet and social media, integrating rhetoric from social media or internet magazines provides the latest rhetoric and expands the potential pool of sources.

In addition to the previous recommendations, future research can explore further into other personality elements, State leaders, or potentially United States domestic terrorists. Studies

should explore Hermann's (1980) other personality elements like locus of control, need for approval, or paranoia. Investigating how much leaders think they have control over a situation (locus of control) and conceptual complexity could reveal specific locations' targeting in conjunction with a high locus of control. Additionally, examining whether leaders of States display similar or different trends in conceptual complexity concerning attack characteristics. An intriguing experience would be investigating domestic terrorists within the United States through this approach.

REFERENCES

Allport, F. H., & Allport, G. W. (1921). Personality Traits: Their Classification and Measurement. *The Journal of Abnormal Psychology and Social Psychology, 16*(1), 6-40. doi:https://doi.org/10.1037/h0069790

Ashton, M. C., & Lee, K. (2005). Honesty-Humility, the Big Five, and the Five-Factor Model. *Journal of Personality, 73*(5), 1321-1354. doi:https://doi.org/10.1111/j.1467-6494.2005.00351.x

Barbaranelli, C., Caprara, G., Vecchione, M., & Fraley, C. R. (2007). Voters' personality traits in presidential elections. *Personality and Individual Differences, 42*(7), 1199-1208. doi:https://doi.org/10.1016/j.paid.2006.09.029

BBC. (2021, August 21). *Kabul airport attack: What do we know?* Retrieved from BBC: https://www.bbc.com/news/world-asia-58349010

Bono, J. E., & Judge, T. A. (2003). Core Self-Evaluations: A Review of the Trait and its Role in Job Satisfaction and Job Performance. *European Journal of Personality, 17*(Suppl1), S5-S18. doi:https://psycnet.apa.org/doi/10.1002/per.481

Britannica. (2021, April 28). *Osama bin Laden*. Retrieved from Britannica: https://www.britannica.com/biography/Osama-bin-Laden

Caprara, G., & Vecchione, M. (2018). On the Left and Right Ideological Divide: Historical Accounts and Contemporary Perspectives. *Political Psychology, 39*(Suppl. 1), 49-83. doi:https://doi.org/10.1111/pops.12476

Conway III, L. G., & Conway, R. K. (2011). The terrorist rhetorical style and its consequences for understanding terrorist violence. *Dynamics of Asymmetric Conflict, 4*(2), 175-192. doi:https://doi.org/10.1080/17467586.2011.627940

Conway III, L. G., Gornick, L. J., Houck, S. C., Towgood, K. H., & Conway, K. R. (2011). The hidden implications of radical group rhetoric: Integrative complexity and terrorism. *Dynamics of Asymmetric Conflict, 4*(2), 155-165. doi:https://doi.org/10.1080/17467586.2011.627938

Costa, P. T., & McCare, R. R. (1999). A five-factor theory of personality. In L. A. Pervin, & O. P. John, *Handbook of personality: Theory and research* (pp. 139-153). New York: Guilford Press.

Dietrich, J. B., Lasley, S., Mondak, J. J., Remmel, M. L., & Turner, J. (2012). Personality and Legislative Politics: The Big Five Trait Dimensions Among U.S. State Legislators. *Political Psychology, 33*(2), 195-210. doi:https://doi.org/10.1111/j.1467-9221.2012.00870.x

Digman, J. M., & Takemoto-Chock, N. K. (2010). Factors In The Natural Language Of Personality: Re-Analysis, Comparison, And Interpretation Of Six Major Studies. *Multivariate Behavioral Research, 16*(2), 149-170. doi:https://doi.org/10.1207/s15327906mbr1602_2

Doeser, F. (2013). Leader-driven foreign-policy change: Denmark and the Persian Gulf War. *International Political Science Review, 34*(5), 582-597. doi:https://doi.org/10.1177%2F0192512112473027

Doeser, F., & Eidenfalk, J. (2013). The importance of windows of opportunity for foreign policy change. *International Area Studies Review, 16*(4), 390-406. doi:https://doi.org/10.1177%2F2233865913512117

Foreign Broadcast Information Services. (2004). *Compilation of Usama Bin Laden Statements; 1999 - January 2004.* Foreign Broadcast Information Services.

Gerber, A. S., Huber, G. A., Doherty, D., & Dowling, C. M. (2011). The Big Five Personality Traits in the Political Arena. *Annual Review of Political Science, 14*, 265-287. doi:https://doi.org/10.1146/annurev-polisci-051010-111659

Goldberg, L. R. (1983). The magic number five, plus or minus two: Some considerations on the dimensionality of personality descriptors. *In a Research Seminar, Gerontology Research Center, Baltimore, MD*.

Hassan, O., & Featherstone, C. (2021). Trump's low conceptual complexity leadership and the vanishing 'unpredictability doctrine'. *Cambridge Review of International Affairs, 34*(3), 407-429. doi:https://doi.org/10.1080/09557571.2020.1853054

Hermann, M. G. (1980). Explaining Foreign Policy Behavior Using the Personal Characteristics of Political Leaders. *International Studies Quarterly, 24*(1), 7-46. doi:https://doi.org/10.2307/2600126

Hermann, M. G. (1983). *Handbook for assessing personal characteristics and foreign policy orientations of political leaders.* Columbus: Mershon Center, Ohio State University.

Hermann, M. G. (1999). Assessing Leadership Style: A Trait Analysis. *The Psychological Assessment of Politicial Leaders*, 178-212.

Hermann, M. G., & Sakiev, A. (2011). Leadership, terrorism, and the use of violence. *Dynamics of Asymmetric Conflict, 4*(2), 126-134. doi:https://doi.org/10.1080/17467586.2011.627935

Houck, S. C., Repke, M. A., & Conway III, L. G. (2017). Understanding what makes terrorist groups' propaganda effective: an integrative complexity analysis of ISIL and Al Qaeda. *Journal of Policing, Intelligence and Counter Terrorism, 12*(2), 105-118. doi:https://doi.org/10.1080/18335330.2017.1351032

Ishiyama, J., & Backstrom, J. (2011). Reconciliation and Conceptual Complexity: The Case of Post Conflict Kenya. *African and Asian studies, 10*(4), 366-386. doi:http://dx.doi.org/10.1163/156921011X605607

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin, *Handbook of personality: Theory and research* (pp. 114-158). The Guilford Press.

National Consortium for the Study of Terrorism and Responses to Terrorism (START), University of Maryland. (2019). *The Global Terrorism Database*. Retrieved from https://www.start.umd.edu/gtd/

Nelson, L. K., Burk, D., Knudsen, M., & McCall, L. (2018). The Future of Coding: A Comparison of Hand-Coding and Three Types of Computer-Assisted Text Analysis Methods. *Sociological Methods & Research, 50*(1), 202-237. doi:https://doi.org/10.1177%2F0049124118769114

Parks-Leduc, P., Feldman, G., & Bardi, A. (2015). Personality Traits and Personal Values: A Meta-Analysis. *Personality and Social Psychology Review, 19*(1), 3-29. doi:https://doi.org/10.1177/1088868314538548

Pennebaker, J. W. (2011). Using computer analyses to identify language style and aggressive intent: The secret life of function words. *Dynamics of Asymmetric Conflict, 4*(2), 92-102. doi:https://doi.org/10.1080/17467586.2011.627932

Pennebaker, J. W. (2013). How authors' forgettable words reveal their personality and social behaviors. *Information Design Journal, 20*(3), 267-272. doi:https://doi.org/10.1075/idj.20.3.062pen

Scull, N. C., Alkhadher, O., & Alawadi, S. (2020). Why People Join Terrorist Groups in Kuwait: A Qualitative Examination. *Political Psychology, 41*(2), 231-247. doi:https://doi.org/10.1111/pops.12622

Stewart, P. D., Hermann, M. G., & Hermann, C. F. (2014). Modeling the 1973 Decision To Support Egypt. *American Political Science Review, 83*(1), 35-59. doi:https://doi.org/10.2307/1956433

Stimson Center. (2018, May 16). *Counterterrorism Spending: Protecting America while Promoting Efficiencies and Accountability*. Retrieved from Stimson Center: https://www.stimson.org/2018/counterterrorism-spending-protecting-america-while-promoting-efficiencies-and-accountability/

Suedfeld, P. (2010). The Cognitive Processing of Politics and Politicians: Archival Studies of Conceptual and Integrative Complexity Suedfeld Conceptual and Integrative Complexity. *Journal of Personality, 78*(6), 1669-1702. doi:https://doi.org/10.1111/j.1467-6494.2010.00666.x

Suedfeld, P., & Bluck, S. (1988). Changes in Integrative Complexity Prior to Surprise Attacks. *Journal of Conflict Resolution, 32*(4), 626-635. doi:https://doi.org/10.1177%2F0022002788032004002

Suedfeld, P., & Rank, A. D. (1976). Revolutionary leaders: Long-term success as a function of changes in conceptual complexity. *Journal of Personality and Social Psychology, 34*(2), 169-178. doi:https://psycnet.apa.org/doi/10.1037/0022-3514.34.2.169

Tetlock, P. E. (1981). Personality and Isolationism: Content Analysis of Senatorial Speeches. *Journal of Personality and Social Psychology, 41*(4), 737-743. doi:http://dx.doi.org/10.1037/0022-3514.41.4.737

Yang, Y. E. (2010). Leaders' Conceptual Complexity and Foreign Policy Change: Comparing the Bill Clinton and George W. Bush Foreign Policies toward China. *The Chinese Journal of International Politics, 3*(4), 415-446. Retrieved from https://www.jstor.org/stable/48615758

Zucchi, K. (2020, October 15). *What Countries Spend on Antiterrorism*. Retrieved from Investopedia: https://www.investopedia.com/articles/investing/061215/what-countries-spend-antiterrorism.asp