VIOLENT IDEOLOGIES:

AN INVESTIGATION OF THE RELATIONSHIP BETWEEN LINGUISTIC EVALUATIVE PATTERNS AND PSYCHOPATHOLOGY IN THREE TYPES OF VIOLENT OFFENDER

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THESIS ABSTRACT

Forensic linguistic and psychological assessments of language evidence each offer useful information about authors, but conclusions reached by one are often considered beyond the scope of the other. This research aims to bridge this gap with an approach that examines the relationship between evaluative language patterns and schemas underlying psychological traits and violent ideation. Schemas are beliefs that impact interpretation of and response to information. In linguistics, they are posited to influence language output, and in cognitive psychology, different schemas are argued to underlie different psychological traits and symptoms and produce different evaluative/perceptual biases. This research merges perspectives, arguing that schemas underlying psychological traits and violent ideation can be identified by examining the stance-taking resources used to express the beliefs influenced by them. Three studies are conducted to account for differences between violent offender types: one on serial murderers, one on a serial bomber, and one on perpetrators of mass violence. A comparison study of non-violent counterparts is conducted to help separate patterns attributable to psychopathology versus violent ideation. Written first-person accounts comprise the datasets because cognitive and phenomenological theories argue they are appropriate for examining the impact of psychopathology on experience. The Appraisal framework offers a means to track the resources authors employ to (1) convey their attitudes, (2) position themselves with respect to others, and (3) scale the intensity of their attitudes or commitment to their positions. Evidence is found of a link between stance-taking patterns and schemas underlying psychopathology. Similarities in overarching stances between authors within and across chapters suggest schemas relating to general and act-specific violent ideation exist, but the findings indicate that an author's psychopathology likely influences the distribution of resources used to convey them. Further research is needed, but the findings offer support for analyzing stance-taking resources to uncover possible psychological traits of authors.

Keywords: Appraisal Analysis; Systemic Functional Linguistics; cognitive theory and phenomenology; forensic linguistics; forensic text assessment

This work is dedicated to my Papa.
He could not be here to see my goals become reality,
but he always supported and encouraged me in everything I did
and I am forever grateful.

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To my partner: Words cannot express how grateful I am for you and everything you do for me. You helped me stay sane throughout this incredibly exhausting and difficult endeavor. Thank you for your unwavering support, your boundless patience and understanding, and of course for spending countless hours on video calls with me when I needed a little extra help staying on task.

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CHAPTER 1 INTRODUCTION

Books and television have made famous a dramatized version of a broad kind of investigative technique termed *profiling*, which helps law enforcement to narrow down suspect pools. The arguably more well-known *psychological*[1] (sometimes referred to as *behavioral*) profiling involves the analysis of aspects of a crime and often comparison of them to past crimes of a similar nature to discern behavioral and psychological characteristics of the perpetrator (Douglas et al., 2004). The more niche field of forensic linguistics offers its own profiling approach called *linguistic* profiling, which involves analyzing and describing how features of a suspect's language use compare to features identified in previous sociolinguistic research to be "characteristic of specific societal groups" (Shuy, 2014, pp. 76-77). These two approaches, of course, are likely to only overlap in investigative situations where there is language evidence (also referred to as 'forensic texts' in this project when discussing written language evidence), and the differences in analytical methods and theoretical grounding mean that some of the information provided by one might be considered outside the purview of the other. For example, a psychological profile might use a method grounded in psychological or psycholinguistic theory and analyze more surface-level features like content (overarching themes) and form to generate hypotheses about personality characteristics (Miron & Douglas, 1979). Linguistic profiles, conversely, will use methods based in linguistic theory to analyze language features at multiple levels (e.g., lexical, grammatical, discourse) and generate hypotheses about characteristics like age, education level, or geographic background (Shuy, 2014), but it would be beyond their scope to speculate about the psychological traits of authors (Grant, 2008).

Herein lies a potentially significant gap between forensic psychological and forensic linguistic approaches to the assessment of language evidence, which could be addressed with an approach that combines both fields. That is, one in which an analytical method based in linguistic theory is used to identify patterns of linguistic features which are then examined through the lens of past psychological research to determine their relationship to the psychological traits of the author. The current research offers one possible design of such an approach, introduced in three parts: first, the theoretical foundation (chapters 2-3), followed by the empirical studies (chapter 4-6) to test its efficacy, culminating in the

[1] Different terms have been used for this type of assessment, including *criminal profiling, behavioral profiling,* and *psychological profiling*. While Douglas et al. (2004) primarily use 'criminal', this arguably also encompasses linguistic profiles (as they also are used to profile criminals). Thus, to distinguish between it and linguistic profiling, 'psychological' is used here.

discussion and conclusions (chapter 7-8) consisting of a comparative analysis to writings of non-violent counterparts in chapter 7 before a discussion of the overall findings from the project in chapter 8. To begin, however, a brief introduction to the theoretical assumptions of this project is warranted.

The base assertion here is that an individual's collective set of psychological traits, or their *psychopathology*, impacts their lived experience—i.e., how they interpret information and interact with the world (Beck, 2015; Bortolan, 2019). While this is generally an agreed upon notion, some disagreement arises regarding the best method for examining the impact. Oftentimes, it is argued that underlying cognitive processes can be inferred through, for instance, scores on psychometric tests (i.e., tests designed to measure psychological phenomena like personality traits or symptom severity) or direct observation of an individual's behavior/reactions to stimuli (e.g., APA, 2013; Dozios et al., 2006; Fournier, 2015). Language output has been considered a potentially valuable source of data at times, but the nature of the relationship between language and psychological processes is a topic of debate. At one extreme, it is argued that certain linguistic features—such as lexical categories or syntactic complexity—are indicative of aspects of mental health such as symptom/trait severity, functional impairments, or personality traits (e.g., Buck & Penn, 2015; Gawda, 2013; Pennebaker & King, 1999). At the other extreme, a less direct relationship is posited: language serves to enable social interaction and linguistic choices reflect more the social goals of the speaker or writer in a given context than any underlying cognitive processes (Edwards & Potter, 1992, 1993).

In this research, an argument is made for a view that combines aspects of the aforementioned perspectives, one which was informed by elements of three distinct, though in some important ways overlapping, theories from psychology and linguistics: cognitive psychology, phenomenological psychopathology, and Systemic Functional Linguistics (SFL). Namely, it is argued that linguistic choices—specifically those made when recounting a lived experience—are sensitive to, and thus impacted by, social and contextual factors like audience or genre (Bednarek, 2009a; Biber et al., 1999; Fine, 2006; Halliday & Matthiessen, 2014) *as well as* the psychological traits that influence the experience (Bednarek, 2009a; Bortolan, 2019; Fine, 2006). The argued value in analyzing accounts of lived experiences stems from phenomenological psychopathology, which is designed to be used in conjunction with other theories to guide research (Stanghellini et al., 2019). It places particular importance on subjective experience (Stanghellini et al., 2019) and using first-person accounts as a data source, contending that they allow one to observe "the various ways in which everyday experience can be disrupted" or altered by psychopathology (Bortolan,

2019, p. 1054). Cognitive psychology then offers a way to specifically characterize that impact by describing the underlying *schemas* (beliefs and assumptions) responsible for disrupting and altering experience (e.g., Beck & Haigh, 2014). This is most often done using belief assessment scales and examining the form and themes of an individual's language output to determine the schematic content, which varies depending on the traits and symptoms of the individual (Beck, 2015; Beck et al., 2015; Fournier, 2015).

It is important to note that schemas are also a concept found in linguistics (e.g., Bednarek, 2009a; Shuy, 2015), with broadly the same definition, though they are conceptualized and operationalized differently (this is discussed in more detail in chapter 3). As such, they serve as a bridge between the psychological and linguistic aspects of the theoretical foundation for this project. In fact, what is argued here is that in order to address the research questions posed below, the conceptualization of schemas from cognitive psychology—that is, as beliefs underlying psychopathology that impact how one interprets and responds to information (e.g., Beck, 2015)—should be operationalized using methods from SFL. This is because SFL provides an approach for analyzing the linguistic resources used to manifest one's schemas in language, something which neither phenomenology nor cognitive psychology offers. More specifically, it is argued that feelings about and evaluations of oneself, others, and the world represent a core aspect of cognitive schemas. Within linguistics, such feelings and evaluations are often called *stances* (Biber et al., 1999), and the linguistic resources used to convey them can be analyzed using a framework developed within SFL called Appraisal (Martin & White, 2005). Appraisal offers a way to track, in immense detail, the fundamental elements of stances with three systems: (1) *attitude* for the core feelings/value judgments and at whom/what they are directed; (2) *engagement* for the author's level of commitment to that feeling; and (3) *graduation* for the intensity of the feelings and commitment.

To summarize, **the aim of this research is to present and test the efficacy of a novel interdisciplinary approach designed to identify patterns of linguistic resources used for expressing evaluations (i.e, evaluative resources) and determine their relationship to various psychological traits of the authors**. The primary research question, therefore, is:

(1) Are there patterns of linguistic evaluative resources that can be attributed to specific psychological traits?

Since the research is intended to be applied in forensic contexts, the scope of the investigation was narrowed further by focusing primarily on language data collected from violent offenders with documented mental health conditions (chapters 4, 5, and 6). Chapter 7

then explores linguistic patterns of non-violent individuals with similar diagnoses and how they compare and contrast to those of the violent offenders. It should be stressed here that the **prevalence of violence amongst individuals with mental health disorders is very low**, and research shows that mental health alone is not a reliable predictor of violence (Hiday, 1995; Nestor, 2002; Stuart, 2003). In cognitive theory, violence has been suggested to result from dysfunctional and maladaptive schemas (Walker & Bright, 2009)—just as mental health disorders do (Beck & Haigh, 2014)—which adversely affect individual's interpretations of and responses to situations. (The literature on the cognitive perspective of violence and factors believed to contribute to it is discussed in detail in chapter 2.) This is the view adopted here; violence and violent ideation, just like psychological traits, at least partially stem from underlying maladaptive schemas that impact information processing and behavioral responses and might therefore be evident in their patterns of linguistic choices. However, as is discussed more in chapter 2, not all forms of violence are the same; different types of violent offenders are considered to have different psychological profiles (for overviews of different typologies, see, e.g., Miller, 2014a; Palermo & Kocsis, 2005). Thus, a second research question emerges:

(2) a. Are there patterns which are consistent across violent offenders of the same type (thus possibly indicative of specific schemas associated with that type of violent act)?

b. Are there patterns that are consistent across different types of violent offenders (thus possibly indicative of broad violence-related schemas)?

Three empirical studies were carried out using data from three types of violent offender (all with documented mental health conditions) alongside one smaller comparison study using data from five non-violent individuals with mental health diagnoses that overlap with some of the diagnoses of the violent offenders. All four of the studies are used to address research question 1; research question 2a is also addressed in the three violent offender studies; and research question 2b is the focus of the discussion chapter (chapter 8), when the findings from all the studies are considered together.

In chapter 2, the relevant psychological literature is reviewed, focusing on the research done on the mental health diagnoses received by the authors studied in this project. Chapter 3 then details the methods and methodology of this project, first introducing the linguistic literature and how it relates to the psychological literature, before outlining the analytical framework used across all four studies as well as the design of the studies (including how the confounding variables were handled). Chapter 4 contains the first empirical study, which utilizes writings about three broad topics from four serial murderers with a myriad of mental

health diagnoses. The second study (chapter 5) focuses on a single author—a serial bomber—and examines linguistic patterns over time in letters written to his family. The final violent offender study (chapter 6) examines writings of four perpetrators of mass violence, all of whom had similar mental health diagnoses or symptom and trait combinations. The final study (chapter 7) uses excerpts from memoirs by non-violent individuals with similar mental health diagnoses to the violent offenders from the previous chapters. The discussion chapter (chapter 8) then brings all of the findings together to discuss what they suggest about the efficacy of the proposed approach, its limitations, and possible directions for future research. Given the apparent lack of previous research on the relationship between stance-taking features and psychopathology, it is difficult to generate specific hypotheses about the possible observed distributions of evaluative resources and their connection to underlying traits/symptoms. Therefore, a more exploratory approach is taken in this research; the distributions of resources that were found are described and then possible interpretations of those distributions, using the cognitive psychology literature as a guide, are offered.

CHAPTER 2 THEORIZING A RELATIONSHIP BETWEEN LANGUAGE AND PSYCHOPATHOLOGY

In this chapter, the literature which forms the psychological side of the theoretical foundation for this project is reviewed alongside some of the existing literature on the relationship between psychopathology and language to help demonstrate the distinctiveness and added value of the novel approach proposed in this research. As mentioned in chapter 1, the cognitive and phenomenological perspectives of psychopathology both prove useful for providing theoretical grounding. The cognitive psychology literature is the focus of much of this chapter and is discussed in section 2.1, while phenomenology becomes more useful for providing context for guiding data selection and is therefore focused on more in chapter 3. However, to preview the two perspectives:

- The **cognitive** theory of psychopathology provides constructs which can be expanded upon to inform hypotheses about how certain evaluative language patterns may relate to specific psychological traits and symptoms. Research from this perspective focuses on examining how internal cognitive processes, like schemas and evaluative biases, influence interpretation of and reaction to incoming information (Beck & Haigh, 2014). Taking the view that stance-taking resources are a means with which to convey those interpretations and reactions (as, say, evaluations of the people and things in one's environment), the research on schemas and evaluative biases in individuals with different mental health diagnoses can be argued to offer a solid empirical basis from which to extrapolate about connections between evaluative language patterns and psychopathology. The psychological literature in support of this argument is reviewed in detail in section 2.1 (and how it connects to the linguistic construct of stance and stance-taking resources is discussed more thoroughly in chapter 3).
- The **phenomenological** theory of psychopathology focuses on examining individuals' first-person accounts of lived experiences to determine how those experiences were impacted by psychopathology (Bortolan, 2019). In this perspective, "the forms and contents of the patient's subjective experience are prioritized" and theoretical assumptions are minimized (Stanghellini et al., 2019, p. 3). As such, it served primarily as a guide in devising the data selection criteria—to ensure the types of writings chosen would have the best chance of providing insight into psychological traits—and is discussed in more detail in chapter 3.

The literature on the relationship between psychopathology and language is then reviewed in section 2.2. As briefly mentioned in chapter 1, the nature of this relationship is widely

debated. Existing perspectives offer some guidance as to what the analyses might reveal, but the findings have been fairly inconsistent and stance-taking resources do not appear to have been considered before, at least not with regard to how they relate to specific psychological traits.

Turning now to the specific data in this project, there are both psychological and linguistic data. The psychological data consist of the traits and symptoms of the data subjects in this project (i.e., the authors), which for the violent offenders were drawn from reports (or references to reports) generated from psychological assessments conducted on the authors (typically during their trials) as these reports were the most reliable way to remotely gather the psychopathological information. An overview of this information can be found in Table 2.1 below; more detailed descriptions for all authors are included in their respective chapters.

Table 2.1: Overview of author diagnoses and traits

	Author	Diagnosis	Reference
Chapter 4 (Serial Murder)	**Aileen Wuornos**	--Borderline Personality Disorder --Antisocial Personality Disorder	*Myers et al., 2005*
	David Berkowitz	--Schizophrenia --Impulsivity; Attention Seeking; Anxiousness personality traits	*Abrahamsen, 1979*
	Dennis Rader	--Obsessive-Compulsive Disorder --Narcissistic Personality Disorder	*Ramsland, 2016*
	Ian Brady	--Schizophrenia --Narcissistic Personality Disorder --Antisocial Personality Disorder	*Atherton et al., 2013*
Chapter 5 (Serial Bombing)	**Ted Kaczynski**	--Schizophrenia --Paranoid Personality Disorder (premorbid)	*Johnson, 1998*
Chapter 6 (Mass Violence)	**Alvaro Castillo**	--Psychotic Disorder --Manic & Depressive symptoms	*North Carolina v. Castillo, 2010*
	James Holmes	--Schizotypal Personality Disorder --Delusional Disorder	*Reid, 2014*
	Alex Hribal	--Major Depressive Disorder --Psychotic symptoms	*Pennsylvania v. Hribal, 2016*
	Kip Kinkel	--Psychotic Symptoms --Depressive Symptoms	*'111 Years Without Parole,' 2000*

For most of the authors, the evaluating psychiatrist/psychologist posited specific mental health diagnoses. In these cases, the psychological traits and symptoms could be

determined by referencing the diagnostic manual used to arrive at the diagnoses because it necessarily contains the basic list of symptoms and traits associated with each disorder listed within it. As far as can be discerned, the one used in every case was the American Psychiatric Association's (APA) *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*). Older editions of the manual were used in a number of the reports, but the fifth edition (*DSM*-5; APA, 2013) is the primary reference in this research because it contains the most up-to-date information about the disorders. For any disorders that underwent significant changes in their diagnostic criteria, the older editions were consulted. For the remaining authors, the process was more straightforward because the report listed only a set of pathological symptoms and traits which did not technically constitute any specific diagnosis, but which still caused a significant amount of distress and impairment.

For the non-violent authors who are the focus of chapter 7, psychiatric reports were not available, but the chosen data was excerpted from their memoirs which detailed the diagnoses they received as well as their experiences with those diagnoses. This information can be found in Table 2.2 below.

Table 2.2: Diagnostic information for non-violent authors

Author	Diagnosis	Memoir
Elizabeth Wurtzel	--Major Depressive Disorder	*Prozac Nation (1994)*
Pamela Spiro Wagner	--Schizophrenia	*Divided Minds (2005)*
Merri Lisa Johnson	--Borderline Personality Disorder	*Girl in Need of a Tourniquet (2010)*
Esmé Weijun Wang	--Schizoaffective Disorder*	*The Collected Schizophrenias (2019)*
David Adam	--Obsessive-Compulsive Disorder	*The Man Who Couldn't Stop (2014)*

*Not one of the diagnoses listed in Table 2.1 but was one possibility offered to explain Alvaro Castillo's symptoms and is the closest to the combination of symptoms and traits seen in the chapter 6 authors that can be found in authors of mental health memoirs.

As mentioned above, section 2.1 contains an overview of the literature from the cognitive theory of psychopathology and section 2.2 contains an overview of the literature on language and mental health. For conciseness, though, the focus in these coming sections is on the research concerning only the mental health disorders, symptoms, and pathological traits reported for the authors studied in this project.

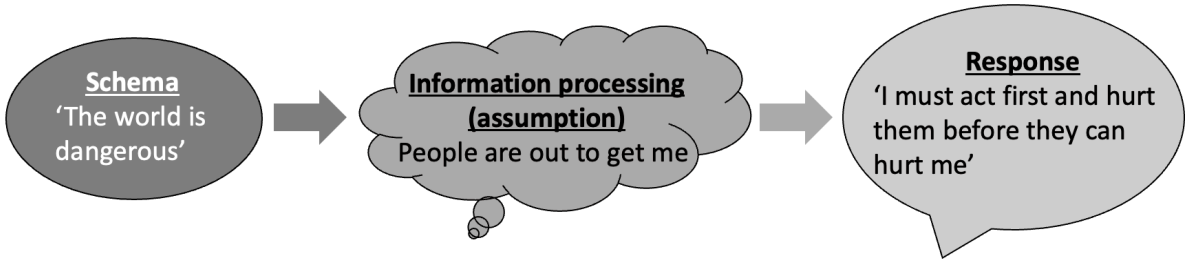
2.1 THE COGNITIVE THEORY OF PSYCHOPATHOLOGY

There are a number of different cognitive theories in existence that are oriented toward clinical application, all with the general shared view that cognition influences emotions and

behavior and maladaptive cognitions can be examined, monitored, and altered to bring about desired change (Dozios et al., 2006). The theory primarily relied upon in this research is Beck's theory, which while it met criticism shortly after its inception in the early 1960s for its inability to explain certain features of mental health disorders or account for certain relationships between some disorders, innovations have been made in the decades since to address its early shortcomings (Beck & Haigh, 2014). It is now considered one of the fundamental theories in cognitive therapy (Beck & Haigh, 2014; David & Freeman, 2015; Dozios et al., 2006) and is one of the most scrutinized, comprehensive, and empirically supported of the existing theories (Dozios et al., 2006).

The primary focus of Beck's theory is cognitive schemas, which are internal "representations of stimuli, ideas, or experiences" (Beck & Haigh, 2014, p. 3) that impact interpretation of and response to incoming information (Beck, 2015). They are viewed as an abstract concept which cannot be directly observed, but whose content can still be discerned through examination of the sets of beliefs and assumptions that constitute them, often done using assessment scales or observation and analysis of statements made during interviews or in self-reports (Beck et al., 2015). To illustrate, consider the diagram in Figure 2.1 below.

Figure 2.1: Example of the effect of cognitive schemas



Different schemas are proposed to be core to different mental health conditions and to correspond to the various traits and symptoms which comprise those conditions. Of course, psychopathology is inherently very complex, and the interplay between the same traits and symptoms in two different people can have vastly different effects on functioning depending on the order of prominence of those traits and symptoms (Millon et al., 2012). The same applies to the effect of underlying schemas; their impact on information processing will vary based on their intensity and whether they are connected to a stable personality trait (which has a more continuous effect) or a symptom that fluctuates in severity (which has the greatest impact when the severity is highest; Beck, 2015). This is elaborated upon in section 2.1.1 on personality disorders and section 2.1.2 on symptom disorders.

It is worth briefly noting here that linguistics also utilizes the concept of schemas but uses a less narrow conceptualization and different methods for observing their realizations. In fact, part of the appeal of the cognitive psychology theory is that it focuses on this shared concept. The relationship between the psychological and linguistic theories of schemas and how they relate to the methodological approach of this project, however, is beyond the scope of this chapter and is instead explored more thoroughly in chapter 3.

The schemas posited to be associated with the diagnoses, symptoms, and traits seen in Tables 2.1 and 2.2 are reviewed in detail in the subsections to follow. It is difficult to hypothesize how they might manifest in specific distributions of stance-taking resources because different schemas may be more active or dominant in information processing at different times and the same schema can be realized using a variety of combinations of resources (Beck et al., 2015). Therefore, in each chapter, specific hypotheses are not offered about the possible distributions of evaluative resources associated with a given diagnosis and its composite traits/symptoms. Instead, the distributional findings are described first and their potential relationships to the relevant symptoms/traits and the underlying schemas are explored second, guided by the research presented in the coming sections. There is not as much research regarding the schemas that underlie violence specifically, but Walker and Bright (2009) propose their own cognitive model of violence based on past research of related factors such as aggression and anger, which is reviewed in section 2.1.3 and used as a guiding reference for interpretations relating to violent ideation found in chapter 7.

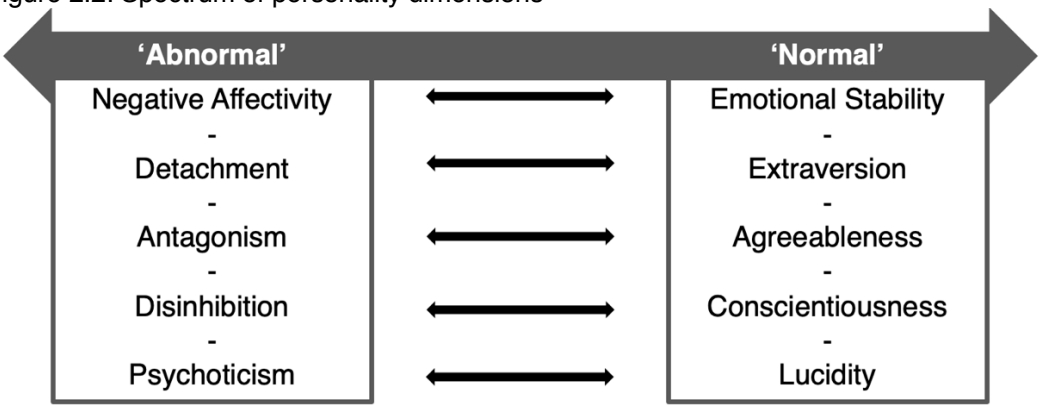
The diagnoses have been separated into two categories—*personality disorders* (PDs) and *symptom disorders* (SxDs)—in line with the distinctions drawn between them in the *DSM-5* (APA, 2013) and by Beck (2015). The five above-listed PDs (antisocial, borderline, narcissistic, paranoid, and schizotypal) are covered in section 2.1.1, which also inevitably includes a review of the standalone pathological traits of impulsivity, attention seeking, and anxiousness reported for David Berkowitz because they each occur in at least one of the PDs. The five SxDs (schizophrenia, psychotic disorder, delusional disorder, obsessive-compulsive disorder, and major depressive disorder) as well as the standalone psychotic, manic, and depressive symptoms are then discussed in section 2.1.2. The general cognitive theory of violence is detailed in section 2.1.3 alongside a discussion of differences between violent offender types and, where relevant, the connections between violence and hostility and the disorders covered in the next two subsections.

2.1.1 PERSONALITY DISORDERS

Personality traits are "enduring patterns of perceiving, relating to, and thinking about the environment and oneself that are exhibited in a wide range of social and personal contexts" (APA, 2013, p. 647). Each trait is accompanied by schemas that impact interpretation of and response to various situations (Beck, 2015). 'Normal' personality traits are considered to be adaptive and flexible in that their role in interpretation and response varies depending on what a situation necessitates (Beck, 2015, p. 24). The pathological traits that constitute personality disorders, conversely, are *maladaptive* and *inflexible* such that the same interpretation and response strategies are applied in situations for which they are inappropriate. For example, heightened 'competitiveness' might be adaptive for an athlete on a sports team trying to win a game, but might be considered maladaptive if it causes someone to alienate their friends by trying to best them in every activity.

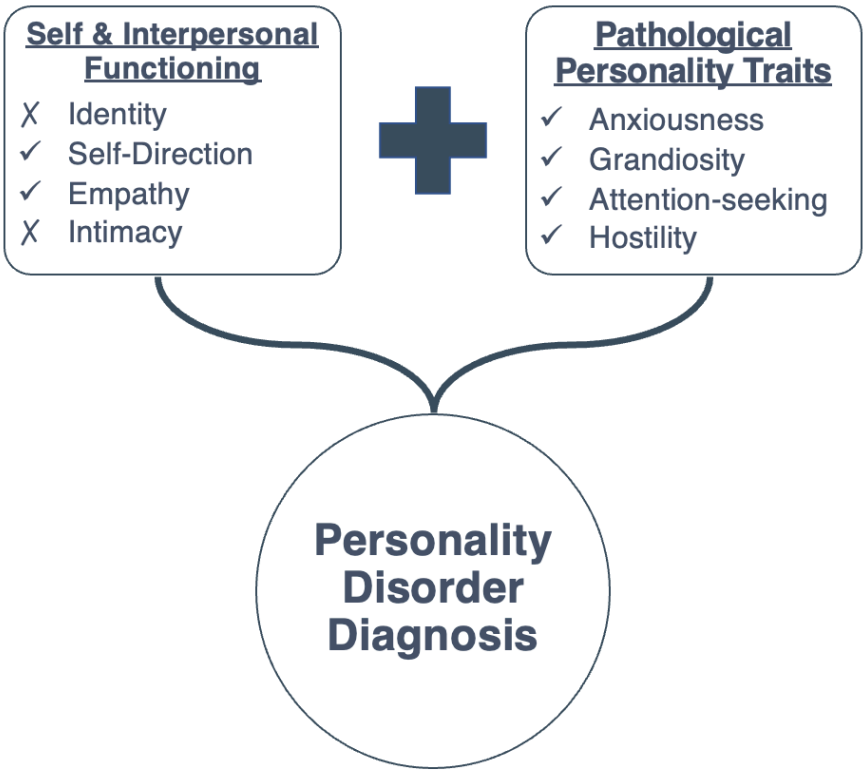
In the *DSM-5*, two approaches to diagnosis and classification of PDs are offered: a *categorical approach* and a *dimensional approach* (APA, 2013). The categorical approach rolled over from the previous editions of the *DSM*, treating PDs in much the same way as SxDs; that is, as discrete entities comprised of specific sets of possible behaviors that must be present for the diagnosis to be made. The dimensional model was proposed as an alternative in the *DSM-5* after criticism about the categorical approach being ill-suited for diagnosis of PDs because it fails to account for the high rates of comorbidity (co-occurrence) and the degree of overlap between them (APA, 2013; Fournier, 2015; Hopwood et al., 2013; Krueger et al., 2011; Morey et al., 2011). Under this model, personality traits are viewed as existing on a spectrum from 'normal' to 'abnormal' and therefore as being present in every individual with varying degrees of severity and normality/adaptiveness; PDs are then the result of multiple pathological traits becoming dominant and causing significant impairment or distress (APA, 2013). To illustrate, consider the graphic representation in Figure 2.2 below:

Figure 2.2: Spectrum of personality dimensions



As this graphic shows, there are five personality *dimensions*—comprised of 25 individual traits between them—which represent the pathological variants of the 'normal' personality dimensions (i.e., the 'abnormal' end of the spectrum). Using different combinations generated from the same base set of traits to distinguish between PDs more effectively accounts for the observed overlap between them because it allows for some of the same underlying traits to be shared by different disorders. There is usually slight variation, though, in parts of the trait descriptions likely because the interaction with the other traits changes its exact manifestation. In addition to the pathological traits, there must also be observed impairment in at least two out of four areas of self and interpersonal functioning: *identity, self-direction, empathy*, and *intimacy* (APA, 2013). A graphic representation of these main criteria is provided in Figure 2.3 below; the criteria marked with an 'X' indicate the impairment is not present, those marked with a check mark are present.

Figure 2.3: Example personality diagnosis



The final criterion is that evidence of the PD must not be better explained by another mental health disorder, though it may be present alongside a SxD, which could impact the manifestation of that SxD (APA, 2013; Millon et al., 2012). For this research, the dimensional model was consulted for four of the five above-listed PDs because the criteria can more easily be related to the internal processes and biases that are central in cognitive theory. For paranoid personality disorder (PPD), the categorical criteria were consulted because it is not

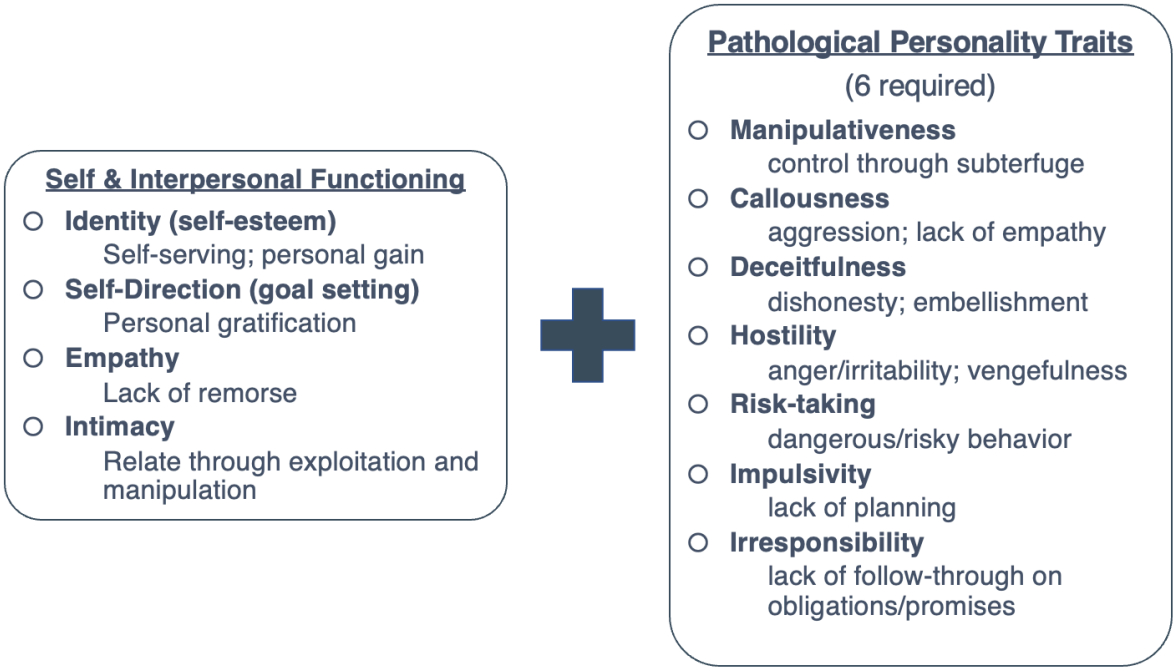
one of the specific PD diagnoses derived from the dimensional model (APA, 2013). In this particular instance, however, the majority of the categorical criteria refer to information processing biases making it still possible to relate them to the core schemas and dysfunctional beliefs identified under the cognitive perspective.

Cognitive theory aims to describe more specific aspects of how PDs manifest and the impacts of their composite traits on functioning. Schemas are considered to be at the core of PDs, with each having its own set that is discernible through examination of dysfunctional beliefs (Beck, 2015; Beck et al., 2001). To determine which dysfunctional beliefs are present, clinicians may carefully analyze the content and form of self- and other-appraising statements (though importantly not with a focus on specific stance-taking resources; Beck et al., 2015) or they may use assessment scales in which individuals rate how much they believe each statement presented in the scale (Fournier, 2015). Studies testing the reliability of these scales have demonstrated that there are specific subscales of items which can distinguish between some PDs (e.g., Arntz et al., 2004; Beck et al., 2001; Butler et al., 2002; Fournier et al., 2012). That is, individuals with a specific PD have been found to more strongly endorse the items that correspond to their diagnosis. The degree of overlap between certain PDs, however, means that the distinctions between some are not captured as well by the assessment scales. For instance, narcissistic PD (NPD) and antisocial PD (ASPD) have been found to share a number of underlying beliefs (e.g., Butler et al., 2007; Fournier et al., 2012) and individuals with borderline PD (BPD) are thought to endorse beliefs from multiple other PD subscales (Fournier et al., 2012, p. 801). Additionally, schizotypal PD (StPD) is thought to cause "dysfunction in the process of thinking…[not] pathology in thought content" which results in more difficulty identifying the beliefs representative of its underlying schemas (Fournier et al., 2012, p. 801). For each of the five PDs found in Table 2.1 and 2.2, the basic diagnostic information from the *DSM-5*'s dimensional model and the research from the cognitive perspective of the core dysfunctional beliefs and their impact on various cognitive processes is reviewed below.

Antisocial Personality Disorder (ASPD)

Antisocial personality disorder (ASPD) is characterized by a disregard for lawful and ethical behavior, egocentrism, a lack of concern for others, and accompanying behaviors such as manipulativeness and irresponsibility (APA, 2013, p. 764). The specific criteria for the self and interpersonal functioning and required pathological traits for ASPD are shown in Figure 2.4 below.

Figure 2.4: Diagnostic criteria for Antisocial Personality Disorder



Information from (APA, 2013, pp. 764-765)

From the cognitive perspective, these traits manifest in a number of beliefs and assumptions about the self and others. The core beliefs of ASPD reflect an exaggerated self-interest. They view themselves as strong, autonomous, and entitled, and sometimes as having been the victim of society, which helps justify their unlawful and harmful actions ("[they] need to be the aggressor or [they] will be the victim"; Beck, 2015, p. 54). They view others as being deserving of exploitation, either because those others are weak and vulnerable (i.e., easy targets) or because they are exploitative, as well (Beck, 2015; Mitchell et al., 2015). The sense of entitlement results in a belief that societal rules are arbitrary and thus do not apply to them and that they are owed something, which they can only get from pushing others around. Some studies have revealed that while able to infer the mental states of others (i.e., intact *cognitive empathy*), individuals with ASPD exhibit deficits in affective empathy (i.e., the ability to resonate emotionally with others; Bateman et al., 2013; Dolan & Fullam, 2004; Velotti et al., 2019) and often show negative biases in the interpretation of others' intentions (Bateman et al., 2013; Lobbestael et al., 2013).

Some ASPD beliefs have been found to overlap with narcissistic PD (NPD) beliefs and they have also been found to pattern together in tests of associations between personality traits and certain areas of functioning (e.g., Butler et al., 2007; Fournier et al., 2012). This includes both negatively correlating with anxiety and depression scores (Butler et al., 2007), which is unsurprising given that an inflated sense of self and disregard for the impact of their actions on others can be present in both PDs (Beck, 2015; Behary & Davis, 2015; Mitchell et al., 2015). Beck (2015) did point out, however, that the core of each is slightly different; in

NPD, there is a sense of superiority and a desire to win others' admiration whereas in ASPD, there is inflated self-interest, such that others are seen simply as tools to be used to get what they want.

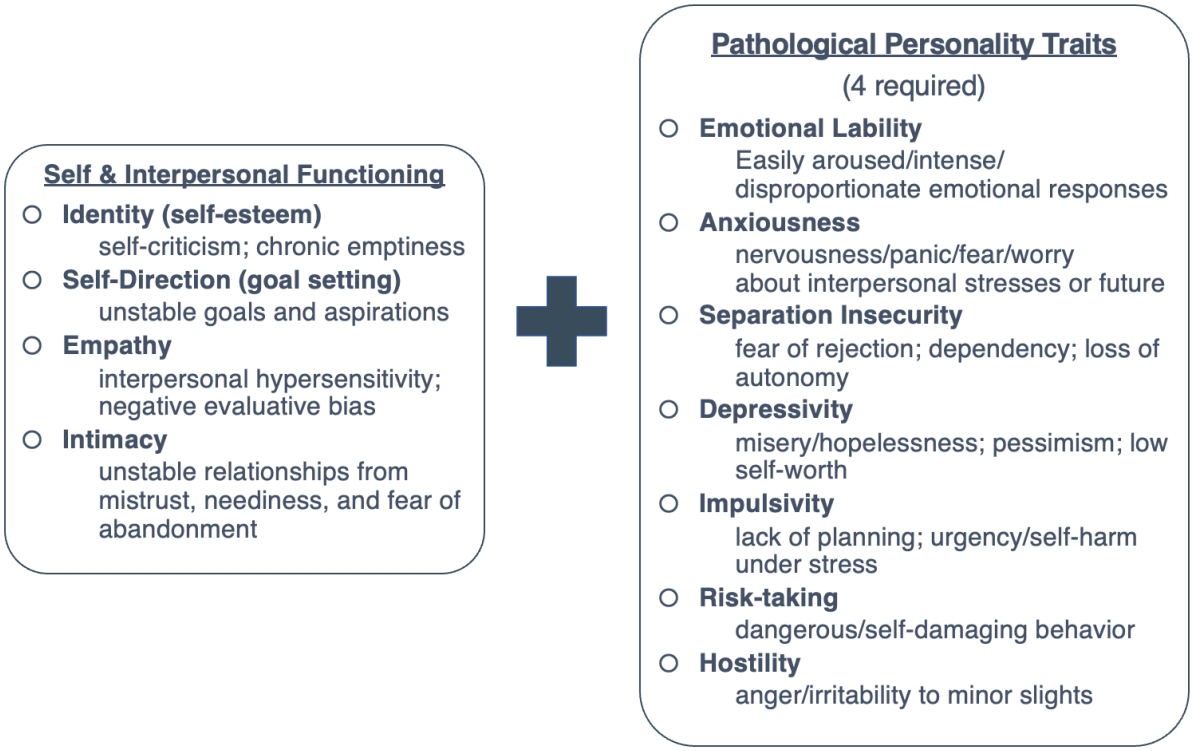
Overlap between ASPD and borderline PD (BPD) has also been found, primarily with aspects of *hostility,* a trait shared by both PDs (APA, 2013). While the scores on hostility measures overall tend to be similar, individuals with ASPD are found to most often direct hostility outward (Hatzitaskos et al.,1997; Sinha & Watson, 2005) and individuals with BPD more often direct both anger and hostility inward (Hatzitaskos et al., 1997). In fact, it has been suggested that antisocial belief patterns can be viewed as mirror images of those found in persons displaying depressive or anxiety symptoms (Mitchell et al., 2015). For instance, an individual with ASPD is likely to refrain from negative self-judgments or expressing concern for the effects of their actions on others, unlike individuals with depression. They are also unlikely to "overestimate and exaggerate potential dangers" as is often seen in individuals with anxiety (Mitchell et al., 2015, p. 349).

Conversely, some research has suggested that beliefs which are typically associated with avoidant PD (e.g., fear of failure or criticism) and paranoid PD (e.g., mistrust or suspicion of others) might be dominant in some individuals with ASPD instead of the stereotypical selfish and self-serving beliefs (McMurran & Christopher, 2008). In fact, it has been found that individuals with ASPD can sometimes have relatively high anxiety levels (APA, 2013; Hatzitaskos et al., 1997; McMurran & Christopher, 2008), and that particularly low levels of anxiousness and social withdrawal alongside high levels of attention seeking are actually evidence of concurrent *psychopathic* features (which can be specified on top of an ASPD diagnosis; APA, 2013). While such features can occur in individuals with ASPD, it is worth briefly noting the relationship between the two to avoid conflating them. In some cases, the two terms have been used interchangeably based on the assumption that the overlap in some of the features (e.g., lack of remorse, grandiosity, disregard for the rule of law; Ogloff, 2006) between them means that findings relating to one can be extended to the other (Hare, 1996; Mitchell et al., 2015; Ogloff, 2006; Palermo & Kocsis, 2005). However, psychopathy is considered a more severe pathology than ASPD (Mitchell et al., 2015), and while individuals diagnosed with psychopathy would be expected to meet the criteria for ASPD, the reverse would not necessarily be expected to hold true (Hare, 1996; Ogloff, 2006).

Borderline Personality Disorder (BPD)

Borderline personality disorder (BPD) is characterized by "instability of self-image, personal goals, interpersonal relationships, and affects, accompanied by impulsivity, risk taking, and/or hostility" (APA, 2013, p. 766). The criteria are shown below in Figure 2.5.

Figure 2.5: Diagnostic criteria for Borderline Personality Disorder



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Three primary schemas have been posited to underlie BPD: "'the world is dangerous and malevolent,' 'I am powerless and vulnerable,' and 'I am inherently unacceptable'" (Pretzer, 1990, as cited by Arntz, 2015, p. 371). Moreover, there is a distrust of and dependency on others resulting from these schemas that is believed to be accompanied by a view that one must act preemptively to avoid being harmed by others (Bhar et al., 2008). A subscale consisting of 20 beliefs considered to be central to BPD was developed as part of the Personality Disorder Beliefs Questionnaire (PDBQ)—one of the two main PD belief assessment scales—and found to be stable and reliable in distinguishing patients with BPD from other PDs (Arntz et al., 1999; Arntz et al., 2004). The items primarily reflect themes of a negative self-view (e.g., 'I will always be alone' or 'I am evil and need to be punished'), dependency (e.g., 'I can't manage it by myself, I need someone else'), powerlessness/lack of control (e.g., 'I can't discipline myself' or 'I'm powerless and vulnerable'), distrust (e.g., 'Others are evil and will abuse you'), and fears of abandonment or rejection (e.g., 'I have to adapt my needs to others, otherwise they will leave or attack me'; Arntz et al., 1999, p. 555).

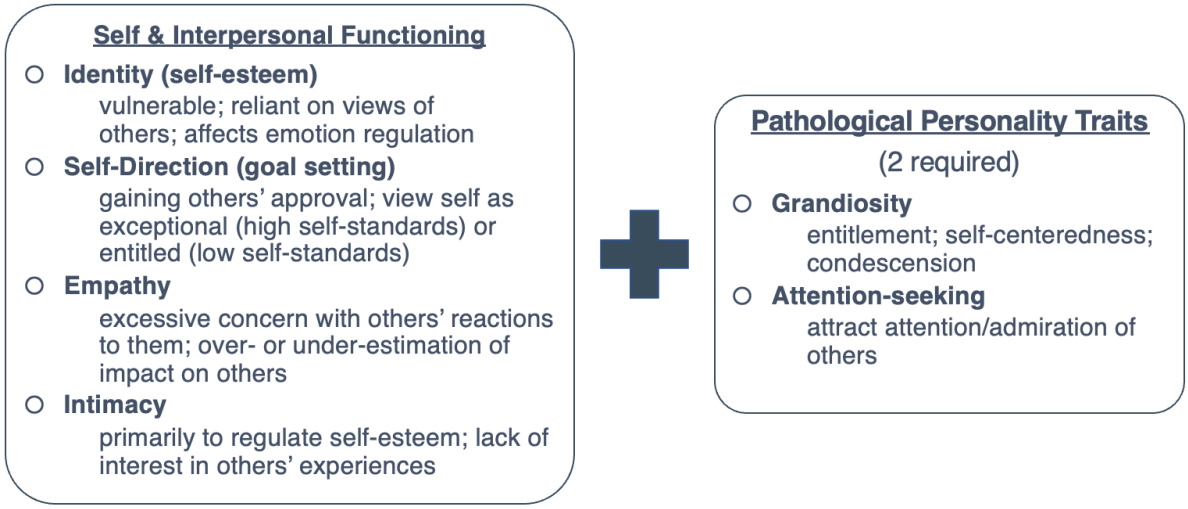
The creators of the other main PD belief assessment scale—the Personality Belief Questionnaire (PBQ)—on the other hand, did not originally develop a subscale for BPD specifically, citing the lack of theoretical support for it as the reason (Beck et al., 2001). However, studies on this scale have been conducted to test this assumption, which have shown that while there is evidence of a subset of items which accurately discriminates BPD from other PDs and reflects the same themes described above (Bhar et al., 2008; Butler et al., 2002; Giesen-Bloo & Arntz, 2005), all of the items come from subscales for other PDs. Fournier and colleagues (2012) argued, and demonstrated, that because the items most strongly endorsed by individuals with BPD originated from subscales for other PDs, the notion of a BPD-specific subscale was not necessarily supported. However, despite their origin point, the PBQ items that were identified as being strongly endorsed by individuals with BPD do reflect the fundamental themes of the core schemas as well as the self and interpersonal functioning impairments and pathological personality traits mentioned above. That is, just like the PDBQ themes above, the PBQ items "reflect themes of dependency, helplessness, distrust, fears of rejection/abandonment/losing emotional control, and extreme attention-seeking behavior" (Butler et al., 2002, p. 1231).

Studies on cognitive processes in BPD, such as evaluative biases and empathy, have offered further support for the proposed underlying schemas and beliefs. Individuals with BPD have been found to consistently view others and the world negatively (often as malevolent; Arntz & Veen, 2001; Barnow et al., 2009; Giesen-Bloo & Arntz, 2005) but at the same time demonstrate negative self-judgments and self-directed hostility (Giesen-Bloo & Arntz, 2005; Hatzitaskos et al., 1997). In addition, BPD has been found to be associated with impairments in cognitive empathy (Harari et al., 2010; Ritter et al., 2011; Semerari et al., 2015) but not necessarily in affective empathy (Harari et al., 2010; New et al., 2015) meaning they have more difficulty seeing things from others' perspectives than resonating with their emotional states. Specifically, within cognitive empathy, two areas of information processing showed the most impairment: *differentiation* and *integration* (Semerari et al., 2005; Semerari et al., 2015). Integration refers to the ability to reflect on one's own different mental states and provide "consistent narratives of [their] mental processes" (Semerari et al., 2014, p. 3-4), while differentiation refers to the ability to recognize the difference between external reality and one's own internal representations of that reality. The impairment in integration means that individuals with BPD evince "contradictory and unstable" mental processes and behaviors (Semerari et al., 2015, p. 627) and the impairment in differentiation means that they may believe that their internal, subjective interpretations of the world are actually objective and concrete realities.

Narcissistic Personality Disorder (NPD)

Narcissistic personality disorder (NPD) is characterized by "variable and vulnerable self-esteem, with attempts at regulation through attention and approval seeking, and either overt or covert grandiosity" (APA, 2013, p. 767). The criteria are shown in Figure 2.6 below.

Figure 2.6: Diagnostic criteria for Narcissistic Personality Disorder



Information from (APA, 2013, pp. 767-768)

Individuals with NPD hold beliefs that they are superior to others, but at the same time view themselves as unlovable and helpless (Beck, 2015; Behary & Davis, 2015). The commonly sought out fame, success, and power are seen as "forms of excitement [to] help persons with NPD escape dreary reality" (Behary & Davis, 2015, p. 312). They believe they are above the rules set by society and others are seen primarily as a source of admiration and respect—which should be given without an expectation of reciprocation—and as competitors in nearly every aspect of life. They attempt to minimize any blame assigned to themselves, instead evaluating others negatively and assigning blame to external sources (Behary & Davis, 2015). As a result of the core vulnerable self-esteem, individuals with NPD are prone to depression and anger especially in the face of humiliation or a threat to their image (Beck, 2015) and are likely to display overt, outward-directed hostility (Sinha & Watson, 2005).

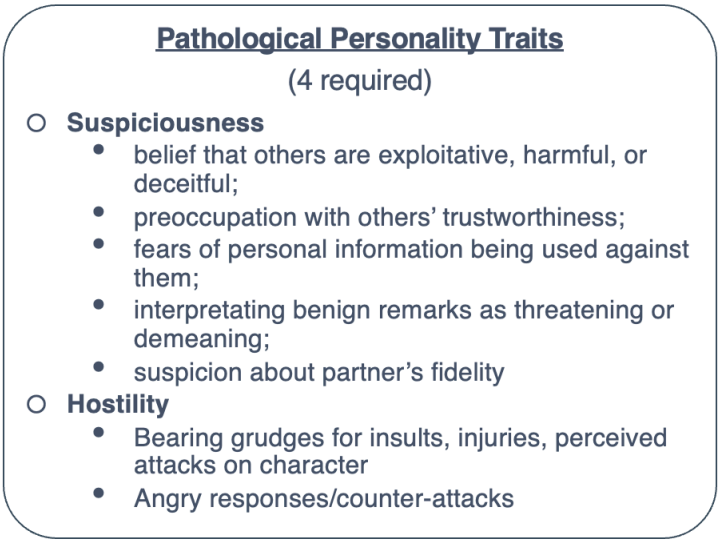
The dissonance created by the core beliefs of unlovability and superiority can result in two opposite manifestations, as reflected in the diagnostic criteria laid out above: *overt narcissism* (ON) and *covert narcissism* (CN; Behary & Davis, 2015; Given-Wilson et al., 2011; Wink, 1991). The more stereotypical presentation is that of ON, "characterized by grandiosity, entitlement and self-absorption" whereas CN is "characterized by hypersensitivity, vulnerability and dependence on others" (Given-Wilson et al., 2011, p. 1000). Interestingly, the distinction between the two types is not always made in research on the effect of NPD on cognitive processes, possibly because the core schemas relating to

grandiosity and vulnerability are the same in both; the difference lies in which aspects of the personality (i.e., which schemas) are emphasized and dominant (Given-Wilson et al., 2011; Wink, 1991). That is, in ON, the schemas around the themes of grandiosity (e.g., self-importance, aggressiveness, exhibitionism) are dominant, but in CN, the schemas around the themes of vulnerability (e.g., defensiveness, hypersensitivity, need for validation) are emphasized. At this broadest level, though, NPD is associated with impairments in primarily affective empathy but not cognitive empathy (Given-Wilson et al., 2011; Ritter et al., 2011) meaning that these individuals demonstrate more deficits in their ability to understand others' emotions than their ability to understand others' perspectives. More specifically, Given-Wilson and colleagues (2011) demonstrated that ON and CN were associated with slightly different combinations of deficits. Those with ON exhibited a more assertive interpersonal style, showing more concern for gaining admiration from others and maintaining control while those with CN were more socially detached and had increased social anxiety and distrust of others, likely to prevent the ever-feared rejection or disapproval from coming to pass.

Paranoid Personality Disorder (PPD)

Paranoid personality disorder (PPD) is marked by a "pervasive distrust and suspiciousness of others such that their motives are interpreted as malevolent" (APA, 2013, p. 649). While not one of the PDs explicitly laid out in the alternative diagnostic model, the seven categorical criteria—four of which must be present for diagnosis—can all be subsumed under the traits of *suspiciousness* and *hostility* (something which has been suggested in past research; e.g., Beck, 2015; Millon et al., 2012). The behaviors that fall under each trait are shown in Figure 2.7 below.

Figure 2.7: Relation between pathological traits and categorical criteria for PPD



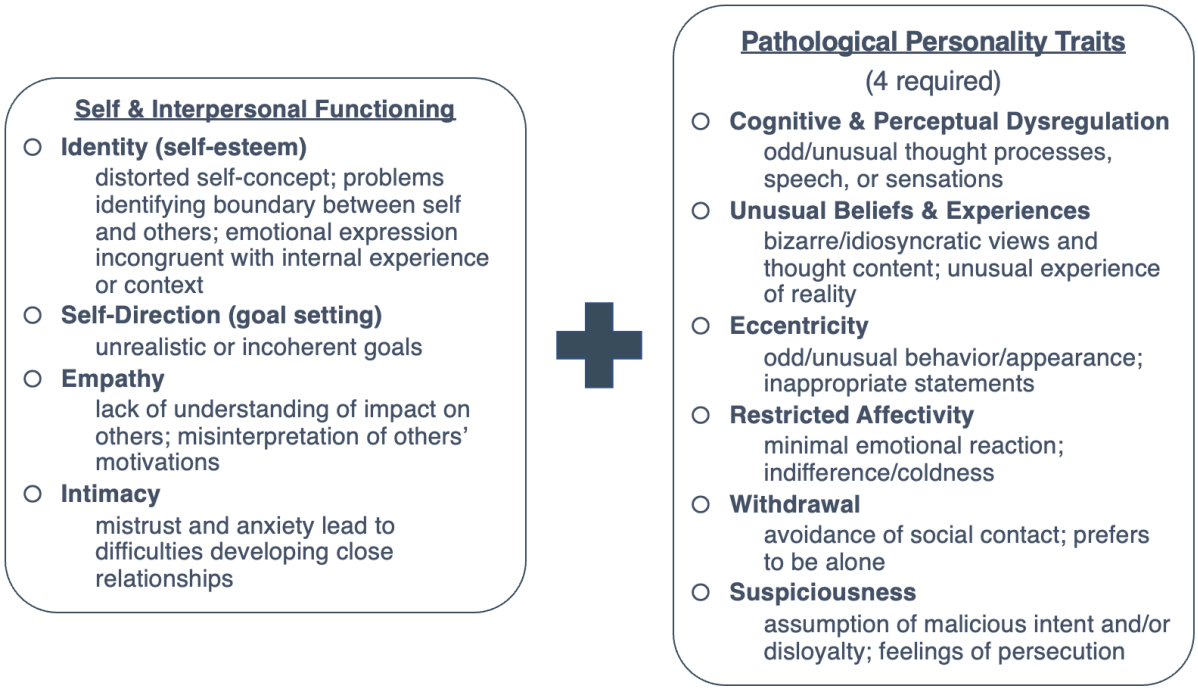
On both the PBQ and PDBQ, subscales were proposed and validated for PPD which center around the heightened suspiciousness and mistrust of others and their intentions (Arntz et al., 2004; Beck et al., 2001; Bhar et al., 2012; Fournier et al., 2012). For instance, holding the belief that others aim to take advantage of them; that they must always be on guard; or that when others are friendly, they are trying to manipulate them (Bhar et al., 2012; Fournier, 2015). Individuals with PPD view themselves as righteous and clever, but at the same time as vulnerable to mistreatment (Beck, 2015). Others, on the other hand, are viewed as mischievous, deceptive, manipulative, and exploitative (Beck, 2015; Renton & Mankiewicz, 2015). As a result, similar to BPD, individuals with PPD are hypervigilant; the perception of threats is high and generalized meaning they are inclined to see threats in even the most benign actions (Renton & Mankiewicz, 2015, p. 248). As a result of the perceived threat and potential for exploitation, PPD is often accompanied by anger or constant anxiety (Beck, 2015). These beliefs are also often held with a high degree of conviction, though not necessarily to the extent of a full-blown *delusion* (Renton & Mankiewicz, 2015)—a fixed belief considered incontrovertibly true regardless of contrary evidence (APA, 2013).

Studies examining the impact of PPD on cognitive processes are limited, though the effects of paranoia and persecutory delusions (i.e., beliefs that others are intent on causing one harm; APA, 2013) have been investigated, and while not necessarily studying individuals with PPD, it has been shown that similar reasoning biases are present in PPD as in persecutory delusions (Thompson-Pope & Turkat, 1988). As such, these biases are discussed in the section on Schizophrenia and Psychotic Disorders/Symptoms below.

Schizotypal Personality Disorder (StPD)

Schizotypal personality disorder (StPD) is considered to be part of the group of schizophrenia spectrum and other psychotic disorders and, as such, is characterized by bizarre perceptual experiences in addition to an inability to form social or close relationships, a distorted self-image, incoherent personal goals, suspiciousness, and restricted affect (APA, 2013, p. 90, 769). The criteria for diagnosis can be found in Figure 2.8 below.

Figure 2.8: Diagnostic criteria for Schizotypal Personality Disorder



Information from (APA, 2013, p. 769)

Very little research has been done on the underlying beliefs of StPD, and Fournier and colleagues (2012) found that there is no evidence for a StPD-specific subscale in the PBQ, suggesting it is likely because individuals with StPD "suffer from dysfunction in the process of thinking as opposed to pathology in thought content" (p. 801). That is, it can be associated with a wide range of unusual beliefs (and thus not any specific set of beliefs as with other PDs) and is more defined by the presence of distorted experiences and thought processes (Renton & Mankiewicz, 2015). Beck (2015) posited that individuals with StPD often view themselves as a loner, as different, and perhaps unique and view others as hostile and unfriendly. As such, there is a fair amount of overlap between it and PPD. Additionally, as it is on the schizophrenia spectrum of disorders, individuals will often present with "subclinical psychotic symptoms or experiences, such as suspiciousness, believing people are talking about them or intend them some harm" (Renton & Mankiewicz, 2015, p. 257). The similarities between StPD and aspects of schizophrenia and PPD suggest that findings relating to those disorders and their composite traits and symptoms may be applicable. However, similar to PPD, StPD can be distinguished from schizophrenia and other psychotic SxDs by the severity of the psychotic-like traits, with strong convictions **below** the threshold of full-blown delusions being indicative of PDs rather than SxDs (Renton & Mankiewicz, 2015).

2.1.2 SYMPTOM DISORDERS

Just as with PDs, the cognitive theory posits that what underlies symptom disorders (SxDs) is a set of dysfunctional beliefs and schemas that impact various cognitive processes (Beck, 2015; Beck & Haigh, 2014). Once these processes have been adversely affected, "other systems (e.g., affective, motivational, behavioral) begin to function in a maladaptive manner, giving rise to symptoms of clinical disorders" (Beck & Haigh, 2014, p. 13). The heterogeneity of SxD presentations can make it more difficult to identify the underlying schemas as their specific content may vary from person to person. However, the effects of the schemas on the fundamental processes, which give rise to the development and maintenance of the symptoms, are thought to be consistent (Beck & Haigh, 2014). Additionally, unlike pathological personality traits, which are considered stable, the symptoms that comprise SxDs often fluctuate in severity, cycling between periods of exacerbations and subsequent returns to baseline. As a result, the schemas associated with various symptoms are activated more easily and often when the severity of those symptoms is greater (Beck, 2015). The diagnostic criteria and literature from the cognitive perspective are reviewed below for each of the SxDs and standalone symptoms listed in Tables 2.1 and 2.2.

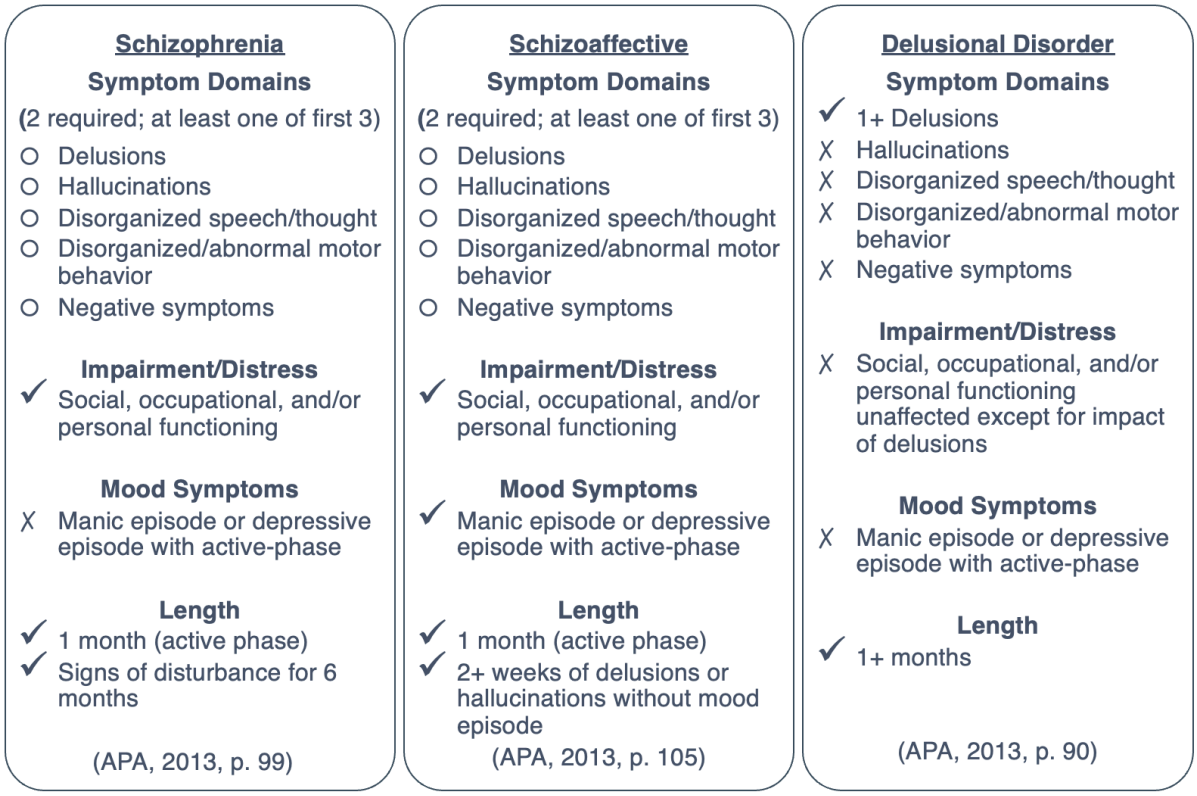
Schizophrenia and Psychotic Disorders/Symptoms

Schizophrenia is believed to exist on a spectrum with StPD, schizoaffective disorder, and other psychotic disorders like delusional disorder, which all involve abnormalities in at least one of five domains: delusions, hallucinations (which together constitute the *psychotic* symptoms), disorganized thought/speech, "grossly disorganized or abnormal motor behavior," and negative symptoms (APA, 2013, p. 87). The first four are considered 'positive' symptoms in that they are the presence of behaviors or experiences which are not observed in most 'normal' people. The negative symptoms, then, are the absence of 'normal' behaviors, such as *alogia* which is characterized by a lack of thought content in speech (Freedman, 2010), meaning the individual would provide no more than the bare minimum required when giving a response.

Since StPD is discussed in the PD section above, it is not covered again in this section, but it is worth noting its relationship to the other disorders in schizophrenia spectrum diagnostic group (APA, 2013). The other diagnoses in this category listed in Tables 2.1 and 2.2 include schizophrenia, schizoaffective disorder, delusional disorder, and an unspecified psychotic disorder. There is quite a bit of overlap between the diagnoses in the schizophrenia spectrum of disorders; the differences lie mostly in the number of symptoms from the above five domains that are present and for how long. The criteria for the first three

to illustrate where the differences are between them are shown in Figure 2.9 below. In the situations where an unspecified or 'other' psychotic disorder diagnosis is given, the individual is determined not to meet the criteria for any of the disorders within the diagnostic group, but some symptoms that are characteristic of those disorders are present and cause significant impairment and distress (APA, 2013, p. 122).

Figure 2.9: Diagnostic criteria for Schizophrenia, Schizoaffective Disorder, and Delusional Disorder



The authors given diagnoses from this group of disorders were reported to primarily have exhibited signs of the psychotic symptoms (delusions and hallucinations) and as such, these symptoms are the primary focus in this section. Delusions are "fixed beliefs that are not amenable to change in light of conflicting evidence", while hallucinations are "perception-like experiences…without an external stimulus" (APA, 2013, p. 87), that can occur with any of the five senses, but those in the auditory modality have been studied most extensively and are the most common (APA, 2013; Beck & Rector, 2003). Both are not found exclusively in psychotic disorders, but can occur in a variety of contexts, such as during major depressive or manic episodes or in obsessive-compulsive disorder (Beck & Rector, 2005). They both cause distortions in the perception and experience of reality, and their formation and maintenance are argued to depend on information processing biases that arise from underlying schemas (Beck & Rector, 2003, 2005; Bell et al., 2006; Garety et al., 2001), the

content of which is reflected in the themes of the delusions or hallucinations (Beck & Rector, 2003, 2005).

The formation of delusions does not occur immediately; they take time to fully solidify in the individual's mind and, even after they have, they can still be elaborated upon and refined and an individual's investment in them can vary over time (Fineberg et al., 2015; Freedman, 2010). During their formation and periods of exacerbation, the schemas bias information processing and, as a result, control to a significant degree the individual's interpretations of their experience (Beck & Rector, 2005). The combination of two specific biases, "preemptive self-centered focus and external locus of causation" is thought to be core to delusional beliefs (Beck & Rector, 2005, p. 584). The self-centered focus results in perceptions of oneself as the center of a large number of events, even when they have no relevance to them (Beck & Rector, 2005). The external locus of causation, or externalizing bias, leads to assignment of blame to external circumstances or people. Auditory hallucinations are believed to be formed in a similar way (Beck & Rector, 2003). Underlying schemas become hyperactive and as a result, manifest as an external voice expressing the beliefs representative of the schemas. The heightened externalizing bias, as seen in delusions, then leads to a reinforcement of the perception of the voice as real and as coming from some external agent.

The content of the schemas that are active in individuals who experience delusions or hallucinations will be evident in the themes of those delusions or hallucinations (Beck & Rector, 2003, 2005). With hallucinations, any number of themes are possible, it depends on the situation and the active schemas, but what is consistent is the experience of the cognitions as being directed **at** the individual rather than originating from them or being something in which they participate (Beck & Rector, 2003). Delusions, on the other hand, are more consistent in the broad themes that are experienced. *Persecutory* delusions, in which the individual believes that others intend to harm or harass them, are the most common (APA, 2013) and their impact on information processing has been extensively studied. Since paranoid ideation, which is central to this type of delusion, is also present—usually at a slightly lower intensity (Renton & Mankiewicz, 2015)—in PPD and StPD, such research arguably would apply to some extent to them, as well.

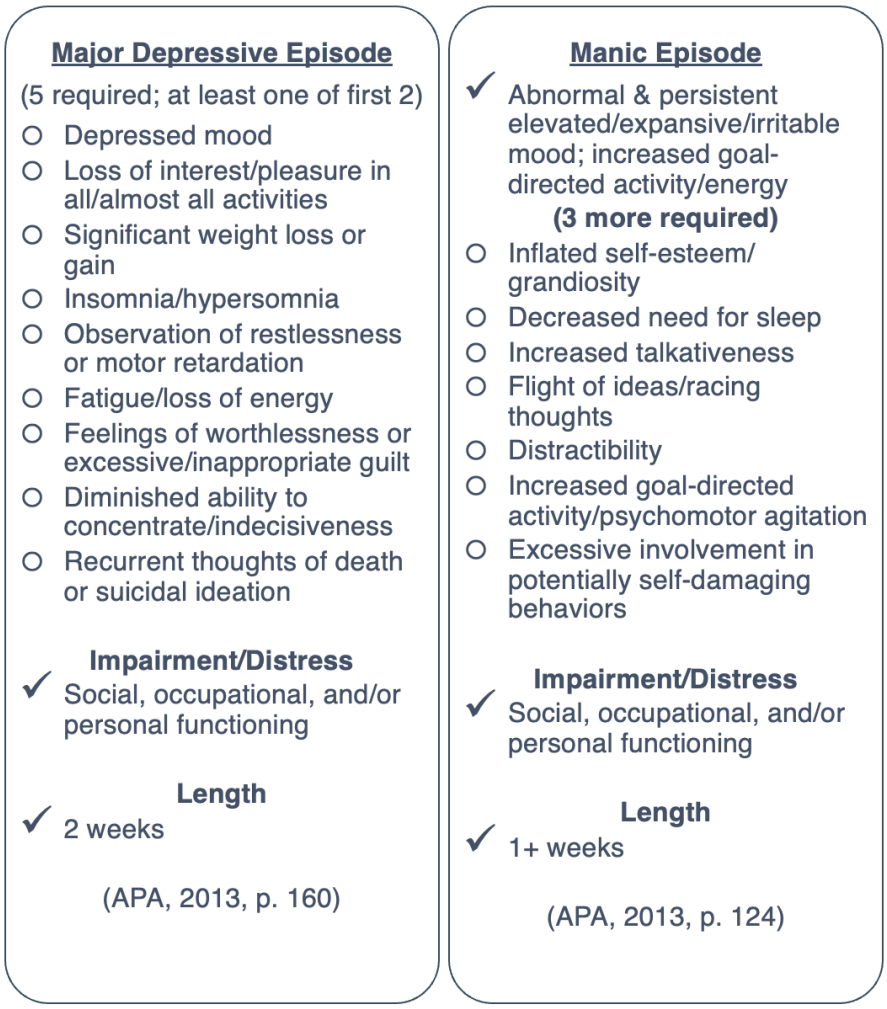
Paranoid ideation and persecutory delusions have been found to be associated with externalizing biases and reasoning biases (e.g., Kinderman & Bentall, 1997; Langdon, et al., 2006; Langdon et al., 2010; Martin & Penn, 2002; Murphy et al., 2018). The externalizing biases result in an increased tendency to blame circumstances or other people for negative events rather than themselves (e.g., Bentall et al., 2001; Langdon et al., 2006; Langdon et

al., 2010; Martin & Penn, 2002), which is argued to contribute to the creation and maintenance of the paranoid world view (Bentall et al., 2001). Reasoning biases include a greater tendency to 'jump to conclusions' after receiving minimal information (e.g., Garety et al., 2005; Langdon et al., 2010) and deficits in theory of mind, which is the ability to infer others' intentions (e.g., Langdon et al., 2006; Langdon et al., 2010). Bentall and colleagues (2001) posited that the deficit in theory of mind might even result in a greater chance of attributing negative characteristics to others for negative events rather than circumstances because of a diminished capacity for considering alternative explanations.

Major Depressive Disorder (MDD)/Manic and Depressive Symptoms

In the *DSM-5,* major depressive disorder (MDD) is grouped with other 'depressive disorders' characterized by "the presence of sad, empty, or irritable mood" alongside "somatic and cognitive changes that significantly affect the individual's capacity to function" (APA, 2013, p. 155). For a diagnosis of MDD specifically, at least five out of a possible nine symptoms of a major depressive episode must be present, and one has to be either "depressed mood or…loss of interest or pleasure in all, or almost all, activities" (APA, 2013, p. 160). Both depressed mood—indicated by chronic feelings of sadness, emptiness, or hopelessness—and loss of interest can be either determined through self-report or observation. Major depressive episodes and depressive symptoms can occur in the course of other disorders, as well, including the bipolar disorders which require a manic or hypomanic episode to have also occurred at least once (APA, 2013). Manic episodes, in particular, are the defining feature of bipolar I and are characterized by "a distinct period of abnormally and persistently elevated, expansive, or irritable mood and…goal-directed activity or energy" which is present for at least one week (APA, 2013, p. 124). A visual representation of the basic criteria for these diagnoses is provided in Figure 2.10 below.

Figure 2.10: Diagnostic criteria for Major Depressive and Manic Episodes



The schemas and information processing biases underlying depressive and manic symptoms contrast each other. In depressive episodes, negative evaluative biases dominate leading to negative self-evaluations, assignment of blame to the self for negative events that can become overly generalized to all events, an intensified focus on negative aspects of life, and a decrease in the ability to devise solutions and see the possibility of positive outcomes (Beck, 2002; Beck & Haigh, 2014; Beck et al., 2021). Interestingly, the evaluations of others can be equally negative (Beck, 2002). In manic episodes, positive self-evaluations dominate; there is an increase in self-esteem (which may even reach the level of grandiosity; APA, 2013), a desire to act in a way that will provide pleasure and improve their self-image and social image, and positive beliefs about future outcomes (Beck & Haigh, 2014). In the case of depression (and possibly mania), beliefs may shift from conditional to more absolute as severity increases—e.g., 'If I cannot do X, then it means I am helpless' may become 'I am helpless'.

Obsessive-Compulsive Disorder (OCD)

Obsessive-compulsive disorder (OCD) is characterized by the presence of *obsessions, compulsions*, or, most commonly, both, which are either time-consuming or cause significant social, occupational, and/or personal functioning (APA, 2013, p. 237). Obsessions are defined as recurrent, persistent, unwanted, and intrusive thoughts, urges, or images that cause significant distress and compulsions are repetitive behaviors an individual feels compelled to employ either in response to obsessions or according to a set of rules. Oftentimes, compulsions are performed in response to an obsession under the belief that something 'bad' might happen if they do not. The content of the obsessions varies from person to person, but the most common concern fear of contamination, desire for symmetry/order, fear of taboo thoughts, and fear of causing harm to oneself or others.

Similar to the other disorders already described, OCD is viewed in cognitive theory as the result of dysfunctional beliefs and schemas which impact information processing and subsequent behavioral responses (Taylor, 2002). At the core of obsessions and compulsions are an overestimation of threat and an exaggerated sense of personal responsibility (Beck, 1976; Salkovskis, 1985, 1989). Intrusive thoughts, when misinterpreted as holding high significance (i.e., that the thoughts are happening because they are a sign of something like potential danger), lead to previously neutral stimuli being interpreted as threatening (Rachman, 1998). Importantly, though, intrusive thoughts become distressing when personal responsibility for the threat that is perceived is assigned to the self (Salkovskis, 1985, 1989). For instance, intrusive thoughts about causing someone harm might be disregarded by most and forgotten, but it can constitute an obsession if the individual then believes that they will actually commit an act in which they cause someone harm. As a result, that individual might begin to perceive previously neutral stimuli—such as cooking knives or baseball bats—as threatening in that they may increase the chances of them acting out the intrusive thought (Rachman, 1998; Salkovskis, 1985, 1989). Compulsions are then considered 'neutralizing behaviors' in that they serve to minimize the distress—though increase the sense of personal responsibility (Taylor, 2002)—caused by the intrusive thought, as every time the compulsion is performed and the feared consequence does not occur, the compulsion is viewed as responsible for having averted the threat.

To summarize, in OCD, obsessions and compulsions are the result of core dysfunctional beliefs centered around a heightened perception of threats (the exact threat relates to the specific content of the obsession; Beck, 1976), an exaggerated sense of personal responsibility, and the notion that certain actions will prevent the threat from being realized

(Taylor, 2002). As is the case in depression, as symptoms worsen, beliefs go from conditional to absolute (Beck & Haigh, 2014). For instance, in OCD, it might go from 'If I touch X, I might get contaminated' to 'I am contaminated' (Beck & Haigh, 2014, p. 7) or 'If I have thoughts of hurting others, it might mean I am dangerous' might just become 'I am dangerous' (Rachman, 1998).

2.1.3 Violence and Violent Offenders

Various theories about what leads to violence as a behavioral response have been proposed from various perspectives (Miller, 2014b; Palermo & Kocsis, 2005; Walker & Bright, 2009) but identifying specific factors predictive of violence has proven elusive, especially when considering mental health disorders (e.g., Hiday, 1995; Nestor, 2002; Stuart, 2003). Generally speaking, it has been consistently found that mental health disorders alone are **not** a reliable predictor of violence, but rather it is a combination of, among others, situational, social, economic, and personality/psychopathology traits (Hiday, 1995; Nestor, 2002; Stuart, 2003). Narcissistic and antisocial traits have been found to be associated with violence, aggression, hostility, and recidivism (i.e., reoffending; Fossati et al., 2007; Fountoulakis et al., 2008; Lambe et al., 2018; Sinha & Watson, 2005), as has psychopathy (Fountoulakis et al., 2008; Ogloff, 2006). Borderline personality disorder has also been found to be strongly associated with measures of hostility (Hatzitaskos et al., 1997; Sinha & Watson, 2005) and it has been proposed that its traits "relate closely to violent behavior" (Fountoulakis et al., 2008, p. 88), though Johnson and colleagues (2000) suggested that this might hold true only for the most severe cases. Finally, the schizophrenia spectrum disorders have been theorized to be associated with a greater risk of violence, but this is primarily only with individuals experiencing comorbid substance abuse (e.g., Fazel et al., 2009; Walsh et al., 2002).

While the above theories and research focus on the relationship between psychological traits and violence, cognitive theories have instead focused on the possible combinations of schemas that contribute to violent behavior. The more popular and common of these theories posits that a combination of low or unstable self-esteem alongside narcissistic (and perhaps antisocial and/or psychopathic) traits increase the risk of committing violent or aggressive acts (e.g., Baumeister et al., 2000; Lambe et al., 2018; Walker & Bright, 2009), most often in response to some kind of threat to their ego. From this perspective, as briefly mentioned in 0, violence is seen as resulting from dysfunctional and maladaptive schemas that impact the interpretation of situations and responses seen as available. Walker and Bright (2009) brought together aspects of the existing cognitive theories—with the notion of

low self-esteem as the basis—to create a more comprehensive and general cognitive model of violence. They proposed that early experiences form core negative beliefs about the self (adding to low self-esteem); the resulting dysfunctional assumptions can then increase the chances of situations activating those negative core beliefs, and in some cases may be responded to maladaptively with violence. They also posited a cognitive network of violence, which "combines a range of information processing, interpretative, emotional, affective, self-referent, and behaviourally 'programmed' factors" which, at their core stem from extremely low self-esteem that is concealed via "machismo and false inflated self-esteem" (Walker & Bright, 2009, p. 19). The schemas in this network relate to things like anger, self-esteem, lack of empathy, lack of alternative available strategies, and evaluative biases, which work in conjunction with each other—and the schemas associated with their psychopathology—to impact how situations (and others' actions) are interpreted and how the individual believes they should respond.

It should be noted that the aforementioned theories do not necessarily focus on the types of violent acts like those perpetrated by the authors studied in this project. That is, most are meant to apply to a range of acts, from standalone ones to the serial and mass acts committed by the authors studied here, and everything in between. Thus, to round out the review of possible violent schemas, the literature relating to the classification of serial and mass offenders, specifically, warrants review. Numerous typologies have been proposed for serial and mass murderers (e.g., Dietz, 1986; Fox & Levin, 1998; Holmes & Holmes, 2001), each with its own set of categories that offer a simplified account of the variation in offender characteristics. These typologies differentiate categories based on a number of features, though it appears motive and method are primary (Miller, 2014a). Given the range of categories presented by just the most common few typologies, they are not reviewed here (those that are relevant are explored more in their relevant empirical chapters in relation to how they might help explain certain evaluative patterns). However, there are more general features that have been suggested to be consistent across categories of each offender type.

Serial and mass murder have both been defined in multiple ways, most often varying slightly on the number of required victims. Generally, though, serial murder is defined by the Federal Bureau of Investigation (FBI) as "the unlawful killing of two or more victims by the same offender(s) in separate events" (Morton & Hilts, 2005, p. 9), and mass murder is defined as the killing of four or more people (excluding the perpetrator, if relevant) in one incident by an offender (Huff-Corzine & Corzine, 2020).

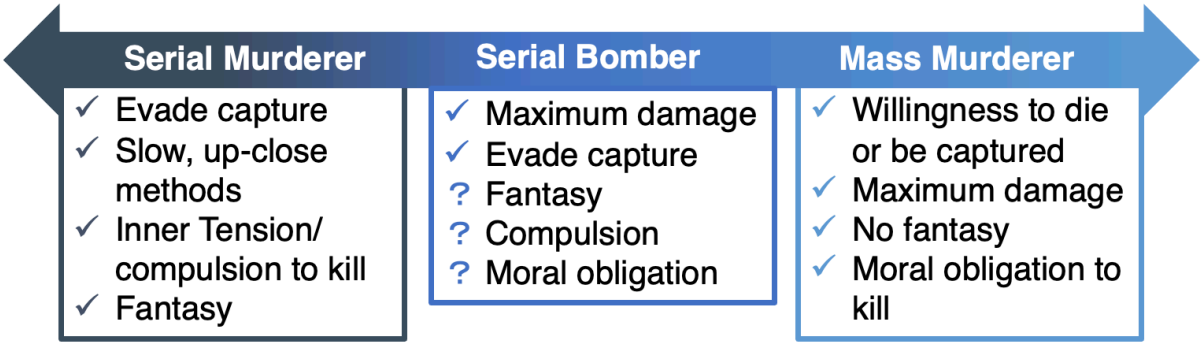
Palermo and Kocsis (2005) argue that serial murderers have a unique 'cognitive map' (i.e., set of schemas); they view the world as hostile and get caught in a circuitous cycle of narcissistic and self-referential thinking that is centered around finding ways to relieve their "inner tension" (p. 60). This 'inner tension' resembles the compulsion to kill that has been posited by other researchers to be a fundamental feature of serial murderers, alongside the presence of a fantasy (e.g., Holmes & Holmes, 2001; Schlesinger, 2000). The fantasy represents the "idea, thought pattern, or even sexual fantasy that propels the killer into the murderous process" (Holmes & Holmes, 2001, p. 25). The inner tension and urge to act out the fantasy then build, and the individual may believe the only way to gain relief is through committing a murder (Schlesinger, 2000). As a result, they may describe their actions as being completely out of their control (Holmes & Holmes, 2001). However, the decision to actually carry out the violent act is often believed to be reliant upon the additional presence of narcissistic, antisocial, and/or psychopathic traits like egocentricity, lack of empathy, and/or poor impulse control (Miller, 2014b). In other words, traits that lead them to place their need and desire to relieve the inner tension above all else.

Unlike serial murderers, who make every effort not to be caught, perpetrators of mass violence often express a desire or willingness to die or be captured after they have committed their violent act (e.g., Fox & Levin, 1998, 2003, 2022; Holmes & Holmes, 2001). Additionally, while serial murderers tend to kill multiple people over a stretch of time, mass murderers often aim "to kill as many victims as possible, quickly, efficiently, and at once" (Miller, 2014a, p. 4). As Holmes and DeBurger (1985) put it, a mass murderer "usually exhibits a momentary frenzy and kills in his frenzy" and "probably will not kill again" (p. 30). While perpetrators of mass violence have been found to sometimes describe their actions as out of their control (e.g., Hurt, 2020), it is portrayed more often as an obligation than a selfish need—i.e., as the only viable solution to the problem they see in the world. This is perhaps in part because mass murder is often motivated by a desire for power over or revenge against specific individuals or groups (Fox & Levin, 1998, 2003, 2022). As such, they view their actions as necessary to either rid the world of a perceived evil or to prevent others from causing them harm.

Since bombs are not the most common weapon for serial nor mass murder (Holmes & Holmes, 2001), serial bombers, like the one that is the focus of Chapter 5, are not discussed as often in the typologies. However, it has been argued they lie somewhere in the middle of the serial and mass offenders described above (Fox & Levin, 1998). The use of bombs suggests a similar desire for large amounts of damage like mass murderers, but the evasion of capture and multiple targeted attacks more closely resembles serial murderers. The

limited research on serial bombers means information on their possible underlying schemas is scarce, but in comparing the evaluative patterns of all three offender types, it may be possible to determine the type (if any) to which the serial bomber evinces more similar features. A visual representation of the spectrum of serial to mass violence and the similarities and differences between them is provided in Figure 2.11 below.

Figure 2.11: Spectrum from serial to mass violence



2.2 Language and Psychopathology

In 0, two sides of an ongoing debate about the relationship between language and psychopathology were briefly introduced. On one side are those who argue that language output reflects aspects of mental health such as symptom severity, functional impairments, or personality traits (e.g., Buck & Penn, 2015; Fine, 2006; Pennebaker & King, 1999). On the other side are those who argue that language choices are separate from any underlying psychological processes and are more a reflection of the social context in which they are made (e.g., Coulter, 2005; Edwards & Potter, 1992, 1993). Generally, more empirical studies appear to have been produced from the first perspective while more theoretical works have been produced from the second. As such, the latter perspective is discussed (section 2.2.1), but the main focus of this section is the work from within the first perspective (section 2.2.2). It should also be noted that while there is research examining linguistic features associated with certain symptom disorders, psychotic symptoms, and non-pathological personality traits, there is minimal, if any, which examines pathological personality traits or the personality disorders they comprise.

2.2.1 Language as Social Action

Especially in the case of studies of mental health disorders which are found to impact language production (i.e., result in incomprehensible speech), it has been argued that language is not always reflective of thought (e.g., Chaika, 1982; Rochester & Martin, 1979), despite that being the predominant position for many years (e.g., Andreasen & Grove,

1986). They cite that an individual can, for example, choose to express content different from the preceding thought, depending on the communicative goals of the individual. Edwards and Potter (1992) proposed a model, the *discursive action model* (DAM), which was based on a similar notion. In this model, discourse is viewed as a series of actions and linguistic choices are seen as a reflection not of underlying cognitive processes, but of the function they are meant to serve in a given social situation. That is, they argue language output does not necessarily contain evidence of the psychological processes which influenced the initial interpretation, or the later recall, of the experiences being described but are better examined "in terms of the social actions these descriptions accomplish" (Edwards & Potter, 1992, p. 2-3), such as reporting a noteworthy event or assigning praise and blame.

Of course, the notion that language is influenced by social context is not being disputed here; it is the base assertion of the Systemic Functional Linguistics (SFL) framework within which this research operates (Halliday & Matthiessen, 2014; Schleppegrell, 2012). Language undoubtedly plays a pivotal role in social life, providing vast resources from which language users can make choices to construe a particular meaning, achieve a social goal, and establish interpersonal relationships. What is being disputed is the value of the discursive psychological perspective aiming only to describe the social functions language choices serve in context, and not considering how they might be influenced by the cognitive mechanisms responsible for processing and interpreting information (Edwards & Potter, 1992, 1993; Potter, 1998). Instead, it is advocated throughout the coming chapters that it is more informative to describe how evaluative language is influenced both by social and cognitive processes (Bednarek, 2009a; Grant & MacLeod, 2018). Despite its apparent shortcomings, the perspective does provide a fair amount of guidance for the types of factors which, if controlled for, would allow a stronger case to be made for some evaluative language patterns to be attributed to specific psychological traits. As such, it was consulted during the design of the three empirical studies in this project.

2.2.2 Language as a Reflection of Mental Health

On the other side of the debate are those that argue language choices reflect aspects of mental health, from 'normal' personality traits (e.g., Pennebaker & King, 1999) to symptoms of a clinical disorder (e.g., Buck & Penn, 2015). A large portion of the earlier research in this area was focused on linguistic errors and impairments, primarily in individuals with schizophrenia (e.g., Chaika, 1974; Rochester & Martin, 1979) and mania (e.g., Andreasen & Grove, 1986). Many of these studies analyzed primarily clause and discourse level features—like syntactic complexity (Çokal et al., 2018) or cohesion (Rochester & Martin,

1979)—likely because many of the errors and impairments resulted in incomprehensible speech from inappropriate connections between larger blocks of speech (Andreasen, 1986). However, because stances are reliant on their context, the relationships between elements such as the feeling/value judgment and at whom/what it is directed, must be identifiable for any results to be meaningful (Martin & White, 2005). As a result, while it is useful to make mention of this research, it is not reviewed in detail as this subset of studies is not overly relevant to the current research. Instead, the empirical studies reviewed here are those which identified connections between specific linguistic features and aspects of mental health in individuals without linguistic production impairments.

In this area, a variety of approaches have been used, typically focusing in on a single level of language and as a result, studies can generally be classified based on whether they analyzed the lexical, clausal/sentential, or discursive level. With the advent of more advanced text-analysis software in recent years, it has become possible to examine larger sets of data at a much faster rate. Most often this has been to identify features at the lexical level, but some corpus analysis programs have been used to identify discourse features, as well (e.g., Hunt & Brookes, 2020; Noël-Jorand et al., 1997). Additionally, researchers have begun expanding their focus to include other mental health conditions besides schizophrenia and mania, such as MDD (e.g., Tackman et al., 2019) and OCD (Knapton, 2018). The most common software used in the lexical studies is called *Linguistic Inquiry and Word Count* (LIWC; Pennebaker et al., 2015). It contains a dictionary of thousands of words and word stems which have all been assigned to one or more of the nearly 100 pre-determined categories. Each individual word in a text is compared one-by-one to those dictionary items and assigned to the categories of the item with which it matches. These categories primarily consist of words denoting different 'psychological processes', such as emotions or social relationships, but there is also a subset of categories for grammatical roles, such as part-of-speech (e.g., pronouns, prepositions, negations) or communicative function (e.g., interrogative, comparative).

The results from studies using LIWC have been mixed, depending on their focus. Those on schizophrenia (or psychotic symptoms more generally) have been more varied in their findings than those on other disorders like MDD. For example, some studies of schizophrenia have found significantly higher use of first-person singular pronouns (Buck & Penn, 2015; Fineberg et al., 2016) and negative emotion words (Cohen et al., 2009; Fineberg et al., 2016) by patients with schizophrenia, while others have found no significant difference between groups in the usage of those categories (Buck et al., 2015; St-Hilaire, 2008). A study comparing groups of clinical and non-clinical voice-hearers (not necessarily

with schizophrenia but experiencing auditory hallucinations) then found that the clinical group used more negative affect terms and employed more negative self-evaluations (Collins et al., 2020). Studies of depression and personality have yielded more consistent results. With depression, correlations have been found between depression severity and use of first-person singular pronouns (Rude et al., 2004; Tackman et al., 2019). With personality studies, there have been findings demonstrating links between LIWC categories and certain personality dimensions (e.g., Mehl et al., 2006; Pennebaker & King, 1999), which as discussed above are broad categories made up of more specific, related personality traits. For example, higher *extraversion* scores—meaning more ""sociable, talkative, and enthusiastic" (Mehl et al., 2006, p. 866)—have been linked to more overall words, and fewer large words (Mehl et al., 2006; Pennebaker & King, 1999) and lower *agreeableness*—i.e., less sympathetic and warm, and more confrontational—has been linked to higher frequency of swear words (Mehl et al., 2006) and 'anger' words (Schwartz et al., 2013).

There is an overarching problem with LIWC, however, which challenges the extent of the meaningfulness of the results from studies in which it is used. The way that it codes texts is by automatic classification of single words, **one at a time** (Pennebaker et al., 2015). This necessarily means it will fail to consider the surrounding context, something which is crucial for determining meaning (Halliday & Matthiessen, 2014; Martin & White, 2005; Schleppegrell, 2012). Additionally, the word-by-word coding means that meanings which are expressed with more than one word would not be captured properly. For instance, *unhappy* might be coded as a negative emotion word, but a similar meaning expressed via negation (*not happy*) would not be coded accurately; the *not* would be classified as negation and the *happy* as a positive emotion word. That said, findings from this body of research may still prove useful in guiding expectations and interpreting this research's findings for the stance-taking resources that occur at the lexical levels at least in terms of distributions of features like polarity (positive versus negative) or stance object (self versus other). However, this would only be true for the general features, not for anything concerning the relationship between them—i.e., whether the positive or negative items are directed at the self versus others.

The studies that examined lexical patterns by hand (e.g., Gawda, 2013) or focused on clausal or discursive patterns (e.g., Knapton, 2018; Noël-Jorand, 1997) did better at accounting for context. Gawda (2013) compared emotional word use in narratives produced by three groups—prison inmates with and without ASPD and non-inmates—in terms of emotion communicated, valence (positive or negative), intensity (weak, medium, high), and part of speech (noun, verb, adjective). The main finding was that the individuals with ASPD

used more emotion words and higher intensity items, but with inappropriate valence for the situations they were used to describe. In a study by Noël-Jorand and colleagues (1997), it was found that a patient with schizophrenia's discourses consistently over time comprised four classes of words. These discourses were analyzed qualitatively, as well, to determine what additional information could be gleaned from the context. For instance, one class of words was found to reflect paranoia beliefs about persecution and invasion of privacy by other patients (Noël-Jorand, 1997, p. 191). In studies of OCD, accounts of how experiences with the disorder are linguistically constructed have been presented (Hartman, 2018; Knapton, 2018), showing that individuals often, for example, represent themselves as having no agency when it comes to the unwanted, intrusive thoughts that characterize obsessions (APA, 2013). Even if these types of studies were not intended to demonstrate evaluative patterns, the inclusion of more context ensured that they offered a more complete account of the data. This therefore provides more guidance for expectations and for later interpretation of the findings in the empirical studies conducted in this project.

One final set of studies that warrant review lie more on the theoretical side and aim to describe general properties of language used by individuals diagnosed with schizophrenia (Hinzen & Rosselló, 2015) and language used when communicating delusions (Hinzen et al., 2016). As mentioned above, a delusion is a symptom commonly found in schizophrenia and other schizophrenia spectrum disorders, but it and hallucinations (i.e., psychotic symptoms) can occur alone or as part of severe episodes of other disorders, such as major depressive and manic episodes (APA, 2013). It is characterized by false beliefs which are considered to be incontrovertibly true by the individual even when presented with contrary evidence. It is proposed that delusional expressions may sound bizarre not because of any error in syntactic structure, but because the relationships between the elements in the clauses cannot exist in the real world (Hinzen & Rosselló, 2015; Hinzen et al., 2016). For instance, if someone says '*my phone wants to kill me',* the sentence itself is grammatically correct, but it does not represent a situation that could happen in the world—that is, phones are inanimate objects that cannot have wants. Hinzen and colleagues (2016) also stated that delusional statements cannot, by definition, be contained within embedded clauses. Delusions are beliefs that are not changed or altered despite any amount of contrary evidence, so if there was any embedding, such as ***I think*** *my phone wants to kill me*, it would imply that there is at least some room for debate, which would indicate it is below the threshold of a clinical delusion. These theoretical propositions provide an idea of the level of commitment that might be conveyed by the authors found to exhibit signs of delusions toward the people and things that formed the core themes of their delusions.

Overall, the research reviewed above offers evidence of a relationship between language and psychopathology, even if it is somewhat inconsistent. Of course, stance-taking resources appear to have not yet been the focus of any of the past research, but extrapolations can be made from some of the findings when considered in conjunction with cognitive psychological research. In 0, the methodology and linguistic theoretical grounding are presented, and connections are made between it and the research that has been outlined in this chapter.

CHAPTER 3 METHODS AND METHODOLOGY

In the previous chapter, the relevant psychological literature was discussed, introducing the empirical research that demonstrates links between language and psychopathology as well as the theoretical perspective that posits schemas—a construct shared by linguistics and psychology—play a pivotal role in shaping cognitive processes. The purpose of this chapter is to introduce the linguistic methods and methodology of this research and make the case for them constituting a credible means approach for identifying connections between stance-taking resources and cognitive schemas (and in turn, the psychological traits which they underlie). First, the primary linguistic theoretical foundation of this research is introduced to help establish an initial link between the psychological and linguistic theories used in this project (section 3.1). This is then expanded upon in the sections that follow, starting with an overview of schema theory and its implementation within linguistic and how it relates to its cognitive psychological counterpart (section 3.2) followed by a review of the literature on stance to demonstrate why it is a useful linguistic construct to analyze in order to address the research questions posed in chapter 1 (section 3.3). This is followed by a detailed outline of the linguistic analytical framework chosen for this project, Appraisal Analysis, alongside a discussion of some of the criticisms it has received and a review of how it has been applied and adapted for use in a forensic linguistic context (section 3.4). An outline of the methods of the project—including the design of the three empirical studies and the data selection and coding processes—is then provided (section 3.5) before the final section in which the ethical considerations for the research are discussed (section 3.6).

3.1 SYSTEMIC FUNCTIONAL LINGUISTICS

Systemic Functional Linguistics (SFL; Halliday & Matthiessen, 2014) is a theoretical framework that aims to deepen understanding of the relationship between language and social life through examining how the process of meaning-making enables language to influence, and be influenced by, the social contexts in which it is used (Schleppegrell, 2012, p. 21). More specifically, as the name suggests, the choices language users make from available linguistic **systems** (e.g., phonological or grammatical) are examined alongside the **functions** those choices serve in a given context (Schleppegrell, 2012). SFL posits three broad and interacting functions, or *metafunctions*, which co-occur in every clause: *ideational, interpersonal,* and *textual.* Ideational resources allow speakers/writers to communicate their experiences; interpersonal resources allow them to enact relationships with their audience through expressing their attitudes and positions; and textual resources allow texts to be

related to those that preceded and those that will follow. The linguistic choices a speaker/writer makes therefore vary based on what the context demands. That is, different contexts call for different types of experiences to be construed, concern different types of relationships, and require different types and amounts of reference to past and future texts and contexts (Schleppegrell, 2012). For instance, the linguistic choices of a politician issuing an apology would likely diverge from those made by a violent offender recounting a personal lived experience and SFL aims to describe those differences and how they relate to the meanings ultimately construed.

It is for this reason that SFL serves as the core of the linguistic side of theoretical foundation for this project. As stated in chapter 1, the base assertion of this research is that linguistic evaluative choices made when recounting personal experiences or belief systems are impacted by both contextual and psychopathological factors. The psychological side of the theoretical foundation for this assertion is detailed in chapter 2, and while it offers an account of the potential impacts of psychopathology on interpretation of and response to incoming information, it does not aim to account for how specific linguistic choices might be impacted. SFL, on the other hand, does not necessarily acknowledge the impact of specific cognitive processes on language, but as stated above, it does aim to account for the relationship between linguistic choices and the meanings they construe (Schleppegrell, 2012). This includes the experiences they help describe, the relationships they help construct, and the connections they help make to what came before or will come after (Halliday & Matthiessen, 2014; Martin & Rose, 2007; Thompson, 2004), which constitute some of the very aspects of lived experience that would be most impacted by underlying cognitive processes (e.g., Beck & Haigh, 2014; Bortolan, 2019).

Despite these broad links between the psychological and linguistic sides of the theoretical foundation, neither seems to explicitly offer a way or make an attempt to identify and establish connections between specific underlying cognitive processes and patterns of linguistic resources. Thus, the final piece of the foundation is schema theory (next section), which, because both linguistics and psychology have their own version of it, helps to bridge the remaining gap.

3.2 SCHEMA THEORY AND IMPLEMENTATION

Both the psychological and linguistic literature on schemas broadly define them as beliefs which impose an interpretive bias, influencing how information is processed and causal relationships are construed (Beck, 2015; Beck & Haigh, 2014; Shuy, 1993, 2015). However, the more specific conceptualizations and operationalizations of the construct in each field

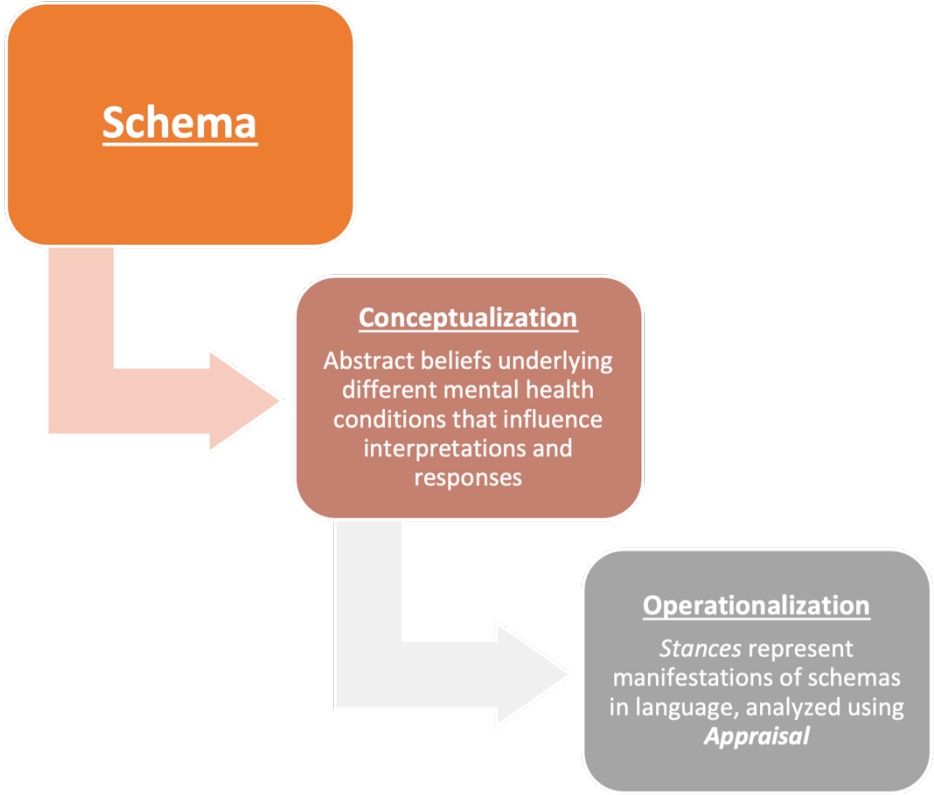
diverge slightly from each other. On the psychological side, as discussed in chapter 2, schemas are more specifically conceptualized as abstract beliefs which underlie specific mental health disorders, symptoms, and traits, and operationally they are evaluated using, for instance, self-report measures, assessment scales, and clinical interviews (Beck et al., 2015).

Within linguistics, schemas are more broadly conceptualized as the background information and understandings about the world under which individuals operate, usually within interactions (e.g., Shuy, 1993, 2015), and they can then be observed through examining patterns of linguistic resources used by a given speaker/writer. It should be acknowledged that similar conceptualizations exist in linguistics, but they have been assigned a different term (e.g., 'frame'), which seems to be primarily due to variation in the types of linguistic resources that are analyzed (Bednarek, 2005). Therefore, to avoid confusion, only examples of approaches focusing on *schemas* specifically are reviewed here. In Shuy's research (e.g., 1993, 2015), the resources that are usually focused on are those which help identify the topics that are introduced and the ways in which individuals respond to each other. For instance, in the movie *My Cousin Vinny* (Lynn, 1992), one of the characters is being interviewed by the sheriff for the murder of a store clerk, but he thinks it is about a can of tuna they accidentally stole. The sheriff poses numerous questions to discern motive for the murder and the other character's blasé responses (because he believes he only committed a minor theft) are interpreted as indifference toward the crime. Both characters are operating under different sets of assumptions (i.e., schemas), which influence both how they interpret the other character's linguistic choices and the linguistic choices they themselves make. Bednarek (2009a) takes a slightly different approach, analyzing the patterns of emotional language resources to identify underlying emotional schemas (i.e., an individual's understandings about emotional experiences). In particular, she examines the differences between explicit expressions of emotions and those implied through shared knowledge and contextual cues.

Importantly, both of these versions of schema theory have their own shortcomings within the context of this project. The psychological perspective will sometimes use linguistic output as one source of data to determine underlying schemas (e.g., Beck et al., 2015), but it does not consider the patterns of specific resources that are used to produce it. The linguistic perspective, on the other hand, focuses on patterns of linguistic resources to determine underlying schemas (e.g., Bednarek, 2009a; Shuy, 2015), but it would be beyond the scope to theorize how those schemas relate to psychopathology. Therefore, what is instead proposed for this project is a combination of the narrower conceptualization of schemas from

the psychological perspective and an operationalization approach from the linguistic perspective. More specifically, the SFL-based framework of Appraisal outlined in section 3.4 is used to identify patterns of resources used to express feelings and attitudes of the author toward themselves, others, and their world, which relate to core elements of the cognitive schemas introduced in chapter 2. These feelings and attitudes (and the linguistic resources for communicating them) are generally encompassed under the heading of *stance* (the focus of the next section), which is a construct that represents one of the possible manifestations of schemas in language—in particular, the aspects of schemas concerning the **evaluations** of the experiences influenced by them. A visual representation of these elements can be found in Figure 3.1 below.

Figure 3.1: Visual representation of methodological approach



3.3 STANCE

As Du Bois (2007) put it, "one of the most important things we do with words is take a stance" (p. 139). The construct of *stance* encompasses a variety of linguistic resources people can use to express their "personal feelings, attitudes, value judgments, or assessments" about themselves, about others, and about their world (Biber et al., 1999, p. 966). It is a powerful tool that allows language users to share their experiences with others, negotiate their interpersonal relationships, align or disalign themselves with other people or

viewpoints, or invoke ideologies that hold sociocultural significance (Biber, 2006b; Du Bois, 2007; Gales, 2010, 2020). Moreover, it is "a device for interpreting the world and offering this evaluation to others" (Bednarek, 2006, p. 4) through linguistic expression, and the fact that certain choices are made over others (oftentimes unconsciously) from the vast available options means that "utterances always encode a point of view" (Stubbs, 1996, p. 197). As such, *stance* is a particularly apt construct to analyze for linguistic patterns that can then be mapped onto the cognitive processes that shape interpretation and point of view.

The concept of *stance* has been studied by researchers from a range of fields beyond just linguistics, such as anthropology and psychology (Englebretson, 2007), and as a result, it has been defined in a number of ways and referred to using a myriad of terms; within linguistics, the three most common are *stance, appraisal,* and *evaluation* (e.g., Bednarek, 2006; Biber, 2006a; Thompson & Hunston, 2000). While all of these terms are used to refer generally to the linguistic resources for stance-taking—that is, "taking up a position with respect to the form or the content of one's utterance" (Jaffe, 2009, p. 3)—each has been operationalized and analyzed in a different way (e.g., Bednarek, 2006; Biber, 2006a; Thompson & Hunston, 2000). The more traditional approach to the analysis of *stance* involves corpus-based methods in which identifying grammatical markers of stance (such as adverbs or negation) consistent across entire registers or genres is central (e.g., Biber et al., 1999; Biber & Zhang, 2018); in other words, moving from **form to function** (Gales, 2010). The approaches to *evaluation* and *appraisal*, on the other hand, often utilize more close discourse analyses focused less on specific linguistic forms and more on the function a word or phrase is serving in a particular context (such as conveying an emotion or an assessment; e.g., Martin, 2000; Martin & White, 2005); that is, moving from **function to form** (Gales, 2010). Despite their methodological differences, the above approaches share a focus on language *in use* (Thompson & Hunston, 2000) and the view that stance-taking is a social action which allows people to relate to each other through communicating their positions and invoking and adopting certain socially-situated ideologies and identities (e.g., Bucholtz, 2009; Du Bois, 2007; Jaffe, 2009; Kiesling, 2009; Martin & White, 2005).

In a forensic linguistic context, both types of approaches have been used to analyze patterns of stance-taking resources in a variety of genres. Appraisal theory (e.g., Martin, 2000; Martin & Rose, 2007; Martin & White, 2005), which goes from function to form, has been employed for analyses of genres such as threatening communications (e.g., Gales, 2010, 2011), pledges to harm (Hurt, 2020; Hurt & Grant, 2019), courtroom discourse (Gales & Solan, 2017), and suicide notes (e.g., Grundlingh, 2018). Corpus-based methods (form-to-function) have also been used on threatening communications (e.g., Gales, 2010, 2015) as

well as broader text-types like malicious forensic texts (Nini, 2017). All of these studies have yielded useful insights about the genres they examined, though Gales (2010) argued (and demonstrated) that combining the function-to-form and form-to-function approaches would provide a more thorough account of the multifaceted nature of *stance*. The large-scale corpus analyses offer a way to observe "how interpersonal meaning is linguistically encoded within and across particular socially-defined registers and genres", but the closer discourse analytic approaches provide "a more nuanced understanding" of the functional language patterns (Gales, 2010, p. 53). While this is likely true in some circumstances, such a combined approach is not always feasible and depending on the research question, it might not be the most appropriate.

In this research, the function-to-form approach is opted for based on two reasons. Firstly, as is discussed more in section 3.5, there was a limited amount of language data from which to choose and what was available varied drastically in terms of genre and register. This was not only true for each author, but there was also limited overlap across authors. As a result, if the corpora were a more adequate size, they would not have been very comparable and if they were made more comparable, they would likely have been too small for corpus methods to offer any meaningful results (Baker, 2006). Secondly, as this research aims to identify relationships between language and the beliefs that underlie an author's psychopathology, the form the language takes is arguably not as informative as the functions it serves. That is, priority is given to tracking the feelings and attitudes encoded in the language (the functions) and the exact constructions that are used are considered secondarily. The beliefs outlined in chapter 2 that are used to help interpret the findings of the analyses are general formulations that represent abstract underlying schemas (Beck, 2015) which could manifest in any number of ways (Beck et al., 2015). In other words, the same function could be served by a range of different forms, both explicit and implicit. While a form-to-function approach would be able to capture the various explicit forms, it would not necessarily capture the implicit ones because it deals in "decontextualized data" (Baker, 2006, p. 25); that is, in units of language that look the same, not necessarily function the same. A function-to-form approach, on the other hand, would be able to identify and track the explicit and implicit forms and capture more easily the variation in the combinations of elements used to achieve a particular function (Martin & White, 2005). Admittedly, the more fine-grained function-to-form approach limits the generalizability of the findings. However, as the relationship between linguistic output and schemas associated with specific psychological traits is relatively unexplored, providing a more detailed account of the language resources used to communicate *stance* can arguably serve as a 'proof of concept'.

As the last few paragraphs have been devoted to demonstrating the inconsistency in the uses of *stance* and related terms, clear definitions for the ways in which *stance, appraisal,* and *evaluation* are used in this research must be provided. Similar to Thompson and Hunston (2000) and Martin and White (2005), *evaluation* (and *evaluative language*) is considered the superordinate term, subsuming both *stance* and *appraisal.* More precisely, the term 'stance' is primarily used to refer to the broader positions the authors take toward the persons or propositions being evaluated, while 'appraisal' is used in reference to the categories of resources identified using Appraisal Analysis (discussed more in the next section) that comprise the stances. Thus, *evaluative resources* include stance-taking and appraisal resources, and *stance-taking resources* encompass appraisal resources (and certain resources not captured adequately with the Appraisal systems, such as specific categories of *modality*). To illustrate, consider, for instance, the following example from a text used in chapter 6:

- *By now, my art has obviously been revealed to the world in its most beautiful fashion…Time to get to the point, my reasoning for such a "monstrosity". This world would undoubtedly be better if we were all in heaven.* (Hribal)

In an analysis of *stance* more akin to that used by Biber and colleagues (1999), grammatical stance-markers such as *obviously* and *undoubtedly* and value-laden lexical items like *monstrosity* might be focused on, but without an ability to classify the *functions* of those words. Appraisal offers categories of meanings to help with such classification (Martin & White, 2005), and while these specific categories are discussed in detail in the next section, the functions served by various words/phrases in the extract can still be briefly examined here for illustrative purposes. For instance, in introducing his actions as *art* and providing his *reasoning* for them suggests he views what he did as being well-composed/elegant and logical, while also demonstrating some awareness that others will hold the exact opposite view through the use of scare quotes around the negatively-valenced item, *monstrosity*. The use of *obviously* indicates the author held an expectation that whoever read the letter after his attack would *concur* with the proposition that his *art* had been *revealed to the world in its most beautiful fashion* (i.e., the reader would share the knowledge, not necessarily agree with the positive assessments; Martin & White, 2005). Conversely, the use of the likelihood modal *would* (Lock, 1996) (alongside the intensifying *undoubtedly*) suggests a level of authorial certainty about the proposition of 'the world being better if we were all in heaven', but as it encodes a subjective prediction about the future, it leaves open the possibility of other outcomes and other viewpoints from the reader (i.e., does not presuppose shared knowledge or position; Martin & White, 2005). The choices of these words/phrases suggest

a positive stance towards the actions described in the text, a view that what he did was justified and good, and a certainty about that view, even if others disagree.

3.4 APPRAISAL FRAMEWORK

The Appraisal framework (e.g., Martin, 2000; Martin & Rose, 2007; Martin & White, 2005) is the most developed of the available close discourse analytic approaches for examining stance (Thompson 2008, 2014). It is based within SFL and is specifically concerned with the *interpersonal* metafunction; with "the subjective presence of writers/speakers in texts as they adopt stances" toward the content of their utterances and their interlocutors; with "the construction by texts of communities of shared feelings and values, and the linguistic mechanisms" for sharing emotions and value judgments (Martin & White, 2005, p. 1). Moreover, it is concerned with the socially-situated and context-dependent meanings of words and phrases, not just their denotations; that is, it is oriented "towards meanings in context and towards rhetorical effects, rather than towards grammatical forms" (Martin & White, 2005, p. 94).

The framework's three interacting systems offer the means to observe patterns in the linguistic evaluative choices authors make (Martin, 2000; Martin & Rose, 2007; Martin & White, 2005) from those that are available to them and "explore how those choices are *functional* for construing meanings of different kinds" (Schleppegrell, 2012, p. 21). As "linguistic choices are not simply piled haphazardly on one another" but are "a result of conscious and also unconscious selection by the writer" (Macken-Horarik & Isaac, 2014, p. 86), I argue the patterns of linguistic choices as observed under Appraisal may provide insight into different aspects of the author's world view. Indeed, the various types of resources Appraisal captures closely relate to aspects of schemas described in cognitive theory (which were laid out in chapter 2). The first system, *attitude*, encompasses the resources for expressing personal emotions and societally-shaped assessments of people and 'things' (Martin & White, 2005). Attitudinal resources point to the kinds of feelings the author has about themselves, other people, and aspects of their experience, which constitute a core aspect of cognitive schemas (e.g., Beck, 2015; Beck & Haigh, 2014). Thus, not only do they help identify the schematic content, but they also help distinguish between schemas which may take similar linguistic form but differ in the core sentiment and direction of the belief (Beck et al., 2015). The second system, *engagement*, comprises the resources for encoding commitment to or certainty about a proposition and positioning of the author with respect to other persons and viewpoints, allowing observation of how authors frame their evaluations and engage with their audiences (Martin & White, 2005). *Engagement*

resources helps identify, for instance, the views the authors hold most strongly, the views they expect others hold, and the knowledge they expect others to share with them, which may help identify which schemas are most active. Finally, the system of *graduation* covers the resources for adjusting the degree of commitment/certainty of positions, the intensity of attitudes, or "the boundaries of semantic categories" (Don, 2016, p. 2). It is considered more of an umbrella over the other two systems and as such, it helps to identify and track more nuanced similarities and differences between the attitudes that are expressed and the positions that are taken with respect to those attitudes (Martin & White, 2005). Such nuance may help further distinguish between schemas and identify those which are most active.

As coding decisions using this framework are reliant on contextual and societal influences and factors, they are necessarily subjective (some more so than others, though, as is discussed more below), which is one of its biggest criticisms (e.g., Fuoli, 2018; Macken-Horarik & Isaac, 2014; Thompson, 2008, 2014). The inherent subjectivity and the fact that Appraisal "[does] not constrain linguistic forms of stance" (Gales, 2020, p. 679) are argued to negatively impact reliability and replicability of analyses utilizing the framework (e.g., Fuoli, 2018; Read & Carroll, 2012) and lead to difficulties in identification and classification of tokens (i.e., individual instances) of all three systems (Fuoli, 2018). First, the lack of constraint on form means that tokens may range from single lexical items (with no constraints on part-of-speech) to multi-word strings (Martin & White, 2005). Certain evaluative items of the same or similar form may perform different functions in different contexts and as a result may be coded under different systems. For instance, *delirious* may usually be coded under *attitude,* but in the phrase *deliriously happy*, it would more aptly be coded as a token of *graduation* which is conveying the degree of 'happiness'. Relatedly, the same evaluative item can encode multiple meanings that span different categories. As Martin and White (2005) assert, certain evaluative items can *inscribe* one meaning while *invoking* another, for instance if "players are explicitly judged in a role, an invoked **appreciation** of their accomplishments might be recognised", as well (p. 67). Additionally, in some cases, coding based on the immediate context may differ from coding based on the larger paragraph or textual context (e.g., Thompson, 2008, 2014).

What the above criticisms highlight is that while Appraisal allows a more nuanced examination of stance-taking resources, its open-ended and subjective nature which imposes no constraints on form and relies on context can make it difficult to know where to draw the line during analysis and open a proverbial 'can of worms' (Fuoli, 2018; Thompson, 2008, 2014). The ever-present possibility of multiple meanings being assigned to one evaluative item and the lack of guidance on where boundaries of tokens should go can

especially create complications for quantitative analyses by inflating or deflating numbers for various categories depending on how the text is parsed (Fuoli, 2018). To remedy this problem as much as possible, it has been suggested that one should, at the very least, define the scope of the analysis, keep a detailed account of coding decisions, and be consistent in those decisions, where applicable (Fuoli, 2018; Macken-Horarik & Isaac, 2014). Indeed, this advice is followed in this research as the context in which it is situated is far removed from the context in which the framework was originally developed. Moreover, recent work in forensic linguistics using Appraisal has demonstrated the need for modifications to be made to it to better capture the types of meanings conveyed in forensic texts (e.g., Gales, 2010; Hurt, 2020). Such further development of the system was even encouraged by Martin and White (2005) when they acknowledged that their "maps of feeling" should be viewed as "hypotheses about the organisation of the relevant meanings", presenting it as a "reference point for those with alternative classifications" (p. 46). Of course, the modifications adopted in the past and current research do not constitute wholly different classifications, but rather represent logical expansions of the existing categories intended to help produce the most thorough account of stance-taking patterns possible.

While these criticisms raise good points about the shortcomings of the Appraisal framework, they are not all insurmountable problems, and they help to highlight exactly what factors should be given due consideration during the analysis to increase reliability and replicability. Also, as Thompson (2008) notes, Appraisal is "the most fully developed model of evaluation", so it offers the best starting point in terms of analytical frameworks, and it can also yield the most detailed account of evaluative resources. Moreover, as stated above, in aiming to identify relationships between cognitive schemas and evaluative language, it is more informative and useful to give priority to identifying the most common functions served by utterances (e.g., the core feelings and attitudes) and examine the form secondarily to determine the relationships between them and the overarching stances they convey.

The inherent subjectivity in Appraisal analyses presents limitations, but it is an arguably acceptable risk and as Fuoli (2018) demonstrated, there are ways to mitigate it. Completely automatic coding of the categories (like the Linguistic Inquiry and Word Count described in Chapter 2) would inevitably create more problems than it would solve because such programs cannot currently account for the impact of context. In this research, multiple steps were taken to minimize the subjectivity and increase the reliability and consistency. First, coding the same word or phrase under multiple categories was only done in instances where multiple meanings were clearly present and equally important to the analysis. (This is described in more detail in section 3.5.1 below.) The possibility of formal reliability studies

was considered, but it was deemed impractical given time constraints. However, coding decisions were discussed with my supervisor to ensure a higher inter-study consistency and limit the amount of subjectivity in the analysis. Second, while a full annotation manual, as suggested by Fuoli (2018), was not created, a comprehensive record of all coding decisions—a 'coding policy book'—was kept for every text. This helped ensure better intra-coder consistency across texts and chapters.

3.4.1 ATTITUDE

The system of *attitude* is divided into three types: *affect, judgment,* and *appreciation* (Martin & White, 2005). *Affect,* which covers **personal** feelings and emotions, is considered to be at the core while *judgment* and *appreciation* are viewed as **institutionalized** (i.e., shaped by society) reworkings of those feelings to assess people and objects, respectively. Each *attitude* type is further separated into categories (four for *affect*, five for *judgment*, and three for *appreciation*) that capture specific kinds of feelings. Tokens of all three *attitude* types can also be coded for a number of other variables to track different aspects of how the author represents themselves and their interpretations of and interactions with the world and the people in it. *Polarity* distinguishes between positive and negative evaluations, based on how the core feelings are "popularly construed by the culture" (Martin & White, 2005, p. 46). While this is traditionally considered a binary distinction—i.e., positive versus negative—it was decided that additional options of *negated-positive* and *negated-negative* would be beneficial to consider. The reasons for this are twofold: (1) as Martin and White (2005) point out, there is a difference in meanings expressed with an attitudinal item that carries a positive or negative value (e.g., *unhappy* or *miserable*) and those expressed using negation (e.g., *not happy* or *not miserable*); and (2) not all negated values necessarily encode the opposite polarity (e.g., *can't even cry* is negated *-happiness*, but it does not convey *+happiness*). *Explicitness* differentiates between attitudes that are conveyed explicitly (*inscribed*) and those which require shared knowledge or context to interpret (*invoked*; Martin & White, 2005). Finally, as feelings necessarily belong to a source (the person 'doing the feeling') and are directed at someone/something (Thompson, 2008, 2014), it is helpful to code for the *appraiser*–to enable observation of the attitudes the author claims as their own versus those they ascribe to others—and *appraised* to track the distributions of evaluations directed inward versus outward (Martin & White, 2005). A visual representation of the coding scheme used in this project is provided at the end of this subsection for reference (Figure 3.2).

Affect

Affect is considered to be the core *attitude* type, encompassing the resources for expressing **personal** emotions, which are then 'reworked' through experience in society to assess people and objects (Martin & White, 2005, p. 45). It can be divided into four categories of emotions: *un/happiness*, *dis/satisfaction, in/security,* and *dis/inclination* (Martin & White, 2005). The first three categories are classified as 'realis affect' (i.e., reactions to real-world stimuli) while the final category is classified as 'irrealis affect' (i.e., feelings about hypothetical or as yet unrealized events; Martin, 2000). *Un/happiness* encompasses "emotions concerned with 'affairs of the heart'" such as happiness, sadness, love, and hate (Martin & White, 2005, p. 49). *Dis/satisfaction* is concerned with feelings "of achievement and frustration in relation to the activities" one participates in or spectates including anger, interest, boredom, or satisfaction (Martin & White, 2005, p. 50). *In/security* covers feelings sparked by one's environment and the people and things in it, such as anxiety, confidence, trust, and uneasiness (Martin & White, 2005). As such, it can also be used to code declarations of certainty about something, such as *I know X* or *I am convinced about Y*. Finally, as *dis/inclination* deals with feelings toward the *irrealis*, it includes feelings like desire, fear, or keenness.

Other features can also be specified, including the 'emoter' (i.e., the *appraiser;* the person feeling the emotion) and the 'trigger' (the *appraised*), which may not always be present if the emotion is described more as an ongoing mood rather than a reaction to a stimulus (Martin & White, 2005). Martin and White (2005) allow for the possibility of attributing emotions to someone external to the author, but Thompson (2008, 2014) argues that *affect* should be limited only to author-sourced emotions and that instances which are attributed actually convey *judgment* of that person because it depicts "what kind of person they are and therefore how the addressee is intended to judge them" (p. 176). This, however, I argue does not properly capture the effect achieved by attributing emotional states to others; to claim to know someone else's inner affective states is a bold action that may be indicative of aspects of underlying schemas, such as individuals with paranoid ideations might ascribe malicious intent to others (Beck, 2015; Renton & Mankiewicz, 2015) or individuals with depression might assume others do not love them (Beck, 2002). Thompson's (2008, 2014) point, however, does become relevant when distinguishing between attributed tokens of *dis/inclination* and assessments of others' determination using *tenacity* (this is elaborated on in the *judgment* section).

Martin and White (2005) also defined three possible linguistic realizations for *affect*: (1) as descriptions of a quality (e.g., *happy woman; they left happily*); (2) as descriptions of

processes (e.g., *they chuckled; it elated him*); (3) or as a comment (e.g., *sadly, they had to leave*). Bednarek (2009b), in contrast, argued that it might be useful to distinguish between 'overt' expressions of *affect* where the 'emoter' is foregrounded (e.g., *I am surprised by this*) and 'covert' expressions where the feeling itself is foregrounded (e.g., *this was surprising*) as they pattern differently in terms of the linguistic constructions in which they can appear. The benefit of this distinction is that the differences in the effects of each type are arguably more useful for this project. Those that foreground the emoter emphasize the connection between the emotion, the emoter, and the trigger whereas those that foreground the emotion deemphasize this connection and place focus on the trigger and its impact. The latter construction, for example, might be indicative of schema-influenced information processing biases which assign more power to events and people external to the individual, as are common with delusions (e.g., Beck & Rector, 2005).

Judgment

The system of *judgment* encompasses feelings that have been **institutionalized** (i.e., shaped by society) and 'reworked' to assess the behaviors and traits of oneself and other people (Martin & White, 2005). It is comprised of five categories, which can be divided into two main groups based on what authority 'polices' the behaviors or traits. The first three categories—*normality, capacity,* and *tenacity*—fall under the heading of *social esteem*, which encompass assessments of behaviors policed by society and culture. *Normality* encodes assessments of how normal or special someone is, with positive values including *normal/stable* and *extraordinary/unique* and negative values including *run-of-the-mill/undistinguished* to *peculiar/erratic*. *Capacity* encompasses assessments of mental and physical capabilities, with positive values including *strong/smart/successful* and negative values including *weak/slow/unsuccessful*. *Tenacity* enables assessments of will-power and dependability, covering values such as *patient* versus *hasty*, *loyal* versus *disloyal,* or *brave* versus *cowardly.* The final two categories—*veracity* and *propriety*—fall under the heading of *social sanction,* which include assessments that are informed by codified laws, rules, and regulations. *Veracity* captures assessments of honesty and trustworthiness (e.g., *truthful* versus *deceitful* or *discreet* versus *blabbermouth*) while *propriety* captures assessments of morality and ethics, including *good* versus *evil* or *altruistic* versus *selfish*.

For this research, modifications of two categories were adopted, based in part on the work of Hurt (2020). The first is with *capacity*, which as a category for meanings relating to capability, has been demonstrated to be useful for coding instances where the appraiser directly **incapacitates** another person (e.g., violent verbs like *kill* or *attack*; Hurt, 2020; Hurt

& Grant, 2019). By process of logical extension, then, it could also be used for expressions in which the appraiser provides the other person with capacity to do something (i.e., *enables* or *helps* them to achieve something). It should be noted that because acts of violence also represent illegal or immoral behavior, they have previously been classified under *propriety* (e.g., Gales, 2010). However, it is argued here that, at least for instances where one participant is portrayed as **directly causing** the incapacitation of another, the more salient meaning is that which is captured under *capacity.* (Instances of descriptions of violent actions where no agency for the violence is assigned are not coded as *capacity*, but these are discussed in the section on *appreciation,* for reasons that will become apparent shortly.)

The other category modified here is *tenacity*. Martin and White (2005) note it is closely related to expressions of inclination, determination, and intent (p. 55), which somewhat blurs the division between *tenacity* and the *affect* category of *dis/inclination*. These divisions are only further blurred when considering modals of inclination such as *will* and *be going to*. What is argued here is that a clear distinction can be made to help with classification based on identifying the source of the evaluation and the level of inclination, which differentiates between expressions conveying only desire for some hypothetical situation and those which convey an intent to act to bring about said situation (Lock, 1996). Author-sourced tokens are mostly coded under *dis/inclination*—unless the assessment more explicitly refers to their will-power or perseverance (e.g., *I fight for X*)—because they first and foremost serve to indicate situations the author wishes to see come about. Attributed expressions are slightly more complicated, but a clear division can still be made, in part based on Thompson's (2008, 2014) argument that tokens of attributed *affect* actually reflect *judgment* of the person to whom they are attributed. When attributed expressions reflect an attempt by the author to infer an **affective state** (such as *want/wish/desire*) they are coded under *dis/inclination*. However, when they reflect an assumption by the author that the individual **intends to carry out** the action (such as with *will* and *be going to*; Lock, 1996), they are coded as *tenacity* because it is arguably more important to capture the assessment of that individual's determination to achieve a goal. This is because, unlike with author-sourced tokens, it helps to differentiate between events the author believes others would like to see become reality versus those they believe others have every intention of making reality.

Appreciation

The final *attitude* type, *appreciation,* encompasses **institutionalized** feelings that are directed at "things, processes, and phenomena" (Gales, 2020, p. 681) and comprises three categories: *reaction, composition,* and *social valuation* (Martin & White, 2005). *Reaction*

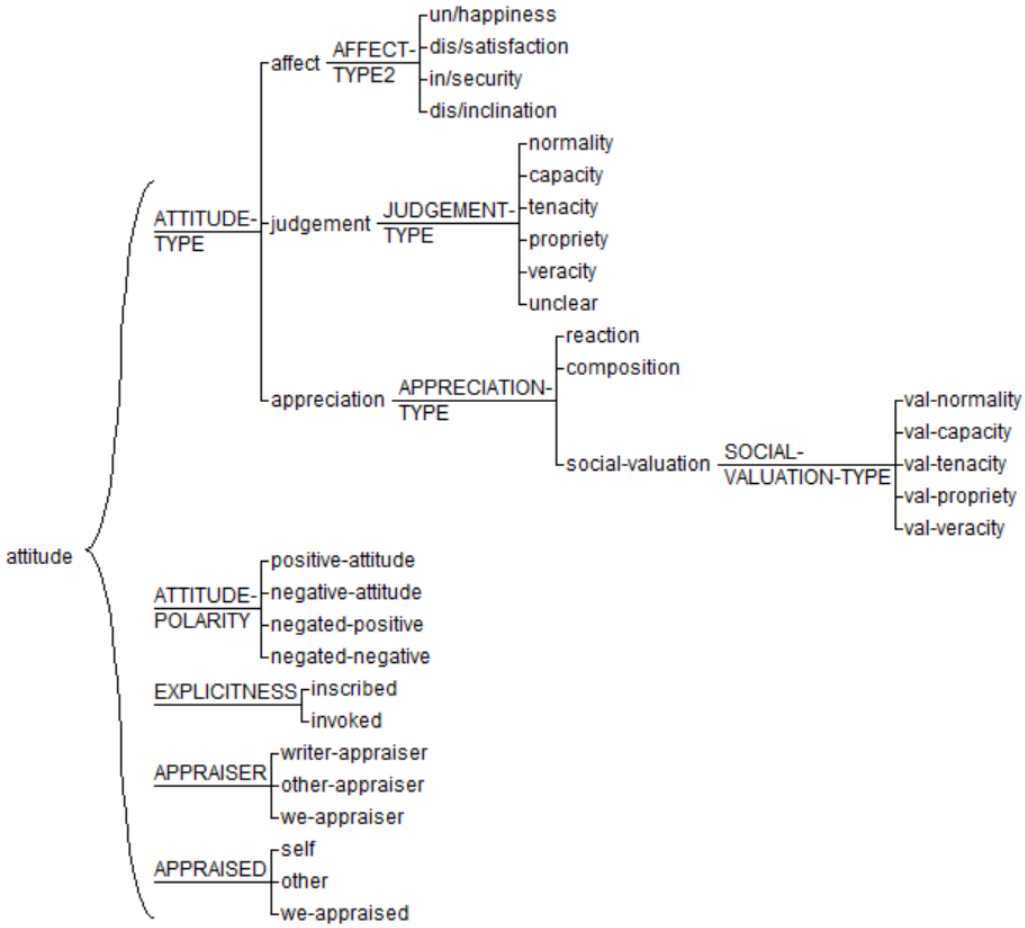
covers assessments about the impact and quality of the stance object, which are similar in nature to the feelings classified under *affect*, but instead of focusing on the emoter, *reaction* tokens help describe a feature of the trigger, for instance saying *a boring building* instead of *this building bores me*. *Composition* encompasses evaluations about the balance and complexity of the stance object—that is, how well they "hang together" (Martin & White, 2005, p. 56)—which includes assessments of symmetry, logicality, intricacy, and elegance. It also captures assessments of **order** and **disorder**, which can be an important feature in forensic texts (e.g., Gales, 2010; Hurt, 2020). The final category of *social valuation* covers assessments of the social value the stance object provides, such as it being *innovative, authentic, derivative*, or *fake* (Martin & White, 2005) and has been linked to the categories of *judgment* (e.g., Bednarek, 2009b; Martin & White, 2005; Thompson, 2008), though the relationship had not been fully explored until Hurt's (2020) work examining pledges to harm.

Within forensic contexts, both *composition* and *valuation* have been found to need expansions to include specific sets of meaning that are not explicitly included in the original framework (Gales, 2010; Hurt, 2020). As *composition* includes evaluations of order and disorder, it has been useful to code references to states of disorder (e.g., *chaos*) as well as references to weapons—as they are "instruments of *dis*order" (Hurt, 2020, p. 191) and "item[s] used to kill" (Gales, 2010, p. 282)—and things that are weapons-related, like their effect (e.g., *destruction*) or how they are used (e.g., *detonated*). The meanings classified under *valuation*, as mentioned above, have been linked to *judgment* categories, such as when Martin and White (2005, p. 58) draw connections between statements like *a brilliant scholar* (evaluating the scholar's capacity directly) and *a penetrating analysis* (a token of valuation that implies a positive assessment of the capacity of the person who wrote the analysis). It is also a relationship touched upon by Bednarek (2009b), who demonstrated that *appreciation* and *judgment* which could be realized in all the same patterns of linguistic constructions, arguing there should be a way to code "judging lexis which is used to appreciate" (p. 180). Hurt (2020) explored the relationship further and demonstrated how the *judgment* categories could indeed be used to appreciate.

This expansion of *valuation* was adopted in this research and because *judgment* and *valuation* capture the same categories of meanings, just directed at different stance objects, the token counts for both are analyzed together in the quantitative analyses. As the boundaries between *judgment* and *appreciation* have been criticized for their blurriness (e.g., Bednarek, 2009b; Thompson, 2008, 2014), a hard line was drawn in this research between items classified under *judgment* versus *appreciation.* Thus, anything that directly ascribed some kind of characteristic or agency for an action to an individual was coded as

judgment—e.g., *he committed a crime* which assigns agency for the illegal action (*-propriety*) to 'him'. Conversely, anything where agency for an action was not directly given to individual (or was given to an inanimate object) was coded as *appreciation*—e.g., *his crimes* where the nominalization 'crimes' generally denotes *-propriety* (it is an illegal action) but removes some of the agency from 'him' for the actions. Admittedly, tokens such as *his crimes* could also be coded under *judgment* as the 'crime' is presented as being 'possessed' by someone. However, since both *judgment* and *appreciation* meanings are arguably present, the reasoning behind the decision to make this distinction was to capture the difference between instances where an individual is described as carrying out some action and those where the actions are nominalized and thus presented as 'things'. As a result of this distinction, the above-mentioned violent actions coded under *-capacity* that necessarily carry a layer of impropriety are coded under *valuation* and classified as *-propriety* when not portrayed as one individual directly incapacitating another—e.g., nominalized forms like *the attack* or *the murders*.

Figure 3.2: Coding scheme for attitude



3.4.2 ENGAGEMENT

The system of *engagement* comprises the resources for communicating commitment to or certainty about a proposition and for positioning the author with respect to other persons and viewpoints (Martin & White, 2005). Furthermore, these resources provide authors with the means to align or disalign themselves (i.e., agree or disagree; Martin & White, 2005) with their audience and the content of their propositions, something which Du Bois (2007) notes happens "by subtle degrees" (p. 162). The system approaches utterances from the dialogic perspective, which emphasizes the relationship between the speaker/writer and the "background of other concrete utterances on the same theme…made up of contradictory opinions, points of view and value judgments" (Bakhtin, 1981, p. 281). It is divided into two broad types of utterances: those that make reference to alternative viewpoints, and those that do not (Martin & White, 2005). On one hand are *monoglossic* utterances, also called 'bare assertions' or 'undialogized' utterances (e.g., Martin & White, 2005; White, 2003), which make no reference to other viewpoints and present the proposition "as one which has no dialogistic alternatives which need to be recognised" (Martin & White, 2005, p. 99). The propositions contained within bare assertions are "held to be unproblematic and generally 'known' or 'accepted' in the current communicative context… where the addressee is assumed to operate with the same knowledge, beliefs and values as those relied upon by the proposition" (White, 2003, p. 263). *Heteroglossic* utterances, on the other hand, do make reference to other positions and viewpoints either by opening up (expanding) or closing down (contracting) the dialogic space to these alternatives (Martin & White, 2005, p. 103).

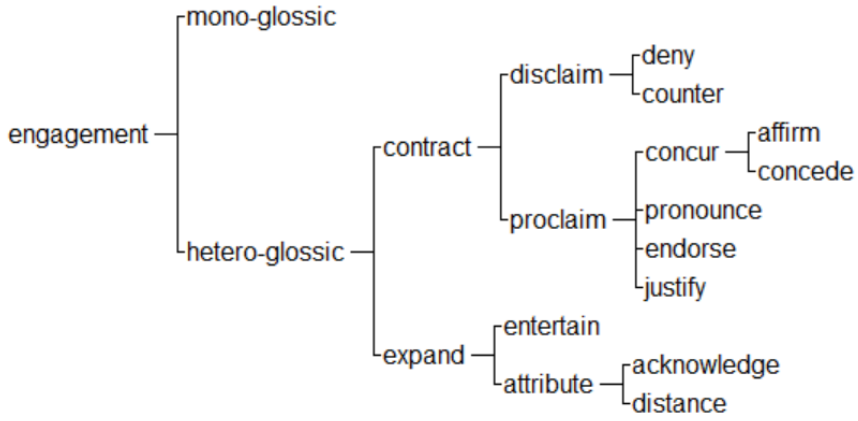
Expansions can be divided into two main types: *entertainments* and *attributions* (Martin & White, 2005). When a proposition is *entertained*, it is presented as one of many possibilities and is typically author-sourced. These types of utterances can be realized in myriad ways, such as with modals of likelihood (*may, might, could*), hedging language (e.g., *probably, perhaps, definitely*), evidentials (e.g., *it seems, it appears*), or mental verbs (*I think, I believe, I doubt*). It is also apparent in certain formulations of questions which do not "assume a specific response but are employed to raise the possibility that some proposition holds" (Martin & White, 2005, p. 105). When a proposition is *attributed*, it is presented as originating from a source external to the author. *Attributions* can be further divided into utterances that simply report (*acknowledge*) the speech or thought of the external voice without indicating their own view about the proposition—e.g., *he said X* or *he believes Y*—and those where the author explicitly *distances* themselves from the propositional content—e.g., *they claim X*.

Contractions acknowledge the existence of alternative dialogic positions, but those alternatives are either *disclaimed*—"rejected, supplanted, or… represented as not applying"—or *proclaimed*—"confronted, challenged, overwhelmed or otherwise excluded" through "authorial interpolation, emphasis or intervention" (Martin & White, 2005, pp. 117-118). Within *disclaim*, there are two sub-categories: *deny* encompasses resources for invoking and then rejecting alternatives, usually through negation (e.g., *it does not prevent X*), and *counter* encompasses resources for presenting a proposition as supplanting some expected alternative often with conjunctions/connectives like *but, however,* or *although* (Martin & White, 2005), but it can also be achieved through compare/contrast relationships (O'Donnell, 2019). *Proclaim* is divided into three categories—*pronounce, concur, endorse*—in the original framework (Martin & White, 2005), but White (2003) and O'Donnell (2019) also note the existence of a fourth category, *justify*. *Pronouncements* include utterances in which there is "authorial emphases or explicit authorial interventions or interpolations" (Martin & White, 2005, p. 127)—e.g., *I contend* or *the truth is*. *Concur* encompasses resources for presenting oneself as agreeing or sharing knowledge with the audience (Martin & White, 2005). This can be achieved either through *affirming* some proposition (e.g., *naturally* or *obviously*) or through *conceding* it (e.g., *admittedly*), which is often followed by a *counter*. It can also be used to code instances where the author presents a sequence of connected propositions *Endorse* then covers formulations in which externally-sourced propositions are "construed by the authorial voice as correct, valid, undeniable, or otherwise maximally warrantable", such as *the studies demonstrate X* or *the report showed Y* (Martin & White, 2005, p. 126). The final category of *justify* is not found in the original framework but has been recognized elsewhere as encompassing resources for presenting a proposition as being "justified, substantiated or otherwise argued for" (White, 2003, p. 274) through explicit markers like *because* or *for this reason* or other linguistic formulations that achieve the same effect implicitly.

In the case of this research, *monoglossic* utterances are rare; they are only coded for in the case of imperatives—e.g., *kill me* (Kinkel, chapter 6)—which Martin and White (2005) note do not make reference to or allow for alternatives. There are many utterances which appear to be monoglossically declared (and indeed in other contexts, might be coded as such), but here, they are instead coded as *heteroglossic*. This is partly based on Gales' (2010) argument that when there is an expectation of disagreement with or dissent from the audience—as is the case in threatening communications—utterances that appear monoglossic instead function more as *pronouncements* because it can no longer be said to contain information that is unproblematic or widely-accepted. While the texts used in this

research admittedly are not threatening communications, I argue that they were all still likely produced under the assumption that the information contained within them was not "generally 'known' or 'accepted' in the… communicative context" and that the audiences did not share "the same knowledge, beliefs and values as those relied upon by the proposition" (White, 2003, p. 263). This is because all of the texts were written either to plead the case to their audience for their version of events—which is necessarily set against the backdrop of other versions of events—or to recount information otherwise unknown to the audience (i.e., information not known or accepted in that communicative context). A visual representation of the coding scheme used in this project for *engagement* can be found in Figure 3.3 below for reference.

Figure 3.3: Coding scheme for engagement

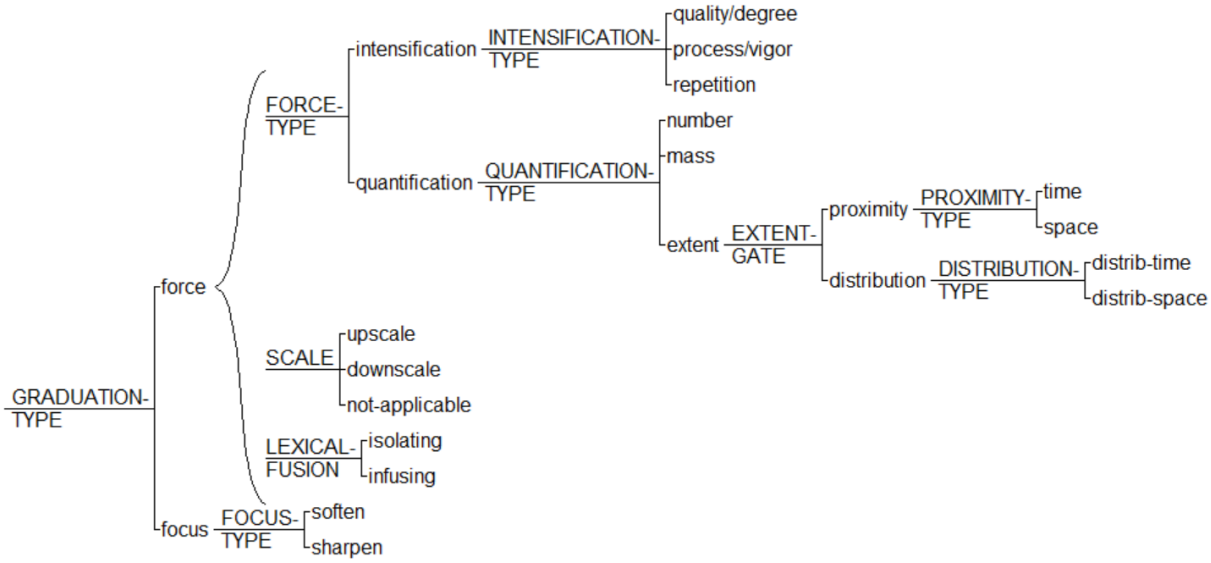


3.4.3 GRADUATION

The third system of Appraisal, *graduation*, is considered to be an umbrella system that able to be applied to both *attitude* and *engagement* (Martin & White, 2005) and "depending on the degree and type of resources used," it can be used to project "the writer's social and individual identities…as more or less authoritative and confident" (Macken-Horarik & Isaac, 2014, p. 77). When applied to *attitude,* tokens of *graduation* convey the intensity of the positive or negative evaluations; when applied to *engagement*, they "intensify or diminish their level of involvement or investment in the discourse" (Gales, 2020, p. 685). The system is divided into two main sub-types: *focus* and *force* (Martin & White, 2005). *Focus* provides gradations of meaning to semantic categories that are not usually considered scalable (the 'either-or' categories). In other words, it is used to indicate whether the stance object is more or less representative of the prototypical qualities of that semantic category. Resources that *sharpen* indicate higher prototypicality (i.e., that the item possesses the exemplary qualities, such as *a true friend* or *real hero*), whereas those that *soften* indicate less prototypicality (i.e., that the item possesses few or none of the exemplary qualities, such as *sort of nice*).

Force broadly encompasses resources for upscaling and downscaling assessments of intensity (*intensification*) and amount (*quantification*; Martin & White, 2005). *Intensification* can be used to assess the degree of intensity of *qualities* (e.g., *happy* versus *ecstatic*) and of *processes* (e.g., *walked* versus *sprinted*). For this research, there was an additional category of *repetition* placed with the *quality* and *process* variables as repetition of similar or identical meanings throughout a text or in quick succession can serve to intensify those meanings. For instance, in chapter 4, Aileen Wuornos repeatedly referred to a number of violent actions committed against her by her first victim, which aided in conveying the extent of the aggression she claimed to experience. (This is an expansion of what Martin and White (2005) classify under *repetition*, which includes repeating the same item, like *super, super happy*, or semantically related items, such as *down and depressed*.) *Quantification* is used to assess degrees of amounts with regard to *number* (e.g., *three pies*)*, size* (e.g., *a massive cake*), and *extent*—which can be divided into assessments of *proximity* (e.g., *nearby store* or *recent purchase*) and *distribution* (e.g., *long-lasting war* or *wide-spread panic*) with respect to time and space. *Force* tokens can also be coded for additional variables to further specify how it is modifying the evaluation. *Scaling* indicates whether the meaning is upscaled or downscaled, and while Martin and White (2005) argue that all *graduation* tokens can be scaled, it is argued here that those falling under *extent* are not as straightforward and thus do not necessarily need to be coded for *scaling*. Consider, for example, the difference between *next door* and *the other side of town*; it is not clarified how to decide which should be considered upscaled and which should be downscaled. As a result, for the variable of *extent*, scaling was not coded. The final variable of *lexical infusion* differentiates between graded meanings that are achieved using *isolated* lexical items as modifiers (e.g., *more miserable*) and those that are *infused* in the attitudinal or engagement marker (e.g., *dislike* versus *hate* versus *loathe*). The visual representation of the *graduation* coding scheme used for this project is provided in Figure 3.4 below for reference.

Figure 3.4: Coding scheme for graduation



3.5 STUDY DESIGN

To facilitate discussion of the studies designed to address the research questions presented in chapter 1, they have been reproduced below:

(1) Are there patterns of linguistic evaluative resources that can be attributed to specific psychological traits?

(2) a. Are there patterns which are consistent across violent offenders of the same type (thus possibly indicative of specific schemas associated with that type of violent act)?

b. Are there patterns that are consistent across different types of violent offenders (thus possibly indicative of broad violence-related schemas)?

As is evident from the information presented thus far, there are numerous factors, both linguistic and psychological, that required consideration and as a result, a number of paths could have been taken to address these questions, each with their own strengths and weaknesses. Given that this research is situated within a forensic context and intended to supplement forensic psychological and linguistic assessments of texts, the first decision regarded the population from which the authors would be chosen. Violent offenders were ultimately selected for three main reasons: (1) criminal profiles are most often generated for violent crimes (Palermo & Kocsis, 2005), thus making it the most worthwhile population to focus on (at least to begin); (2) the high-profile nature of the crimes increased the chances of finding greater amounts of publicly available data; and (3) the relative rarity of such offenders reduced arbitrariness in the data selection process. To offer some balance, texts from non-violent authors with overlapping diagnoses were collected and analyzed, as well.

The decision to conduct three separate empirical studies with the violent offender texts and a comparison study with non-violent author texts was intended to allow the research questions to be approached from various angles and for different combinations of variables to be controlled for. Of course, the heading of 'violent offender' encompasses multiple types of violent acts, such as assault and murder. The typologies of serial and mass murderers, however, are fairly well-developed (e.g., Miller, 2014a), so the focus of the search was narrowed to those sub-groups. Because of the noted contrasts between different types of violent offenders (e.g., Miller, 2014a; Palermo & Kocsis, 2005), it was decided each of these empirical chapters would focus on only one type. That way, detailed accounts of linguistic evaluative features could be generated, and the first research question could be addressed without the influence of offender type being a potential explanatory factor for significant differences. The three types that were selected were based on differences in how the crimes were committed, representing a spectrum from serial to mass violence. The first study focuses on serial murderers, the second on a serial bomber (who exhibits similarities to both serial and mass murderer types; Fox & Levin, 1998), and the third on perpetrators of mass violence (who either killed multiple victims or attempted to do so but were stopped). The primary difference between the two ends of the spectrum is that instead of aiming to "kill as many victims as possible, quickly, efficiently, and at once" as mass murderers do, serial murderers' methods "tend to be slow and close-up" (Miller, 2014a, p. 4). The subject of the middle chapter—the Unabomber—is argued to display aspects of both sides; wanting to cause massive amounts of damage like mass murderers, but also making the same recurring decision to kill in between 'cooling-off' periods as serial murderers do (Fox & Levin, 1998). Each of the empirical chapters includes discussions of how the findings compare to existing literature on their respective offender types. The purpose of chapter 7 is then to ascertain whether any linguistic evaluative patterns identified in chapters 4-6 hold for the non-violent authors, which helps to determine which patterns might be more likely due to psychopathology and which to violent ideation. The final discussion chapter (8) is then intended to address question 2b by discussing the similarities and differences between the linguistic evaluative patterns of (1) the different offender types and (2) the violent offenders and the non-violent individuals to help determine patterns which might be more likely due to violent ideation than psychopathology.

To identify authors for each empirical chapter, two broad criteria were required to be met. (For the non-violent chapter, these criteria were not applicable in the same way as the memoirs were published and therefore publicly accessible and details from them were used to determine diagnostic information; this is discussed more in chapter 7.) First, a

psychological evaluation needed to have been conducted and the subsequent report (or a secondhand account of a report) detailing any mental health diagnoses or pathological traits needed to be available. This was the most reliable way to remotely gather the psychopathological information about the authors that is used to determine relationships between symptoms/traits and linguistic evaluative patterns. Second, there needed to be accessible collections of writings from which data could be selected. This, of course, presents a bias in the sampling, allowing only those offenders who (1) chose to record so many of their thoughts, beliefs, and stories in written form and (2) achieved enough infamy to have their writings be published for the public to see. It is, however, a bias that could not be avoided given the decision to remotely collect data. The list of possible authors resulting from the application of the above criteria was admittedly short as serial murderers, mass murderers, and serial bombers represent a fairly limited set of possible subjects to begin with and those with documented psychological evaluations who have written texts appropriate for analysis are even fewer. However, in this context, and given the novelty of the approach, studying a small number of individuals and texts is a good first step as much can arguably still be gained from the patterns that do emerge, especially considering the detail produced by Appraisal analyses.

The final decisions about which additional factors could be controlled for in each chapter relied upon both the list of possible authors for that chapter and the type of data that was available. These included variables relating to the *genre* and *register* of the texts and the psychopathological profiles of the authors. In general, an effort was made to ensure consistency in the overarching genre of the texts since it is a set of conventions for the organization and structure of texts that can affect the range of language resources an author sees as available to them (Bhatia, 1993; Martin, 2005; Swales, 1990). This is where the phenomenological approach to psychopathology proved most useful. It aims to describe the "conscious, lived experiences" of patients and "what [that] conscious experience—understood in the widest possible sense—reveals to the disciplined observer" (Moran, 2019, p. 205). Thus, texts needed to be *first-person accounts*, which are broadly defined here as a description of an experience, an event, or a belief system written by the authors from their own perspective. As a genre, they impose few constraints on organization and content and they allow one to observe "the various ways in which everyday experience can be disrupted" or altered by psychopathology (Bortolan, 2019, p. 1054). As such, they are especially appropriate for helping address the questions posed in this research.

With respect to register—i.e., audience, topic, and mode of communication (Bell, 1984; Biber et al., 1999; Halliday & Matthiessen, 2014)—and psychopathological variables, each

chapter controlled for different combinations. These exact combinations are discussed in their respective chapters, but a brief overview is warranted here. For chapter 4, the limited number of serial murderers for whom diagnostic or psychopathological information was available meant that controlling for diagnosis to any extent would result in even fewer authors. Additionally, the ability to account for the register variables of audience and mode of communication was hindered by the restricted amounts of texts available for each author. Instead, the topic and length of the texts were matched as best as possible. For chapter 5, only one author was used—which eliminated the need to consider diagnostic variables—and the amount of data available for him enabled a longitudinal study to be carried out in which audience and mode of communication could both be kept consistent. All texts are letters to family falling under the genre of first-person accounts, but the topic could not be controlled for because the topics varied sometimes drastically over time. For chapter 6, it was possible to control for psychopathological variables and the topics, modes of communication, and audiences were relatively consistent (with only minor differences). Finally, for the non-violent chapter, length was controlled for as well as audience and mode, technically, because they were all memoirs about the authors' experiences with mental illness written for public consumption.

3.5.1 CODING PROCESS

Once the data had been collected for each of the chapters, the texts were uploaded to the coding software, *UAM Corpus Tool* (O'Donnell, 2019), which at the time of this writing is free to download[2]. It includes a built-in Appraisal coding scheme and allows texts to be coded for each Appraisal system separately and can then provide raw frequencies of all coded features for individual texts and groups of texts. While it also has the ability to run statistical tests, this function was not utilized here and instead the tests were conducted using Excel. The built-in coding scheme in Corpus Tool is based heavily on Martin and White's (2005) original framework—though they include the category of *justify* in their *engagement* scheme—but modifications can be made if necessary. Therefore, a few changes were made to the *attitude* scheme to reflect the modifications mentioned in the above sections. First, Martin and White (2005) make further distinctions for each category of *affect*—e.g., *un/happiness* is divided into resources for expressing *misery/cheer* and *antipathy/affection*—as well as for *reaction* (*quality* and *impact*) and *composition* (*complexity* and *balance*). These distinctions were not coded for and were removed from the coding scheme as they added an arguably unnecessary layer to the analysis. Then, the five *judgment* categories were added

[2] http://www.corpustool.com/download.html

under *valuation* and the options of *negated-positive* and *negated-negative* were added under *polarity*. Finally, an option for inclusive *we* was added to both the *appraiser* and *appraised* variables to ensure instances where the authors grouped themselves with others to evaluate or be evaluated were captured.

There are a number of potential complications that can be encountered in Appraisal analyses, as has been demonstrated in the preceding sections. As a result, a number of steps were taken based on some of the suggestions provided by those who have criticized Appraisal (e.g. Fuoli, 2018; Macken-Horarik & Isaac, 2014; Thompson, 2008, 2014). In line with some of Fuoli's (2018) suggestions, the scope of the analysis was defined (resulting in the above-mentioned changes to the coding scheme), a comprehensive record of the coding decisions—a 'coding policy book'—was kept for each text, and the decisions for all texts were reviewed a second time and revised if necessary to ensure the highest possible intra-coder consistency across the three studies. Examples of the tables used to record the decisions can be found in appendix B. As mentioned above, formal interrater reliability studies were deemed unfeasible, but coding decisions were discussed with my supervisor to further enhance the inter-study consistency. Additionally, for the most part, the smallest possible unit of meaning was coded to observe the different types of combinations of resources authors used to achieve certain stances. With *attitude*, tokens were coded based on the denotations of the words/phrases (i.e., the more societally-influenced interpretation), but when relevant, connotations and implications (i.e., more contextually-influenced interpretation) were also considered. This is something which Gales (2020) argues can be a particularly useful approach in forensic settings as authors of forensically relevant texts are often automatically disaligned with the views of society at large, meaning that more information is gleaned when the additional implied assessments are incorporated into the analysis. Double-coding was avoided if at all possible, so that frequencies of certain categories were not artificially inflated, but if the presence of multiple meanings was deemed undeniable—that is, all of the meanings seemed equally salient (Macken-Horarik & Isaac, 2014)—all relevant meanings were coded. This includes both single-word tokens conveying multiple meanings as well as longer phrases containing layers of meaning. To illustrate, consider the underlined portion of the following example from one of the texts by Ian Brady (one of the authors in chapter 4):

- *you contain me till death in a concrete box that measures eight by ten* <u>*and expect*</u> <u>[+inclination]</u> <u>*public*</u> <u>[+valuation: normality]</u> <u>*confessions*</u> <u>[+valuation: veracity]</u> <u>*of remorse*</u> <u>[-satisfaction & -propriety]</u> <u>*as well*</u>

The non-underlined portion offers context that indicates the entirety of the underlined portion conveys an assessment of greediness about the reader (i.e., *-propriety*) because they have taken his freedom but still want more from him. However, at the narrowest level, there are numerous other meanings that are being communicated, including referring to *public confessions* which would, by definition, mean making potentially private information common knowledge and attributing the desire for such public confessions to the reader. Examples like this can impact quantitative analysis results (Fuoli, 2018), however they are relatively rare across the three studies (i.e., the impact would likely be fairly small) and when they do occur, it is only because all coded meanings appear equally relevant to the overall stance. Nonetheless, their existence is worth noting and considering during the analyses.

With *engagement* and *graduation*, double-coding was less of a concern as these types of tokens do not usually convey multiple meanings. Most *engagement* tokens were multi-word clauses, but sometimes single words served as the token if what followed was a different type of utterance. For instance, consider the following two utterances:

- *but* [counter] *what if something goes wrong* [entertain]
- *but* [counter] *she believes something will go wrong* [acknowledge]

Coding both of these entire utterances as *counters* would fail to distinguish between the types of propositions that were used to present the counter-argument, which is arguably an important distinction to make, both for the quantitative and qualitative analyses.

3.5.2 Quantitative and Qualitative Analyses

After coding was completed for all the texts in a chapter, the raw frequencies for the various Appraisal categories were extracted from Corpus Tool and input into Excel sheets. In all chapters, these frequencies were normalized as, even though length was controlled to a certain extent, the range of word counts was large enough to potentially impact the results (Grant et al., 2017). For *attitude* and *graduation*, tokens are often single words—or at least the core attitudinal meaning can usually be argued to be individual words, even if longer strings are chosen—and as such, the frequencies for both were normalized per some number of words, depending on the relevant word count. For *engagement,* because tokens are most often clause-length (except the rare cases mentioned above), frequencies were instead normalized per some number of 'instances' of *engagement* (Hurt, 2020).

Given that the data are frequency counts of categorical variables chi-square tests were deemed the best statistical test to use (Grant et al., 2017). In corpus linguistics, chi-square tests are often used to evaluate keyness (Rayson et al., 2004)—i.e., to determine whether a feature occurs significantly more often in one corpus over another (Baker, 2006). In this

research, in line with Hurt (2020), the chi-square tests are used to identify *key variables*; that is, the Appraisal variables which are employed significantly more by one author over another, or in the case of chapter 5 where there is just a single author, in one text over another. These key variables represent the **functions** most often served by the authors' language choices which in turn helps identify which resources warrant a closer examination of their **forms.** In other words, the *quantitative* analysis offers the first piece of the psychopathological puzzle by helping determine the types of evaluations being made. For instance, perhaps one author expresses more *insecurity* than the others, uses more tokens of *propriety* or *capacity*, or perhaps *denies* or *counters* propositions most often while the others *pronounce* them? These functional variable patterns offer a general sense of the authors' world views; the values and characteristics most important or salient to them, the way they approach expressing their views, and the way they most often choose to adjust the intensity of their evaluations or commitment to their positions (Martin & White, 2005). The *qualitative* analysis that follows provides the specifics. It helps discern the relationships between the functional variables and, as a result, the overarching stances that are then examined with respect to the cognitive psychology literature. Because chi-square tests become too complex and difficult to interpret with multiple factors and levels (Grant et al., 2017), only two authors or texts were compared at a time. The specific comparisons that were made depended on the chapter, though, so they are described in more detail in the analysis sections of their respective chapters.

3.6 DATA ETHICS

The writings comprising the datasets for chapter 4, chapter 6, and chapter 7 are all from publicly-available online sources, which are discussed in more detail in their respective chapters. There were discussions about whether the use of these writings warranted ethics approval, but because they are being used in line with the fair use policy, it was deemed unnecessary. An ethics application was submitted to the Aston Institute for Forensic Linguistics Ethics Committee, however, for the writings used in chapter 5. They are from a collection of documents that were obtained through a professional contact of mine who was given the documents when he was asked to conduct the psychiatric evaluation on Ted Kaczynski (the focus of the chapter) before Kaczynski's circumstances changed, and a different psychiatrist had to be asked (R. Freedman, personal communication, 2018). The same collection was provided to the new evaluating psychiatrist. It contains transcribed copies of the original writings, which are able to be accessed in person at the University of Michigan library and some of which (though none of the ones used in this research) have

recently become available online[3]. The documents were provided to aid Dr. Freedman in the evaluation and given without any stipulations restricting their use or requesting their destruction or return. He retained ownership of the collection until transferring that ownership to me in 2018. The letter stating that I had been granted full ethical approval to use the documents can be found in Appendix A.

There are ethical considerations in need of further discussion here concerning the data selection and research more broadly. As De Costa (2015) states, the 'core principles' in applied linguistics research are (1) to respect the subjects, (2) minimize risk of harm while maximizing the benefits of the research, and (3) justice. Every effort was made during the course of this research to comply with these principles. As all of the authors in this research are individuals diagnosed with mental health disorders who also committed violent crimes, the biggest concern was about the potential for the findings to be misconstrued in a way that propagates the erroneous assumptions that individuals with mental health disorders are more dangerous and more predisposed to violence (Hiday, 1995). This is a concern raised by the British Association for Applied Linguistics (BAAL), as well, and the recommendation is to counter such potential misconstruals before they occur (BAAL, 2021). In this research, it is reiterated throughout that violence and violent ideation are viewed as distinct traits that are completely independent from, and able to be present without, concurrent mental health diagnoses, in line with the cognitive theory of violence (Walker & Bright, 2009). With respect to the authors more specifically, this research does not pose any risk to them legally-speaking (as in it does not offer evidence that could extend their sentences) nor does it pose a risk to their reputations. In fact, the aims of this research necessitate the authors' beliefs be treated with respect and in a neutral manner, without judging or dismissing them. To treat them as illegitimate because they are malicious or problematic would do a disservice to this research and render the results and all of its potential benefits moot.

Williams (2012) further offers a series of eight concerns that should always be considered in research involving human subjects, each with a more ethical and less ethical side. This research remains on the more ethical side for each of the issues, as demonstrated below:

1. **Public versus private:** The writings for chapters 4, 6, and 7 are **public** as they were made available by the media, through their use as evidence in trial, or as part of a published book. The writings used in chapter 5 are part of a privately-owned collection (my own), but different versions of the same documents are available to

[3] https://harbor.klnpa.org/california/islandora/object/cali%3A885

the **public** and some of the documents within the collection are available on an open-access website.

2. **Open versus restricted membership access:** The access is **open** because none of the authors belong to online or offline communities for which membership is needed.
3. **Low versus high level of intrusion:** The research has a **low** level of intrusion because the analysis itself is passive and there was no direct contact with the authors.
4. **Less versus more sensitive:** This research is **less sensitive** because while the authors were all diagnosed with mental health disorders, the writings for the authors in chapters 4-6 do not contain sensitive information about their treatment or experience and those in chapter 7 shared such information of their own volition as part of the memoir. Additionally, while two of the authors were minors (Kip Kinkel was 15 and Alex Hribal was 16) when they wrote their texts, they are now both adults and are serving their sentences.
5. **Low versus high risk of harm:** There is a **low** risk of harm because (1) the authors do not belong to a larger group or community that could be disrupted and (2) all of the personal information contained within them or discussed was already publicly-available prior to this research being undertaken. This also negates the need for anonymization of the authors, though names of individuals that are not well-known and associated with the case are redacted (BAAL, 2021).
6. **Broad-based versus intimate group: Neither** applies because, again, the authors do not belong to a group or community.
7. **Owner permission versus refusal:** For chapters 4, 6, and 7 **neither** applies because the writings were made available to the public through channels mentioned in 1. For chapter 5, the documents are a part of a collection that I own, so **permission** is granted by myself and supported with the approval by the ethics committee.
8. **Researcher's ethical stance:** As mentioned above, the aim of this research is to uncover relationships between psychopathology and language and that cannot be achieved without taking the beliefs expressed by the authors seriously and treating them neutrally and with respect.

CHAPTER 4 SERIAL MURDERERS[4]

In Wichita, Kansas on the morning of January 15, 1974, Dennis Rader cut the phone line to the Otero family's home before entering (Slevin, 2004). He bound and strangled the parents and killed the youngest two of the couple's five children; the three eldest later finding the bodies when they came home from school (Ott, 2021). These four murders marked the beginning of a 31-year manhunt for Rader—who became known, infamously, as B.T.K., for Bind, Torture, Kill—during which time he committed six more murders and taunted the police and public with letters and messages claiming responsibility and demanding recognition for his crimes. During his trial, he was assessed by a psychiatrist who determined he met the diagnostic criteria for obsessive-compulsive disorder (OCD) and narcissistic personality disorder (NPD; Ramsland, 2016). Rader, of course, is not the only serial murderer to send letters to law enforcement, but cases like his beg the question: was there evidence in his language choices of any of the symptoms and/or traits that comprise the two diagnoses he received and what good would it have done if there was?

This chapter is the first of the three empirical studies outlined in chapter 3 aimed at addressing the research questions posed in this project regarding how patterns of linguistic evaluative resources relate to underlying psychopathology amongst different types of violent offenders. Here, the focus is placed on serial murderers, defined by the Federal Bureau of Investigation (FBI) as "the unlawful killing of two or more victims by the same offender(s), in separate events" (Morton & Hilts, 2005, p. 9). The specific characteristics can vary drastically from one serial murderer to the next—they may, for example, use different methods, have different motives, select different victims, and 'cool off' for different lengths of time (Miller, 2014a)—but they all share one crucial characteristic: they repeatedly made the decision to kill at the end of their cooling-off periods. Using the Appraisal framework outlined in chapter 3, three written texts from each of four selected authors are analyzed. The findings for each author are considered within the context of that individual's psychopathology; the findings across authors are considered within the context of their shared classification as serial murderers (research question, or RQ, 2a) and their psychopathological similarities and differences (research question, or RQ, 1). Each text ranges from 500 to 1000 words and covers a different topic—one about *crime,* one about an *interpersonal* interaction or relationship, and one about their *childhood*. In the sections to

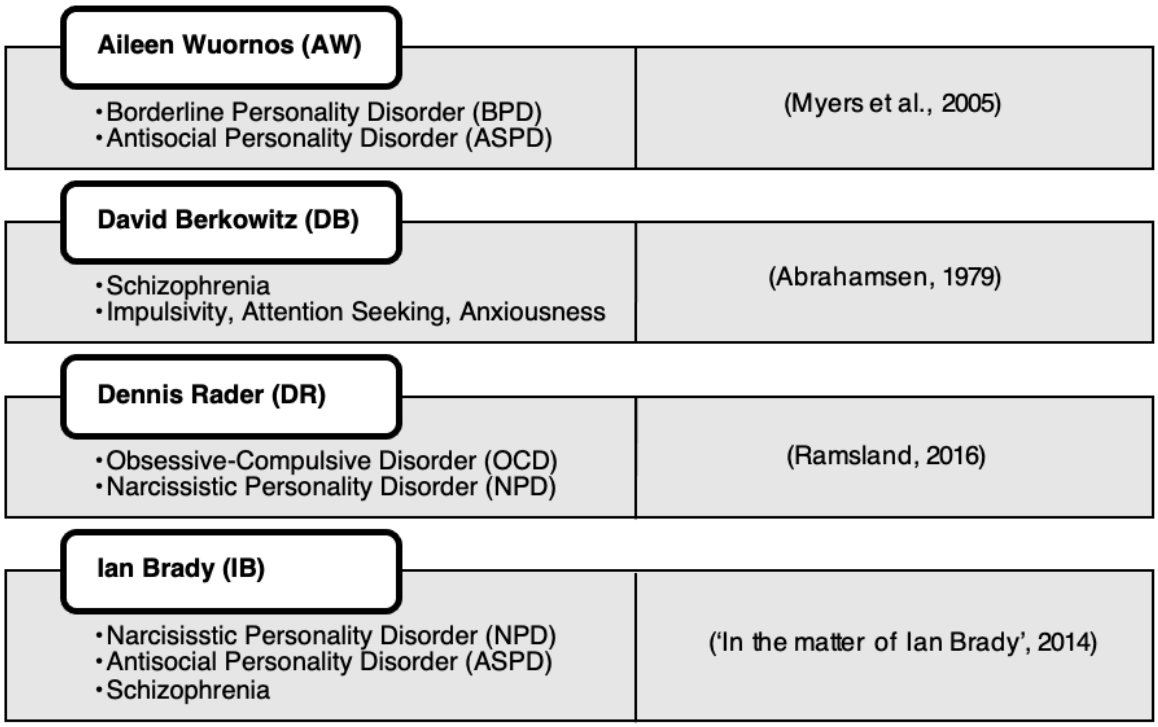
[4] An earlier version of this chapter—which includes small parts of the literature review chapters (1-3)—was adapted into an article for publication with help on the editing of the article by my supervisor, Tim Grant, who is co-author. It was accepted and will be published in the journal *Language and Law/Linguagem e Dereito*.

follow, the dataset is introduced (section 4.1), followed by the findings from the quantitative and qualitative analyses (section 4.2), a discussion of the findings and how they relate to each author's psychopathology and shared offender classification (section **Error! Reference source not found.**), and finally a summary of the findings and conclusions (section 4.4).

4.1 DATA

As was introduced in chapter 3, there were two basic selection criteria used to narrow down the list of possible authors to be used for each study. The first was that the authors needed to have had an official psychological evaluation conducted (typically during their trial) and the subsequent report (or its findings) had to be accessible. The second was that the author needed to have a collection of writings publicly available from which to choose (e.g., as part of a biography). With these criteria, four total authors were identified, and their names—and initials, which are used from this point forward—and psychopathological information are provided in Figure 4.1 below:

Figure 4.1: Authors and diagnostic information



Once the authors were identified, the texts used in the analysis were selected from each author's collection of available writings. As was mentioned in chapter 3, the main text selection criteria for this chapter related to the genre, sub-genre (topic), and length of the writings. With regard to genre, the writings needed to be *first-person accounts*—i.e., descriptions of an experience, event, or belief system written by the authors from their own

perspective. Because of the limited number of writings available, controlling for two register features—audience and mode of communication—was not possible. This was because some authors, like DB, only had letters available and others, like IB, only had monograph-style writings. Topic and length, though, were possible to control for to a certain extent. The word count of each text was required to be between 500 and 1000 words; if full texts were too long, excerpts with clear starting and ending points were chosen to minimize the amount of context lost.

For topic, it was decided that more than one should be chosen so that any significant findings would not be attributable to subject matter alone. Three topics were chosen, which all needed to be general enough to be able to find examples for all four authors but distinct enough to warrant separate classification. These constituted the three sub-genres (as they are all first-person accounts with variation only in their content) mentioned above—*crime, interpersonal*, and *childhood*—and resulted in a total of 12 texts in the dataset. For the *crime* texts, the goal was to find an excerpt that would provide insight into their views on violence, thus texts were chosen where the subjects described acts of violence they committed, or in IB's case (because he avoided discussing his own crimes in his book), a generalized description of *the serial killer*. The *interpersonal* texts were intended to provide insight into their views on others and relationships, thus texts were chosen in which social experiences or beliefs about social customs were described. Finally, the *childhood* texts were intended to offer insight into how the authors recalled aspects of the years preceding their crimes, thus texts were chosen in which the authors recounted an event or phase of their life during pre-teen or teen years. Each sub-genre offers a different opportunity for the authors to describe how they see the world and depict the relationships between themselves and the people and things with which they come into contact. These are all crucial aspects of the schemas that underlie psychopathology (e.g. Beck, 2015) and violent ideation (e.g., Walker & Bright, 2009) and thus important for enabling the later discussion of the findings with respect to research questions 1 and 2a.

For AW, two of the texts (interpersonal and childhood) were letters she had written to a friend who later reproduced them in a book (Wuornos et al., 2011) and the third was a written record of a spoken interaction from a biography (Wuornos & Berry-Dee, 2006). Of course, spoken and written modes impact language choices differently (Biber et al., 1999), but for AW, it appeared that she wrote and spoke in a very similar, informal way, so it was decided that the value of the text as the choice for the *crime* sub-genre outweighed the risk in using a transcription. DR's texts were also selected from his biography, in which the author reproduced letters DR had written her with small interjections from her for clarity

(though none of the excerpts used here included such interjections; Ramsland, 2016). For DB, excerpts from letters he had sent the psychiatrist who assessed him during his trial (and who later wrote DB's biography) were pulled from an article on the website for *New York Magazine* ('The Letters of Son of Sam', 2006). Finally, IB's texts were excerpts from a book he wrote himself (Brady, 2001), meaning that unlike the other authors, his putative audience was anonymous to him.

A few limitations of this data should be addressed. First, while it can be argued that all the texts generally served a similar purpose—i.e., the author's desire to tell their sides of the stories—the inability to control for audience introduces its own set of complications. The relationship between author and audience is generally agreed to be an impactful variable on language choices (e.g., Bell, 1984; Halliday & Matthiessen, 2014). For DB, DR, and IB, their texts were produced with the knowledge that they—or at least the information contained within them—would be disseminated to the public at large and were all written to or for relative strangers. For AW, this was not necessarily the case; two of the texts were letters written to a close friend and the other was produced as part of an interview in which she provided a confession for her actions, which is typically an inherently adversarial situation (Shuy, 1998). Second, it is acknowledged that with only four subjects and 12 texts, there is not enough data to warrant broad conclusions or generalizations and the different author-audience relationships represent a potential confounding variable. However, in the domain of the study of serial killers, there are relatively few possible subjects to begin with and even fewer with documented diagnoses who have written texts appropriate for analysis. Thus, in this context, and given the novelty of the approach, studying a small number of individuals and texts (even without the ability to control for audience) is a good first step as much can arguably still be gained from the patterns that do emerge, especially considering the detail produced by appraisal analyses.

Given that the more specific distinctions in the texts occur at the level of sub-genre, it is expected that more significant differences are likely to be observed at that level than at the broader level of genre as their conventions could have impacted the choices the authors saw as available to them when composing the texts. This is because first-person accounts are descriptions of one's own experience, which means there are arguably few conventions that could truly dictate what language can and cannot be used. Conversely, the limits placed on possible resources when describing one's role in or view of criminal acts, relationships or interactions, or childhood events are potentially more extensive. Take for instance the *crime* texts. For AW, resources were limited to those that allowed her to portray herself as victim acting in self-defense whereas for DR, they were limited to those that allowed him to portray

himself as separate from an ostensible 'Dark Side'. Despite the apparent differences in these two examples, the sub-genres can be viewed as imposing a broad restriction based on conventions concerning how to portray oneself as filling a particular role—e.g., protagonist versus antagonist—or as taking a particular position on something—e.g., in line with or opposed to societal norms. Such a restriction, while broad, still has potentially significant implications especially for an Appraisal analysis. This is because Appraisal—and in particular the system of *attitude*—not only captures the feelings and opinions being expressed, but also at whom/what they are directed (Martin & White, 2005). The role that one wishes to fill or position one wishes to take may impact the distribution of attitude types because different resources are needed for different purposes. For instance, AW's desire to portray herself as the victim may result in higher use of *affect* than DR, say, because part of that role involves conveying heightened anxiety about the actions of the men she ultimately murdered. As such, the effect of sub-genre on the evaluative patterns is considered in the analysis, where relevant.

A brief background for each author and a description of each of their texts are provided below before going into the findings from the quantitative and qualitative analyses. A summary of the texts for each author, including their word count (and the total word count for the author) and mode of communication are included in Table 4.1 below. The label (1) refers to the *crime* sub-genre, (2) to the *interpersonal* sub-genre, and (3) to the *childhood* sub-genre.

Table 4.1: Breakdown of texts by author

	Text	Word Count
AW	(1) Interview transcript	559
	(2) Letter	674
	(3) Letter	820
	Total	**2053**
DB	(1) Letter excerpt	529
	(2) Letter excerpt	578
	(3) Letter excerpt	519
	Total	**1626**
DR	(1) Letter/biography excerpt	582
	(2) Letter/biography excerpt	1049
	(3) Letter/biography excerpt	604
	Total	**2235**
IB	(1) Book excerpt	651
	(2) Book excerpt	724
	(3) Book excerpt	673
	Total	**2048**

4.1.1 AILEEN WUORNOS

Aileen Wuornos was a serial murderer active in the United States from 1989-1990, during which time she killed 7 men, though she was convicted for only 6 of the murders and subsequently sentenced to death, ultimately being executed in late 2002 (Myers et al., 2005). Shortly before her execution, she was interviewed by a psychiatrist who arrived at the diagnoses of borderline personality disorder (BPD) and antisocial personality disorder (ASPD). He also determined that she exhibited evidence of psychopathy after scoring a 32 on the Psychopathy Checklist-Revised (PCL-R)—for reference, the maximum score is 40 and anything above 30 is usually considered to indicate a psychopathic personality (Hare et al., 2013). To arrive at these conclusions, the authors used both the interview and a review of supplementary information from her Department of Corrections file (Myers et al., 2005).

AW's *crime* text was taken from a book written about and with her (Wuornos & Berry-Dee, 2006) and was a transcription of part of her oral confession during one of her interrogations. In it, she recounts in detail the first murder she committed and the events that led up to it. The reason this was used despite being a written record of a spoken discourse is that her writing style seemed to reflect the informality seen in her spoken language, though it is still something to consider when interpreting the results. The other two texts were taken from a book of letters Wuornos wrote to her friend Dawn spanning from around the time of her arrest until her execution (Wuornos, 2011). Most of the letters in the book appeared to be abridged versions of much longer texts with the removed chunks indicated by ellipses. Of course, there is a chance that the elided elements contained important contextual information, so to limit the potential impact of this, the texts that were chosen had ellipses mostly between sentences or paragraphs instead of in the middle of clauses or sentences (as material elided mid-sentence might contain the appraiser or stance object). In the letter chosen for the *interpersonal* text, Wuornos describes from her perspective various interactions that occurred after her arrest including her interrogations and her belief that all those people contributed to the misrepresentation of her as a serial killer. Finally, in the letter chosen for the *childhood* text, Wuornos recounts an encounter with a man that she had at the age of 17 as part of a series of letters detailing various events throughout her childhood and teen years.

4.1.2 DAVID BERKOWITZ

David Berkowitz, also known as the 'Son of Sam', was a serial murderer in New York City active from July of 1976 to July of 1977, during which time he killed six and wounded 10. During the year he was active, he wrote one letter to an NYPD captain—which he left at a

crime scene—and another to a news columnist and in both claimed that he was being told to commit the crimes by a demon-possessed dog and dubbing himself the 'Son of Sam' (Abrahamsen, 1979). He was convicted and sentenced to 6 consecutive life sentences, which he is still serving. During his trial, two different psychiatrists determined Berkowitz to be suffering from the bygone paranoid type of schizophrenia—based primarily on his claims that a demon-dog told him to do it—and therefore unfit to stand trial. The paranoid subtype—which has been removed from the *DSM-5* as it and the other schizophrenia subtypes were found to lack reliability and validity (APA, 2013)—was characterized in the previous editions of the *DSM* (e.g., 4th ed. text revision; *DSM-IV-TR;* APA, 2000) by prominent delusions or hallucinations and was considered the least severe subtype in terms of cognitive impairments (Freedman, 2010).

A third psychiatrist, Dr. David Abrahamsen, arrived at a different conclusion to the other two, stating that it was not schizophrenia, but a 'character disorder' stemming from a need for attention and, as such, DB was competent to stand trial (Abrahamsen, 1979). Dr. Abrahamsen also described evidence of traits such as impulsivity, attention seeking, and anxiousness. Because of the disagreement about diagnosis, it is difficult to know for certain about Berkowitz's true psychopathology. However, for the purposes of this chapter, the assumption is that both sides could be right and thus both should be explored. After all, the other two psychiatrists presumably had reason beyond just the claims of demon dogs to suspect schizophrenia, as more than just hallucinations were required to be present for the diagnosis to be given (APA, 2000). Additionally, it was partly the lack of cognitive impairment that made Dr. Abrahamsen reject the schizophrenia diagnosis, despite it being one of the key features of the paranoid type (APA, 2000; Freedman, 2010). Despite confessing the hallucinations were a hoax later on, it is possible that Berkowitz experienced other symptoms and features associated with the bygone paranoid type, such as delusions or "anxiety, anger, aloofness, and argumentativeness" (APA, 2000, p. 314), most of which Dr. Abrahamsen reported amongst his other observations (Abrahamsen, 1979).

After Berkowitz was sentenced, he picked Dr. Abrahamsen to be his biographer and thus began writing letters to the doctor detailing his life and crimes (Abrahamsen, 1979). These letters were later donated to the Columbia University special collections library by Abrahamsen and a selection of pages from a few of the letters were published on the *New York Magazine* website, from which the texts were collected ('The Letters of Son of Sam', 2006). In his *crime* text, Berkowitz describes what led up to his year-long shooting spree and his reasoning for committing the murders. In the *interpersonal* text, he describes various interpersonal relationships and the impact of finding out he had been lied to about the death

of his biological mother. Finally, in the *childhood* text, DB reflects on the criminal acts he committed when he was younger.

4.1.3 DENNIS RADER

Dennis Rader, also known as BTK (for bind, torture, kill), was a serial murderer in Wichita, Kansas who was active from 1974 to 1991, during which time he killed 10 people (Ott, 2021). Similar to Berkowitz, Rader sent letters to the police and in an attempt to deflect suspicion from himself, purposely misspelled certain words and used poor grammar. As part of the trial process, Rader was assessed by Dr. Robert Mendoza to determine his competency to stand trial (Ramsland, 2016). In the subsequent report, two diagnoses were identified—narcissistic personality disorder (NPD) and obsessive-compulsive disorder (OCD). In his letters to police and in the time since, Rader has also maintained that some uncontrollable Factor X—an evilness/monster deep inside him—is to blame for his crimes. After pleading guilty to all 10 counts, he was sentenced to 10 consecutive life sentences with a minimum of 175 years in prison required before the possibility of parole.

All of the texts for Rader were taken from his biography, which consists mostly of his own words, with minor interjections from the author for the purpose of elucidating certain points or the chronological order of events (Ramsland, 2016). None of the excerpts used in this study, however, contained such interjections. In the *crime* text, Rader describes the events that led up to his first set of murders of the Otero family, namely the failed attempt at kidnapping that occurred just before and how he found the family. For the *interpersonal* text, an excerpt was chosen where Rader talks about the development of his relationship with his ex-wife, from when they met to after they had 'settled' into married life. Finally, in the *childhood* text, Rader recounts his early years including his struggles in elementary school and his first few girlfriends.

4.1.4 IAN BRADY

Ian Brady, along with Myra Hindley, were serial murderers in England who killed five children between 1963 and 1965, though Brady was only convicted for three of the murders and Hindley for two, but both were sentenced to life in prison in 1966 ('Ian Brady', 2014). After sentencing, Brady was diagnosed with narcissistic personality disorder (NPD), antisocial personality disorder (ASPD), and the paranoid type of schizophrenia (Atherton et al., 2013). In terms of the schizophrenia diagnosis, the doctor who treated Brady for decades, Dr. James Collins, detailed evidence of "abnormalities of the possession of thought, delusions of control, influence or passivity, hallucinatory voices and persistent delusions" (Atherton et al., 2013, p. 33). As for the personality disorders, there does not appear to be a comprehensive

list of the criteria Brady met, apart from a description of his extreme hostility toward others. However, it can arguably be assumed that some of the schemas for both are still evident in the language, especially those which are considered core to the disorder and thus present in most cases (Beck, 2015).

As IB represents the sole British English speaker in the dataset and as this is something which might impact certain language choices, a dictionary which offers British English definitions for words (when they diverge from American English definitions) was used in case any words carry a different denotation. IB's texts are all excerpts from a book that he wrote himself in which he provides his perspective on various other serial murderers (Brady, 2001). The *crime* text is about his views on the beliefs of the 'typical' serial killer and how he himself enjoyed committing crimes throughout his life. The *interpersonal* text is directed at the reader, for the most part, and includes descriptions of his views about society and its members as well as his role within it. The *childhood* text then describes anecdotes about his criminal activities during his childhood and how it related to and influenced his choices and beliefs in adulthood.

4.2 ANALYSIS

As mentioned in chapter 3, chi-square tests were used to determine the *key variables*—those which were used significantly more by one author over another (Baker, 2006) with the conventional significance threshold of $p<0.05$—which then guided the qualitative analysis. Because chi-square tests become too complex and difficult to interpret with multiple factors and levels (Grant et al., 2017), only two authors were compared at a time. Each author was compared to every other author (the between-author comparisons), for a total of six pairs. Within-author comparisons were also run to determine whether any findings may be attributable, at least in part, to a specific sub-genre.

Since the range of the total and text word counts was fairly large (see Table 4.1), the frequencies for all of the Appraisal variables are normalized. The *attitude* and *graduation* variables are normalized per 1000 words for the between-author comparisons (as anything lower or higher would have skewed the data for at least one author). For *engagement*, the frequencies are normalized per 150 instances for the between-author comparisons. The results for each Appraisal system are laid out in the coming sections (sections 4.2.1, 4.2.2, 4.2.3) and how they relate to the schemas underlying the symptoms and traits associated with each author's diagnoses (RQ 1) and their shared offender classification (RQ 2a) is then explored using the research from cognitive psychology as a guide (section **Error! Reference source not found.**).

4.2.1 ATTITUDE

As was outlined in chapter 3, Appraisal provides the means to analyze in great detail the patterns of linguistic resources authors use to express their *stances* (Martin & White, 2005). The system of *attitude* encompasses the resources used to convey the core feelings of those stances and is divided into three types—*affect, judgment,* and *appreciation. Affect* is considered to be at the core, covering **personal** emotions while *judgment* and *appreciation* **institutionalized** feelings, i.e., ones that have been shaped by society. *Judgment* concerns feelings of praise/condemnation or admiration/criticism directed at the behaviors of oneself and others and *appreciation* concerns feelings directed at 'things' and their value (Martin & White, 2005, p. 45). Each *attitude* type can then be further divided into categories that help better distinguish between the kinds of evaluations being made. There are additional variables that were coded for every *attitude* type: *polarity, explicitness, appraiser,* and *appraised*.

Polarity distinguishes between positive and negative evaluations (Martin & White, 2005) and was expanded for this chapter and the subsequent chapters to include negated versions of both. *Explicitness* differentiates between attitudes that are conveyed directly through the word or phrase used (*inscribed*)—such as with *happy* or *successful*—and those that are implied and thus require shared knowledge or context to interpret (*invoked*), such as metaphors. In other words, *inscribed* tokens rely on a word's **denotation**, or its dictionary definition, and *invoked* tokens rely on **connotation**, or the positive or negative value it has been assigned by society. Coding for the *appraiser* makes it possible to not only see how the authors themselves view the world, but also their perception of how others view it and coding for the *appraised* makes it possible to track the distribution of inward and outward directed evaluations. For the purposes of this analysis, both of these variables were expanded beyond the 'self-other' dichotomy to include a third option of *we* to capture instances where the author grouped themselves with others to either suggest a shared belief about something (as the *appraiser*) or a shared trait or behavior (as the *appraised*).

As discussed in chapter 3, the category of *valuation* within *appreciation* can be usefully subdivided into the five categories of meaning traditionally found under *judgment*: *normality, capacity, tenacity, propriety*, and *veracity* (Hurt, 2020). Since it is the same categories of meaning, simply directed at different stance objects, the frequencies from *judgment* and *valuation* were combined for the chi-square tests and the combined frequencies are shown in Table 4.2 below. It should be noted that the *judgment* and *valuation* frequencies were also tested separately, but because it is the same types of meanings being employed, it seemed

important to examine the overall distribution of the five categories, then discuss the more specific distributions in the qualitative analysis where relevant.

In Table 4.2 is a breakdown of the between-author comparisons for all of the variables introduced above. The columns represent the four authors, the rows represent the different *attitude* variables, and the values of the cells are the normalized frequencies of the variables per 1000 words. The shaded cells indicate where that author used a significantly higher proportion of the given variable (at the level of at least $p<0.05$) than the author denoted by the superscript. For instance, AW was found to use *in/security* at a significantly different rate than both DB and DR, but **not** IB.

Table 4.2: Between-author comparisons for attitude

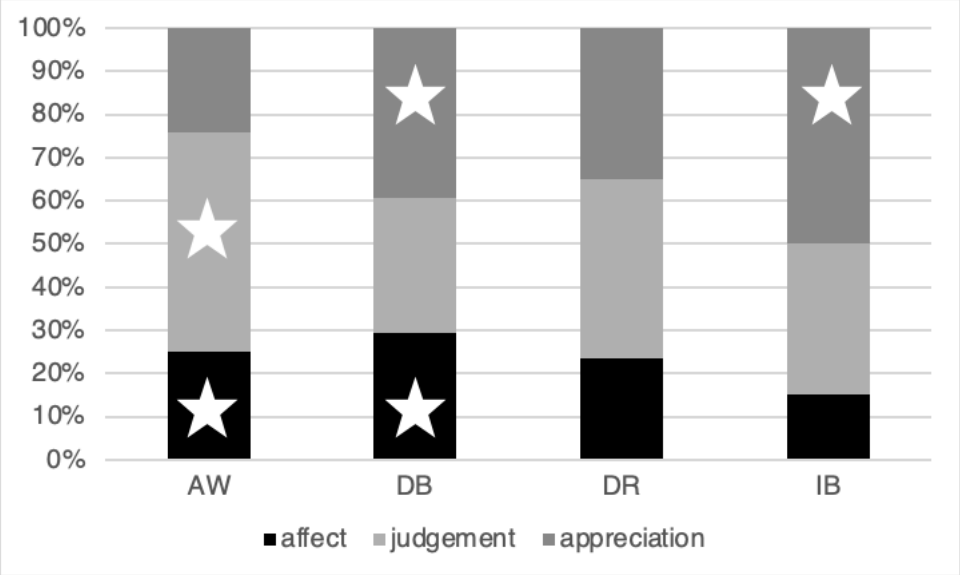
		AW	DB	DR	IB
Attitude	*affect*	39.45^{IB}	48.59^{IB}	33.56	35.64
	judgment	79.40$^{DB, IB}$	51.66	59.06	83.50
	appreciation	37.99	64.58^{AW}	50.11	118.16$^{AW, DR}$
Affect	*un/happiness*	1.95	8.00	11.19^{AW}	4.39
	dis/satisfaction	5.85	15.99	7.16	11.72
	in/security	18.51$^{DB, DR}$	7.38	5.82	8.79
	dis/inclination	13.15	17.22	9.40	10.74
Judgment (*incl. valuation*)	*normality*	9.74	17.22	22.82^{AW}	32.23
	capacity	43.35^{DB}	20.30	32.66	49.32
	tenacity	18.02	10.46	17.90	25.39
	propriety	21.43	25.22^{DR}	11.63	46.88^{DR}
	veracity	12.66	17.22	10.74	22.46
Appreciation	*reaction*	1.95	8.61	4.03	5.86
	composition	10.23	17.22	9.40	19.53
	*valuation**	25.82	38.75	36.69	92.77
Polarity	*positive*	58.94	50.43	59.06	125.49$^{AW, DB}$
	negative	87.19^{IB}	91.64^{IB}	77.85^{IB}	95.21
	negated-positive	7.31	16.61$^{DR, IB}$	4.47	9.77
	negated-negative	3.41	6.15	1.34	6.84
Explicitness	*inscribed*	126.64	131.61	108.72	210.45
	invoked	30.20^{IB}	33.21^{IB}	34.00^{IB}	26.86
Appraiser	*writer*	114.95	145.14	132.89^{IB}	175.29
	other	40.43$^{DB, DR}$	18.45^{DR}	6.71	50.29$^{DB, DR}$
	we	1.46	1.23	3.13	11.72$^{AW, DB}$
Appraised	*self*	38.97^{IB}	35.67^{IB}	40.72^{IB}	17.58
	other	116.90	127.31	99.33	211.91^{DR}
	we	0.97	1.85	2.68	7.81

Frequency per 1000 words

At the broadest level, Table 4.2 shows that there are distributional differences for all three *attitude* types. Within *affect*, it appears that AW and DB both used significantly higher proportions than IB (with DR's nearing significance; $p=0.06$); within *judgment*, AW used a significantly higher proportion than DB and IB; and within *appreciation*, IB used a significantly higher proportion than both DR and AW while DB used a significantly higher

proportion than AW. While the normalized frequencies do not appear significantly different, in examining the distributions of these resources visually in Figure 4.2, it is easier to see how different the proportions are. Stars are used to indicate the variables for which the author used a significantly higher proportion than at least one other author.

Figure 4.2: Distribution of attitude types



Percentage of total *attitude*

For AW and DR, *judgment* represents the largest portion of *attitude* tokens, whereas for DB and IB, the largest portion is represented by *appreciation*. This suggests that AW and DR more often make direct assessments of individuals whereas DR and IB more often make assessments of things, processes, and phenomena (Martin & White, 2005). Additionally, for AW, DB, and DR, *affect* represented almost one quarter of all *attitude*, but represented only 14.85% for IB. In other words, IB described his personal emotions less than the other authors, opting instead for more assessments of people and things.

There are also significant differences in the use of the four overarching variables of *polarity, explicitness, appraiser,* and *appraised.* As this shows, AW, DB, and DR all use majority *negative attitude*, while IB actually uses primarily *positive attitude*. At first glance, this might suggest an overall positive view of the world and of others. However, in actuality, many of these positive tokens are used in tandem with negative ones, as shown with the bolded and underlined examples in Table 4.3 below.

Table 4.3: Examples of IB's use of positive and negative attitude

	Example	Text
1	Particularly if stoical **acceptance** [+valuation: tenacity] of **tedious** [-reaction] **subsistence** [-valuation: capacity] is the prime criterion commonly **sought** [attributed +inclination] and **admired** [attributed +valuation: normality]	**crime**
2	I personally can testify to having had **boundless energy** [+satisfaction] for **criminal** [-valuation: propriety] pursuits	**crime**
3	Is it so perversely singular to postulate that **compassion for mankind** [+valuation: propriety] in general is **empirically** [+valuation: veracity] **inconceivable** [-composition]	**interpersonal**
4	Some **obtusely regard** [-capacity] the tendency to **compromise** [+tenacity] as a sign of **wisdom** [attributed +valuation: capacity] or **tolerance** [attributed +valuation: propriety]. I regard it as **selling out** [-valuation: tenacity]	**interpersonal**
5	Gradually I began to adopt a more **studious** [+tenacity], **professional** [+capacity] attitude towards **crime** [-valuation: propriety]	**childhood**

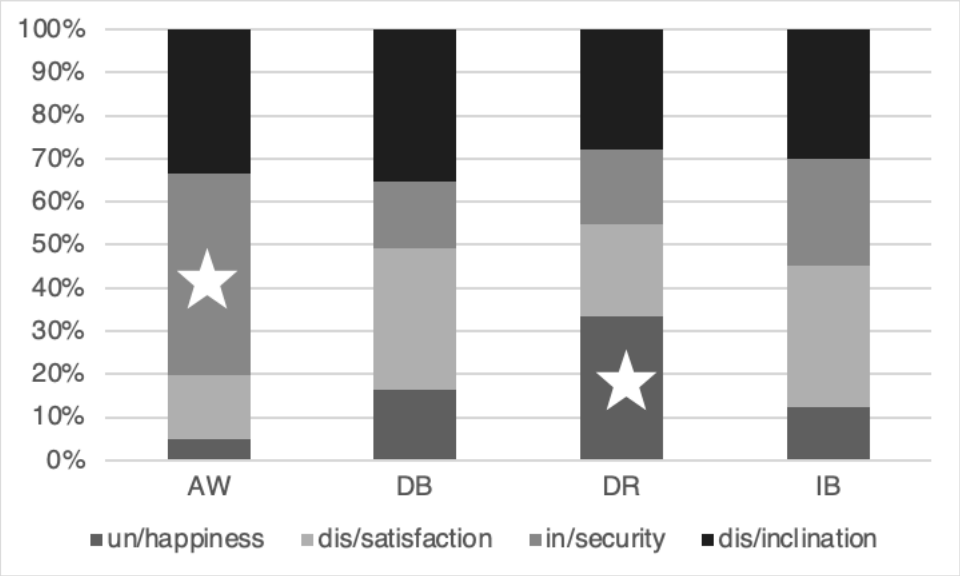
Throughout his texts, IB utilizes evaluative resources to make a point of separating himself in some way from the rest of society—not explicitly claiming superiority but implying it to an extent through the tone created by the combination of positive and negative attitudes. Sometimes this was achieved through directly or indirectly referencing evaluations made by others, for instance by citing positive views of arguably negative attributes (line 1) or conveying disagreement with implicitly (line 3) or explicitly (line 4) mentioned positive views of arguably positive attributes. Other times, it was achieved through positive evaluations relating to himself in the context of something negative, such as when he talks of his *boundless energy for criminal pursuits* in line 2 or his *studious*, *professional attitude towards crime* in line 5.

With *explicitness*, it appears that IB used the lowest proportion of *invoked* tokens, meaning that, more often than the author authors, he was using value-laden items to *inscribe* evaluations rather than implying them through contextual cues (Martin & White, 2005)—which is also evident in the examples provided above. The proportions of the *appraiser* and *appraised* categories present another interesting pattern: all the authors except DR attribute a fair number of evaluations to others and for all but IB, 20% or more of the evaluations are self-directed. This suggests that DR was less concerned with others' viewpoints than the other three authors and IB did not make direct self-evaluations as often as the others.

Affect

As Table 4.2 shows (and Figure 4.3 visually demonstrates with stars being used to mark the key variables), the major distributional differences in *affect* occur with the variables of *un/happiness* and *in/security.*

Figure 4.3: Distribution of affect categories



Percentage of total *affect*

Un/happiness encompasses emotions dealing with happiness, sadness, love, and hate while *in/security* covers emotions relating to one's environment, such as anxiety or trust (Martin & White, 2005). Higher rates of *un/happiness* may suggest more of a focus on the people and things that bring one joy or sorrow or that one likes or dislikes while higher rates of *in/security* may suggest either a kind of hyper-vigilance about one's surroundings or a more relaxed or confident nature. The question that arises, then, is whether the positive or the negative meanings dominate.

For DR, who used a significantly higher proportion of *un/happiness* than AW, the distribution was almost even between positive and negative. Most of the tokens were used in reference to interpersonal relationships, like the example in line 6 in Table 4.4 below. The negative tokens were especially intense and typically were reactions to perceived or real threats to personal or interpersonal security. For instance, in line 7 he describes his reaction when his then-future wife did not come to a gathering early in their relationship, and in line 8, how he reacted when he lost his job. The positive tokens were not as intense, and in fact the most intense *happiness* expressed was him describing being *in love* (line 6). For AW, there were only four tokens of *un/happiness*, three of which were used to tell her friend that she loved her. For DB, most of the tokens were negative, such as those seen in lines 9 and 10 describing his misery and hopelessness. Finally, for IB, about half of the tokens were

attributed broadly to someone else—such as in lines 11 and 12. The other half included emotions he claimed to share with others, like line 13, and those he claimed as his own, like in line 14.

Table 4.4: Examples of *un/happiness*

	Example	Author
6	I had little time or thoughts about the Dark Side. I was **in love** [+happiness]	DR
7	I **became physically sick** [-happiness]. I **threw up** [-happiness] outside, it **hurt so bad** [-happiness]	
8	In October, I was laid off. My **world was crushed** [-happiness]	
9	Here I was, **miserable** [-happiness], **unhappy** [-happiness], maladjusted, plagued with **death fantasies and suicidal hopes** [-happiness]	DB
10	I never felt so **hopeless** [-happiness], so powerless against those noisy forces in my neighborhood	
11	At this initial sage, some serial killers may still retain the common human tendency to **luxuriate** [+happiness] in fear-induced guilt	IB
12	Who can truly distinguish the point where **self-pity** [attributed -happiness] ends and compunction begins?	
13	The more money we stole, the more **fun** [+happiness] we had	
14	I particularly **enjoyed** [+happiness] the old-world romanticism of travelling by steam locomotive	

With *in/security*, AW, DB, and DR primarily used *-security,* while IB used mostly *+security*. The *+security* tokens took similar form across authors, primarily being used to declare confidence about knowledge or decisions, such as how AW *knew* her first victim was going to harm her or how DR had *decided* that he would kidnap his first victims from their house. The *-security* were also similar across authors, often referring to feelings of anxiety or uneasiness. However, for DB, DR, and IB, these feelings were not necessarily evoked by threats in the immediate environment, but were more general, such as DB talking about *lonliness* [sic], DR about *stage fright*, or IB saying that the honesty of a character in a book *scares* the character's peers. For AW, on the other hand, **all** of the tokens were evoked by the immediate environment or someone in it. They were expressed as behavioral surges (Martin & White, 2005), as seen with the bolded and underlined tokens in lines 15 and 19 in Table 4.5; as emotional reactions like in lines 17 and 18 (i.e., *upset, scared, uneasy*); or through implication such as mentioning *going through withdrawals* in line 16 or arriving at a man's house in the *silence in the dead of night* (line 18).

Table 4.5: Examples of *insecurity* in AW's texts

	Example	Text
15	He was going to rape me, take my money, beat me up, whatever the heck he was going to do. I **jumped out of the car** [-security] with my bag and I grabbed the gun.	**crime**
16	I was **going through withdrawals** [-security] and **slight D.T.s** [-security]	**interpersonal**
17	it made me really **too upset** [-security] to relate things coherently or competent	
18	And throughout the **silence in the dead of night** [-security] – had me pretty **scared** [-security] as I felt a bit **uneasy** [-security] now, as he opened his garage (push buttoned) then closed it back up	**childhood**
19	…looking desperately for an exit out – when I noticed a side door and…**took off running** [-security]	

The final finding that warrants discussion relates to the attributed *affect* tokens. As mentioned above, AW, DB, and IB all attribute a fair number of tokens to others whereas DR rarely does so. Within *affect*, most of the attributed tokens were *dis/inclination*, which were majority positive for AW and IB, but majority negative for DB. AW attributed wants and desires to the individuals with whom she was interacting in the experiences she recounted—importantly, these were used at the beginning of the texts, before switching to *tenacity* (to be discussed in the next section) to assess those individuals as not just 'wanting' to commit certain acts, but being **determined** to do them (typically acts that would cause her harm). For IB, the tokens were about what others (usually a vague other person or group) expected, preferred, asked for, or feared. DB's tokens actually all came from one text, and apart from two instances where he said people *asked* for something, he attributed feelings to his birth parents, saying how he had been *unwanted* as a baby or how he was an *accident* and was *never mean't* [sic] *to be born*.

Generally, attributed *affect* took two broad forms: assumptions about the internal mental states of another or descriptions of a behavioral surge indicative of an emotion. AW employed both types almost evenly; internal mental states were either about what she believed they 'wanted' [+inclination] or 'knew' [+security], as shown in lines 20 and 21 in Table 4.6; and behavioral surges included instances like those shown in lines 27-28. DB employed far more tokens ascribing internal mental states, talking about being 'unwanted' by his birth parents (line 22) or how he *couldn't please* a woman (line 23). DR ascribed very few tokens of *affect*, but when he did they were mostly internal states, such as the instance shown in line 24. Finally, IB used mostly tokens assuming internal states, such as those shown in lines 25-26.

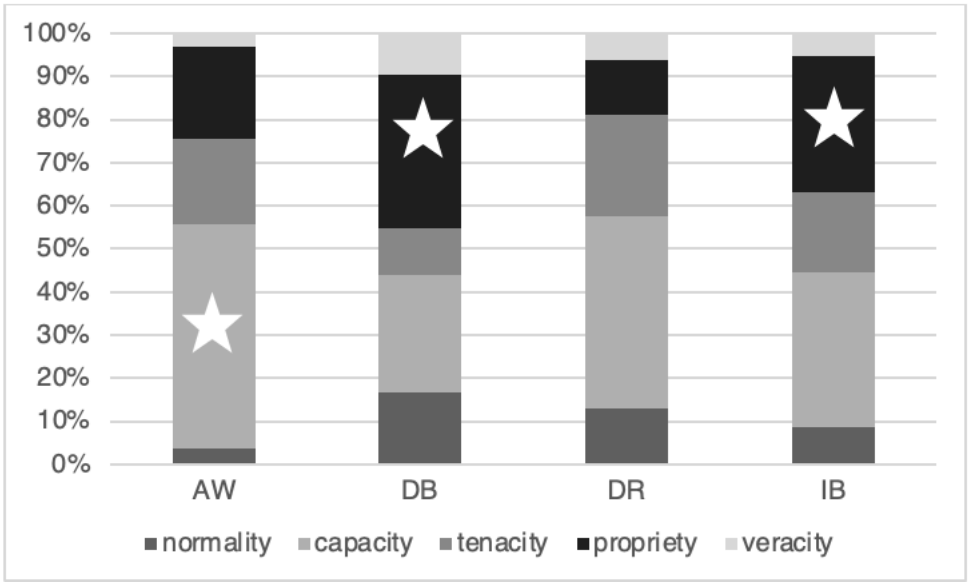
Table 4.6: Examples of attributed *affect*

	Example	Author
	Internal Mental States	
20	He was **interested** [attributed +inclination]	**AW**
21	You **knew** [attributed +security] you were going to try and rape me, man	
22	It was at this time, and never until then, that I first realized I **was an accident** [attributed -inclination], **a mistake** [attributed -inclination]	**DB**
23	I **couldn't please** [attributed negated +satisfaction] a woman	
24	I once tried to hold Paula's hands behind her back, but **she didn't like it** [attributed negated +happiness]	**DR**
25	The reader rightly **expects** [attributed +security] to share the psychic, ethical and moral perspective of the serial killer for a change	**IB**
26	At this initial stage, some serial killers may still retain the common human tendency to **luxuriate** [attributed +happiness] in **fear-induced** [attributed -inclination] **guilt** [attributed -satisfaction]	
	Observed Behavioral Surge	
27	He **begged** [attributed +inclination] for help	**AW**
28	He called me a **bitch** [attributed -satisfaction]	

Judgment

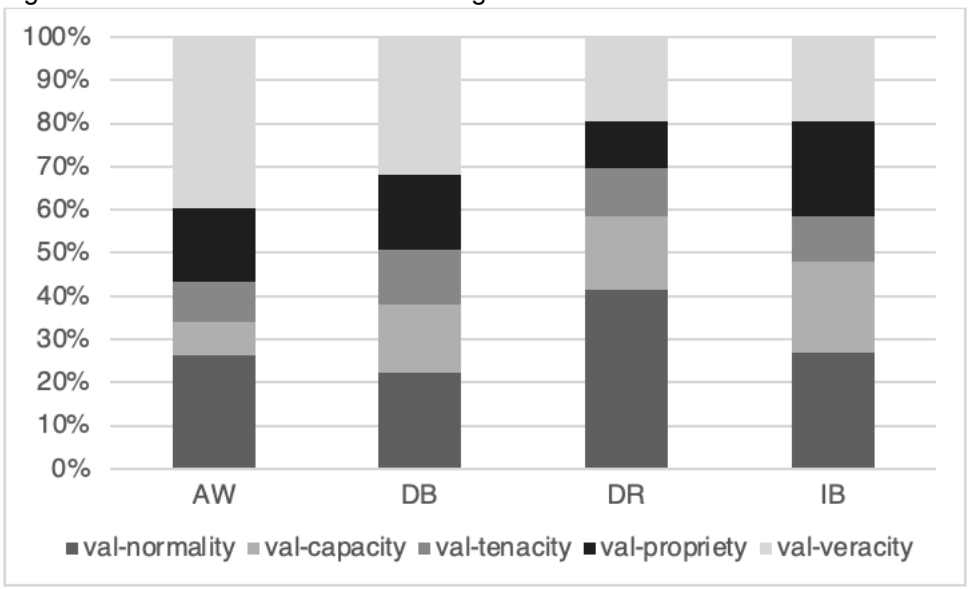
Table 4.2 shows that the major differences in the *judgment* resources (including those employed via *valuation*) are with *normality, capacity,* and *propriety.* When examined separately, no significant differences are found in *valuation,* DB is found to use a significantly higher proportion of *normality* (within *judgment*) than AW, and all but one of the significant differences hold for *judgment* (the only one that does not is the difference between DR and AW in *normality*, but it is just above significance, p=0.052). As observed in Figure 4.4, the distribution of *judgment* resources is more variable than the *valuation* resources found in Figure 4.5 below (the stars indicate key variables). Also evident in the graphs is that both *normality* and *veracity* were far more commonly employed as *valuation* than as *judgment*, whereas *capacity*, and *tenacity* and *propriety* to a lesser extent, were the opposite. That is, the authors did not often assess people for their 'specialness' or their 'honesty', but rather assessed processes and phenomena for such characteristics.

Figure 4.4: Distribution of judgment categories



Percentage of total *judgment*

Figure 4.5: Distribution of valuation categories



Percentage of total *valuation*

Within *valuation*, *normality* was used to indicate the normal/habitual nature of various activities or statements. Consider the examples shown in Table 4.7 below. For DR, in the interpersonal text, he refers to the series of steps involved in the progression of his relationship with his wife, shown in line 29. These are all, of course, *invoked* tokens of *normality*, because the 'normalness' of these behaviors is societally-based and importantly, are *valuation* because they do not necessarily encode a judgment of DR and his wife as 'normal', but focus more on the stages of the relationship. DR also used it to indicate things that were special to him, such as the charm a childhood girlfriend gave him mentioned in line 30. IB uses *normality via valuation* to refer to typical behaviors/traits/tendencies of members of society in the broadest sense, often implying a negative stance, such as the instances

shown in lines 31-32 in which he describes humans as tending to enjoy *fear-induced guilt* or innately having *criminal propensities* [-valuation: propriety]. AW often used it to indicate that something in the environment was odd, like in line 33 describing certain acts as off-limits or in line 34 when she was talking about how a guy's house was so far from the main road and how she could only see two other houses *in the errie* [-security] *dark.* Finally, DB used it to talk about routines, as seen in line 35, and the 'bizarreness' of his crimes, as seen in line 36.

Table 4.7: Examples of *normality via valuation*

	Example	Author
29	We **spent Christmas together** [+valuation: normality] in January 1971, I **proposed** [+valuation: normality]. **She accepted** [+valuation: normality] and **we went looking for rings** [+valuation: normality]	DR
30	[As an adult], I **still had a charm** [+valuation: normality] she gave me	
31	At this initial stage, some serial killers may still retain the common human **tendency** [+valuation: normality] to luxuriate in fear-induced guilt	IB
32	The degree, nature and cultivation of corruption depends almost entirely upon the **innate** [+valuation: normality] criminal propensities of the individual recipient	
33	I never allowed **exotic** [-valuation: normality] **weird** [-valuation: normality] stuff when I husseled [sic]	AW
34	Arriving, I could see two other houses sitting right beside his, in the eerie dark – off a dirt road he was on **miles from the main** [-valuation: normality]	
35	After a visit but also **almost daily** [+valuation: normality], I left around ten or eleven o'clock to begin making my rounds so to speak	DB
36	…looking at the shooting scenes were **nothing more than a distant remembrance** [-valuation: normality]… its like viewing the **actions of a stranger** [-valuation: normality]	

Veracity via *valuation* was most often used in a similar way by all four authors to indicate the truth/honesty value of a proposition or process/phenomenon. For instance, when AW criticized the things said about her in the media saying it was *totally a made up lie* and how interrogators would not listen when she told them *the real realities of the situations*; when DB says he had *always believed my adoptive parents story* about his mother dying or that he was *fully aware that I committed every crime*; or when IB refers to the *certitude of my death* or that *the serial killer is unavoidably a failure*. DR, unlike the others, more often talks of situations in which he implies he was deceitful (but importantly, not directly evaluating himself as such)—e.g., when he talks about his *hidey holes* for things that he did not want his wife to find or how he wore *a coat and ski mask* (to hide his identity) when he attempted to kidnap a woman.

Within *judgment*, the significant differences occur with *normality*, *capacity*, and *propriety*. *Normality* to assess a person directly was used most by DB (a significantly higher proportion than AW) and DR. DB directed all but one of the tokens at himself while DR directed it

inward and outward at similar rates. For both DB and DR, the inward-directed assessments were negative. DB used it to evaluate himself as *an accident* who *wasn't suppose to be born* (which also implied *-inclination* on the part of his birth parents) and as someone with *a rotten social life* who was afraid of *becoming an old bachelor or a dirty old man*. DR described himself as *awkward*, as *a wall-flower,* and as a *lone wolf* who *would eat alone, read true crime, and watch coeds come and go* (which in a different context, might be viewed differently but here, it indicates 'unusual' behavior), but talked about his dad as *social and outgoing*.

Capacity was used in a multitude of ways, including to describe violent acts, helping acts (where capacity is given to someone), and in the more traditional manner to evaluate mental and physical abilities (Martin & White, 2005). AW, DB, and DR all used more negative than positive *capacity*, but IB used them equally. AW used the highest proportion (significantly higher than DB), with DR coming in as a close second. AW's outward-directed tokens of *incapacity* were employed in tandem with *+tenacity* to talk about how determined she believed others were to harm her, like in lines 37-39 in Table 4.8 below, as well as to describe actual violent acts committed by or against her, such as in line 39 when one victim *started getting physical*. She also employed *-capacity* to describe the violent acts she committed against others, which were always depicted as being **in response to** the threat she perceived from others, as in lines 38 and 39.

Table 4.8: Examples of AW's use of *+tenacity* and *-capacity*

	Example	Text
37	He **was going to** [+tenacity] try and **rape** [-capacity] me	**crime**
38	If I **don't kill** [negated -capacity] him, **he'll try** [+tenacity] to **shoot** [-capacity] me, and then maybe **he'll go on to try** [+tenacity] and **rape** [-capacity] someone else	
39	you were **going to** [+tenacity] **blow my brains out** [-capacity]…he started **getting physical** [-capacity]. I **shot him** [-capacity] in the back seat of the car	

DR also used *-capacity* for talking about actions resulting in incapacitation, but not always of others; these were mostly about *bondage*, which he performed on himself and thought about doing to others, and a desire for *hanging victims*. He did also use it to evaluate himself and his mental capabilities, or lack thereof, saying he was a *slow learner, had problems on big words* and was *poor in English, math, and some sciences*.

DB and IB both directed more *capacity* judgments outward than inward. DB did not use *capacity* often (as evident in the significant difference between him and AW). When he did, it was in reference to his mother, who he thought was *dead* for most of his life (and that he was *responsible for [her] death*); to his own feelings of inadequacy (e.g., he felt *powerless* and like *worthless shit*); or to his violent actions (e.g., how he *had to destroy the people who*

were mentally oppressing him). For IB, the few inward-directed tokens, when negative, described someone taking away his capacity, through *captivity* and *imprisonment*. When positive, on the other hand, they suggested an inflated sense of self, such as his *present state of psychic evolution* or how he is *resistant to 'thirty years of blur and blot'*. With outward-directed tokens, the negative ones were mostly a mixture of general evaluations of others that were contrasted to positive evaluations of himself or his experience (e.g., *so-called free people will fail to experience* the freedom of thought he experienced) and attributed tokens where the attributed *appraiser* removed capacity from someone (e.g., *some fool will determine it for him* or *restrictive parents*). Positive tokens, on the other hand, typically occurred against overall negative backdrops, such as referring to *retarded* [-capacity] *authority* [+capacity] or to *so-called* [-valuation: veracity] *free people* [+capacity].

Finally, DB and IB were found to use significantly higher proportions of *propriety* than DR, which is evident in Figure 4.4 above (AW seems to be right in the middle). For all four authors, *propriety* was overwhelmingly negative (70% or higher, in fact). Some of the positive tokens were self-directed, such as AW claiming her actions were in *self-defense* or DB declaring he felt he was *JUSTIFIED* in committing his crimes. Others were evaluations of specific other persons, such as DB's adoptive parents, who he described as *understanding* and *wonderful,* or AW believing (at first) a man she met was *a good joe*. DR used *+propriety* rarely but referred to nice things he did in childhood like when he *used to walk [his girlfriend] home* and *carry her books* or in adulthood like his *volunteering* with his wife at their church.

With the negative tokens, interestingly, DB and DR directed a majority inward, while AW and IB directed a majority outward. For AW, these were used to bolster her self-defense claims, referring to her first victim as a *mean motherfucker* and saying *he deserves to die*, and saying that the man who had attacked her (as recounted in the childhood text) had been *wanted* for murder and assault. She also used it to strengthen her argument that she was mislabeled as a serial killer—attributing the assessment of impropriety to *the cops* who *labeled* her as a serial killer, but that it was inaccurate, because 'real' serial killers are *brutal* in their killings. Finally, she also described how she was mistreated by *crooked scum* and how the people who interrogated her *cut [her] off* when she tried recounting the assaults by her victims. For IB, most *propriety* tokens were outward-directed, talking generally about *repentance* and *compunction* of vague others, the *human savagery* he had witnessed while in prison, and the *avaricious shallowness* of the characters in a book. The rare instances that were self-directed for IB were used to minimize blame and responsibility for his actions, saying *to whom should I apologise*, that he was *not under the least obligation to please by deceit any individual*, and that he *never seriously set out to corrupt* anyone.

DB used *propriety* only a few times to refer to feelings of *guilt* over his actions; more often he was either using tokens to provide justifications for his actions—like in lines 40-42 in Table 4.9 below where he cites the impropriety of others as the reasons for them—or to talk about various crimes he had committed (e.g., how he *wrote graffiti and curse words* on the elevator or *broke windows*). For DR, a majority of the *-propriety* tokens referred to his own illegal or immoral actions, such as those described in lines 44-45. Interestingly, he also used *-propriety* via *valuation* a number of times to minimize his responsibility for those actions by talking about *the Dark Side* or *the first Dark Crack* that got bigger after various negative events in his life, like that described in line 43. In fact, DR contended many times after his arrest that this 'dark side'—which was distinct from his 'normal' self—took control and therefore was ultimately to blame for his crimes (Ramsland, 2016).

Table 4.9: Examples of *propriety* in DB's and DR's texts

	Example	Author
40	To say what led up to the shootings is very difficult. It was a whole host of things – everything from **inconsiderate** [-propriety] neighbors…to too many bills	DB
41	People just don't understand that I had to shed blood – blood that really **wasn't so innocent** [negated +propriety]. I'm **not sorry** [negated -propriety] I did it.	
42	By societies rules, it was **unlawful** [-valuation: propriety] but, at that stage I didn't care anymore… I mean, just let me get my **revenge** [-propriety]	
43	At college, being a lone wolf, the **crack** [-valuation: propriety] opened further	DR
44	…I think deep down, trying to **kidnap someone** [-propriety] again was not long away	
45	…I was laid off. My world was crushed. I **went to the Dark Side** [-propriety]	

In terms of attributed *judgment*, IB and AW used it the most, both employing attributed *capacity* the most. As was already discussed above, AW used a lot of *-capacity* to talk about violent actions committed against her (or that she believed would be committed against her), and this is what made up the overwhelming majority of her attributed *capacity*. IB, on the other hand, referred to both others who had **non-violently** removed his capacity (e.g., *you contain me until death*) or stood in the way of others, such as some trying to *hinder [the serial killer's] riding roughshod over such impediments* or talking about those who *rise to control society*.

Appreciation

No significant differences were found for any of the categories of *appreciation*, as evidenced in Table 4.2, meaning that similar proportions of these resources were used by all four authors. The categories of *valuation* has been discussed above and *reaction* was very rarely used (only 39 tokens in the entire dataset); however, *composition* warrants some further comment. As mentioned in chapter 3, *composition* is used to assess 'things' for how well

things “hang together” (Martin & White, 2005, p. 56) and, in forensic contexts, its ability to capture meanings about order and disorder can be extended to include references to weapons (Gales, 2010; Hurt, 2020). *+Composition* was often used to assess logicality, clarity, and coherence, such as AW saying she believed *the best thing to do was just to keep shooting* her first victim so he could not turn her in; or IB saying that *crime is a logical variant of capitalist free enterprise.*

-Composition, on the other hand, was slightly more varied in how it was used by the different authors. All of the authors **except** IB used it at least once to refer to weapons—such as a *gun* (AW) or a *mini-hit-kit* (DR)—or weapon-related items, such as *extra ammunition* (DB). It was also commonly used to refer either to damage directly, or things that presented danger/a risk of damage; for example, DR talking about how his wife *collided* with another car on the way to work on *snowy and dangerous* roads, AW talking about *wet grass* that was making her slip while she ran away, or DB talking about the *destruction* he caused. Unlike the other authors, IB only used *-composition* to talk about illogicality, incoherence, and lack of clarity—e.g., how compassion for mankind is *empirically inconceivable* or how people over time *opt for increasingly greyer decisions*.

Within-author comparisons

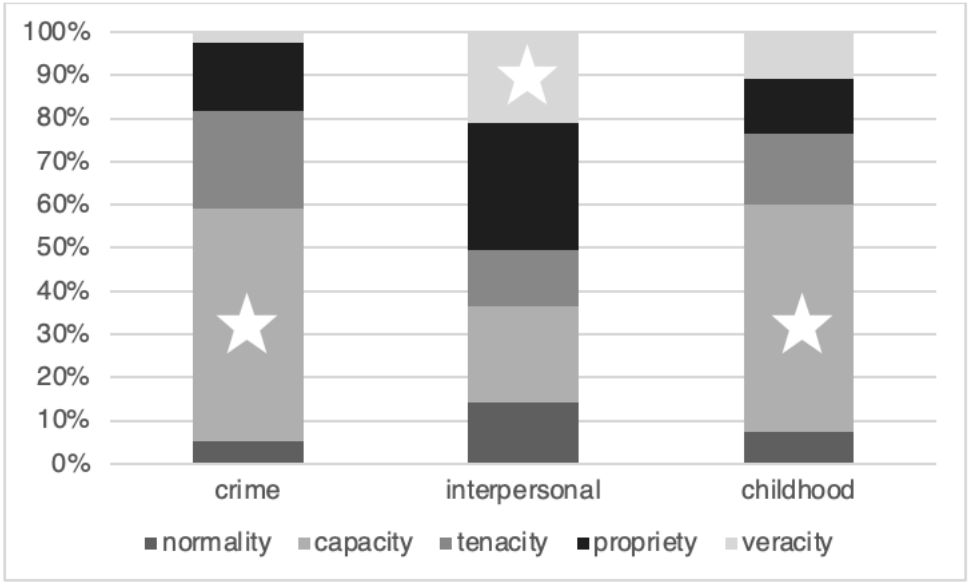
As mentioned above, within-author comparisons were conducted to determine if any of the significant between-author results might be at least partially attributable to disproportionately higher (or lower) rates of a feature in one particular text. For every author, each text was compared to the other two texts, resulting in three total comparisons per author (and 12 overall). It should also be noted that the frequencies of the variables from each text were normed per 500 words for these comparisons instead of per 1000 words like in the between-author comparisons. While using the same number would have been ideal, the word counts for almost all of the texts were too far away from 1000 (as seen in Table 4.1). Using frequencies normed per 500 words ensured that the number of key variables identified with the chi-square tests was not artificially inflated. With that said, there are a few results that warrant further comment.

Starting with AW, the within-author findings that are potentially meaningful involve the proportions of *in/security, capacity*, and *veracity*. When examined qualitatively, though, it becomes evident that the same overall message is communicated despite the differences in the resources used to communicate it. For *in/security,* the proportions in the interpersonal and childhood texts were found to be significantly higher than in the crime text (and in fact, it was the most used *affect* resource in those two texts); in the crime text, the highest

proportion was instead *dis/inclination*, over 60% of which were attributed. Qualitatively, these two categories of meaning were used to convey similar stances. A number of the *dis/inclination* tokens were used in the crime text to either report what AW believed her first victim wanted or directly 'quote' (I use scare quotes here because it is impossible to know how accurate the recalled speech is) what he said he wanted, which started out relatively innocuous. For instance, saying *he was interested* in helping her *make some money* or that *he asked me if I wanted to smoke a joint*. Then, after he *started pushing [her] down*, AW recounted a portion of dialogue in which she quoted him saying things like *I've been waiting for this all night long* and *I'm going to screw you right here and now*. These quotes were then followed by the combined *-capacity* and *+tenacity* mentioned in the *judgment* section above. In the other texts, *in/security* was used to convey directly the emotions elicited by the threat AW believed was posed by people and things in her environment. In other words, in the crime text, the threats were described directly through the combination of attributed *dis/inclination*, *-capacity*, and *+tenacity*; in the other two texts, there was a shift to focus more on the feelings elicited by the threat and less on describing it explicitly.

In terms of *capacity* and *veracity,* both the crime and childhood texts were found to contain higher proportions of *capacity* than the interpersonal text, and the interpersonal text was found to contain a higher proportion of *veracity* than the crime text. The distributions of *judgment* and *valuation* in AW's texts are shown in Figure 4.6 below, with stars being used to indicate the variables for which the proportion was higher in one text than at least one other text.

Figure 4.6: Distribution of combined valuation and judgment for AW texts



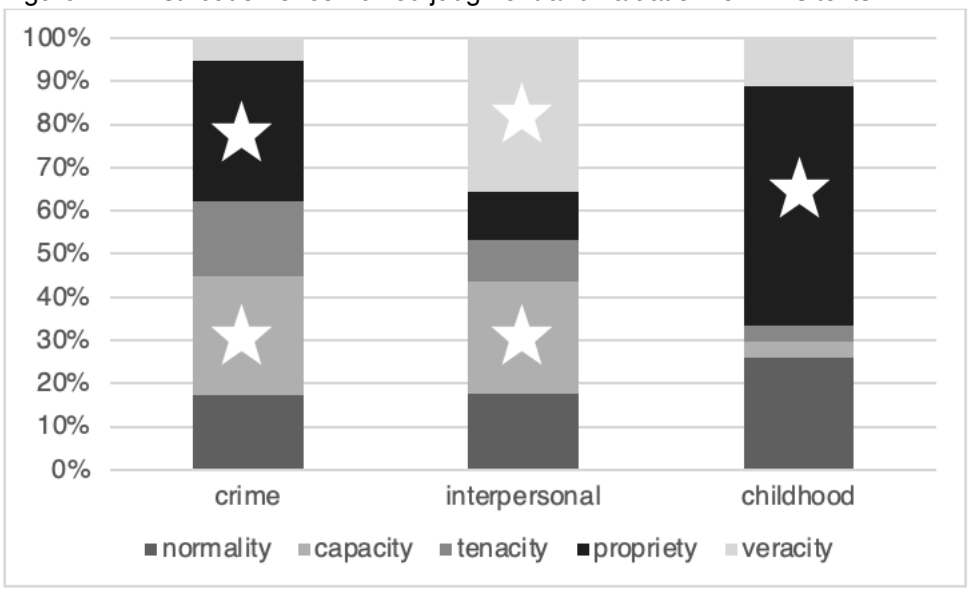
Percentage of total *judgment+valuation*

As is evident in Figure 4.6, *capacity* made up about 50% of the *judgment* and *valuation* tokens in both the crime and childhood texts, but in the interpersonal text, 50% of the tokens are represented by *propriety* and *veracity*. Qualitatively, this difference can be explained by the fact that, in the interpersonal text, AW talked less about direct acts of violence committed against her, and instead focused on the ways she had been mistreated since her arrest. The *veracity* tokens were used in the interpersonal text to indicate that the information spread about her was false—e.g., calling it *slanderous crap* that was being spread because *the public would have to believe* she was a serial killer—but that she had been truthful in telling her interrogators *the real realities of the situations* and *the true facts of Self defense*. *Propriety* tokens in this text seemed to bolster this depiction of events through positive self-judgments (e.g., saying it was *self defense* numerous times); negative judgments of others (e.g., using *valuation* for descriptions of others' actions, like *his attack, the rape,* or people asking *callous question[s]*; or using *judgment* calling people spreading information *crooked scum*); and attributions of negative self-judgments to others—e.g., saying *the cops labeled me this* [serial killer] and asking *why can't people see it was Self defense*.

Taken together, the resources used across the three texts did vary some, but the overall stances remained the same. That is, the stances that others intended her harm and mistreated her and that she was the victim whose actions were justified responses to the perceived or real threats. The differences in resources arguably reflect, then, variations in which aspect of the events AW chose to focus on to depict others as malevolent and her as the victim. For instance, in the crime text, using *inclination*, *capacity,* and *tenacity* depicted others as a serious threat to her safety and her actions as justified responses to those threats. In the interpersonal text, on the other hand, using *in/security* and *veracity* depicted others as creating a threatening environment and mistreating and misrepresenting her despite her trying to be honest and explain why her actions were justified.

For DB, the main finding concerns the use of *propriety, capacity*, and *veracity*. As Figure 4.7 shows (using stars to indicate key variables), *propriety* was used at much higher proportions in the crime and childhood texts than in the interpersonal text; *capacity* was used more in the crime and interpersonal texts than the childhood text; and *veracity* was used more in the interpersonal text than in the crime and childhood texts.

Figure 4.7: Distribution of combined judgment and valuation for DB's texts



Percentage of total *judgment+valuation*

In the crime text, *propriety* and *capacity* were both used to create a narrative in which DB was the victim of others and therefore he was justified in his actions. *Capacity* tokens conveyed a negative sense of self that was caused by feeling like a 'misfit' in society, which led to him committing his crimes. Then, *propriety* was used to frame his crimes as a form of retaliation, so while they were illegal and immoral acts, they were responses to the wrongdoings of others. In the interpersonal text, on the other hand, *capacity* and *veracity* were used together with regard to his mother and information about her. *Capacity* was used to talk about his belief that she had been *dead* (and that he was responsible) as well as to refer to his own desires to die (*death fantasies and suicidal hopes*). Then *veracity* tokens were used to indicate that the story about her death had been a lie and to refer to information he 'found out' later on (i.e., him being *unwanted* [-inclination]). Finally, *propriety* in the childhood texts referred to various criminal acts DB had committed in childhood as well as, briefly, to the murders he committed. However, interestingly, despite admission about committing these acts, he mixed in phrases to diminish the blame he put on himself. For instance, saying *I cannot explain* [negated +composition] *why I did it;* or saying *its like viewing the actions of a stranger* [-valuation: normality]; or stating *I sometimes cannot believe that I could be capable of such destruction* [negated -propriety]. Despite the differences in the resources, similar to AW, the stances that are communicated are fairly consistent across texts; he has a negative self-view but also believes that he is not completely to blame for his actions (i.e., either they are justified because others mistreated him first or he was not fully in control).

4.2.2 ENGAGEMENT

As detailed in chapter 3, the system of *engagement* comprises the resources for communicating commitment to or certainty about a proposition and for the author to align or disalign (i.e., agree or disagree) with their own propositions or with other persons or viewpoints (Martin & White, 2005). The system approaches utterances from the dialogic perspective, which emphasizes the relationship between the speaker/writer and the "background of other concrete utterances on the same theme…made up of contradictory opinions, points of view and value judgments" (Bakhtin, 1981, p. 281). It is made up of two broad types of utterances: *monoglossic* (which make no reference to other viewpoints) and *heteroglossic* (which either *expand* or *contract* the dialogic space to alternative viewpoints; Martin & White, 2005).

Monoglossic utterances, in this research, are considered to be rare, partly based on Gales' (2010) argument that when there is an expectation of disagreement with or dissent from the audience, utterances can no longer be said to contain information that is unproblematic or widely-accepted, as is an essential feature of such utterances (White, 2003, p. 263). The argument here is that the texts used in this chapter (and other chapters) were all likely produced under the assumption that the information contained within them was not "generally 'known' or 'accepted' in the… communicative context" and that the audiences did not share "the same knowledge, beliefs and values as those relied upon by the proposition" (White, 2003, p. 263). This is because all of the texts were written either to plead the case to their audience for their version of events—which is necessarily set against the backdrop of other versions of events—or to recount information otherwise unknown to the audience (i.e., information not known or accepted in that communicative context).

Instead, *heteroglossic* utterances are the most often encountered type, which as mentioned above, are divided into those that *expand* the dialogic space and those that *contract* it (Martin & White, 2005). There are two main categories of *expansions*: *entertain* and *attribute*. *Entertained* propositions present the viewpoint as one possibility of many, while *attributed* propositions present the viewpoint as belonging to someone else, either with (*distance*) or without (*acknowledge*) an indication as to the author's position on the attributed proposition. *Contractions* are divided into two broad subcategories—*disclaim* and *proclaim*—which are each divided into further categories. *Disclaimed* propositions are either *denied* (i.e., one position is invoked and then rejected) or *countered* (i.e., the authorial position supplants or replaces an expected alternative). *Proclaimed* utterances, in the original framework, can be *pronounced* (i.e., interpolation, emphasis, or intervention by the author to present the proposition as highly warrantable), *concurred* (i.e., the author presents

themselves as sharing knowledge with the audience or a proposition as being logically or sequentially connected to surrounding propositions), or *endorsed* (i.e., externally-sourced propositions that are construed as undeniable). A fourth type of *proclamation,* however, is possible, as acknowledged by O'Donnell (2019) and White (2003). *Justified* propositions present viewpoints as "justified, substantiated or otherwise argued for" (White, 2003, p. 274) through explicit markers like *because, therefore, for this reason* or other linguistic formulations that achieve the same effect implicitly.

As briefly mentioned above, frequencies for *engagement* resources are normalized per 150 instances for the between-author comparisons. The *monoglossic* and *endorse* variables were removed, though, because there were only five *monoglossic* tokens in the entire dataset and zero tokens of *endorse*. Additionally, the further categories of *attribute—distance* and *acknowledge*—were not included in the analysis separately because *distance* especially was too rare. Table 4.10 contains the results from the between-author comparisons; the columns represent the four authors, and the rows represent the *engagement* variables. The shaded cells indicate where that author used a significantly higher proportion of the given variable (at the level of at least $p<0.05$) than the author denoted by the superscript.

Table 4.10: Between-author comparisons for engagement

	AW	DB	DR	IB
contract	107.44	114.33	122.18^{IB}	89.66
expand	40.47	36.59	27.82	59.50$^{DB, DR}$
disclaim	34.88^{DR}	50.30^{DR}	18.15	38.55^{DR}
proclaim	72.56	64.02	104.03$^{DB, IB}$	51.12
deny	13.95	30.18^{DR}	2.42	18.44^{DR}
counter	20.93	20.12	15.73^{DB}	20.11
concur	13.95^{DR}	18.29^{DR}	4.84	17.60^{DR}
pronounce	48.14	37.50	91.33$^{DB, IB}$	29.33
justify	10.47	8.23	7.86	4.19
entertain	26.51	25.61	22.38	29.33
attribute	13.95	10.98	5.44	30.17^{DR}

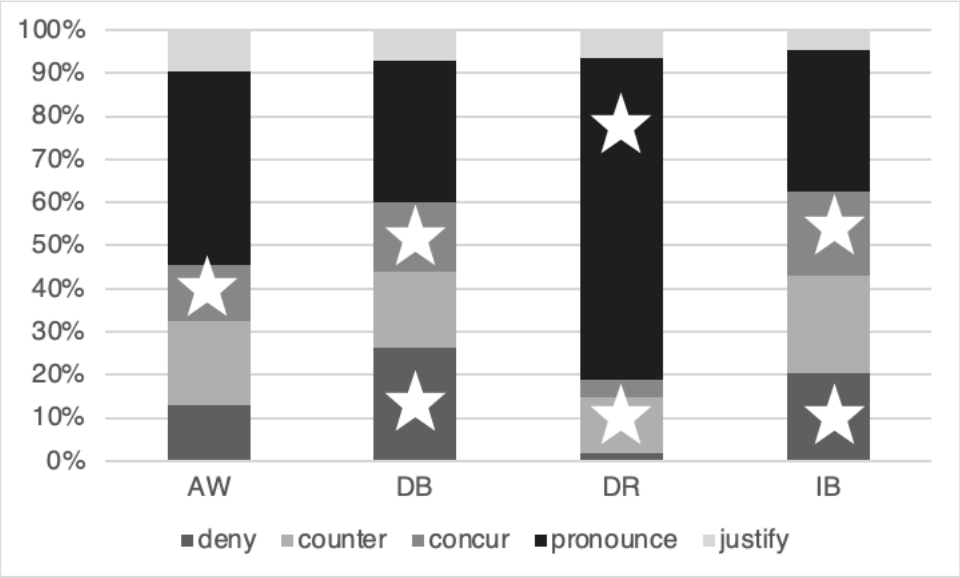
Frequency per 150 instances

At the broadest level, *contractions* are the most commonly employed resource for all four authors, though IB uses a fairly large proportion of *expansions* (the largest proportion, in fact) while DR uses a very small proportion. Additionally, the table shows that DR's usage of *engagement* resources diverges the most from the other authors (because all of the significant differences involve him) and that AW's usage of *engagement* resources diverges the least.

Contractions

Beginning with *contractions*, all of the authors used less *disclaim* (*deny* and *counter*) resources than *proclaim* (*concur, pronounce, justify*) resources as illustrated in Figure 4.8 below. The stars are used to indicate the variables for which one author used a significantly higher proportion than at least one other author. (While all five categories are shown together here, the measure of significance is based on tests comparing *disclaim* and *proclaim* types separately.)

Figure 4.8: Distribution of contraction types



Percentage of total *contractions*

Each *contraction* type encodes a different type of relationship between the aspects of experience that are described in the utterances, and as such contributes to the overarching stances that are communicated within the texts. (The exception here are *pronouncements,* which can be more standalone, contextually, because they are used to declare information about experiences without necessarily indicating any relationship to surrounding statements.) As evident in the graph above, this relationship is most often indicated using *denials, counters,* and *concurrences* (for all except DR, who primarily uses *counters*) with *justifications* being fairly rare.

Each author combines *disclaim* and *proclaim* resources in their own distinct way as a means of connecting the evaluations contained in sequences of utterances. However, what type of connection is made, and which evaluations or arguments are connected to each other, depends on the author and the overarching stances they are attempting to communicate, which are laid out in the *attitude* section above.

Beginning with AW, *pronouncements* were used to make declarations about the experiences she was recounting and how events had unfolded, and the remaining *contraction* types then typically helped further elaborate on the aspects of the experiences and information contained in the preceding utterances. In fact, all of them, to some extent, were used to bolster the self-defense/victim narrative. To illustrate, consider the examples in Table 4.11.

Table 4.11: Examples of contractions in AW's texts

	Engagement token	Text
46	*You don't have to get rough* [deny] *you know* [concur]	**crime**
47	*I knew you were going to rape me* [concur]	**crime**
48	*Real [serial killers] stalk as often as they can* [pronounce]. *And if theres a cooling off period* [expand] *its only in a matter of days* [counter]. *Not months* [deny]. *Plus there* [sic] *brutal in these deaths* [concur]	**interpersonal**
49	*The public would have to believe I was a Seriel* [sic] *Killer* [entertain]… *the thing is* [counter]. *The movie is totally a made up lie* [pronounce]. *And goes 200% against all I told them in my confessions* [concur].	**interpersonal**
50	*Struggling under the grip I tried to break free from it* [pronounce] *and hopefully open the door* [entertain]. *But as I did that's when he slapped me in the face "REAL HARD"* [counter]	**childhood**

These examples represent a pattern seen across all three of AW's texts in which she uses *disclaim* and *proclaim* resources to describe events in a way that depicts her as a victim and the information that had been disseminated about her and her experiences as false. In line 46, the *denial* indicates that the man's actions described in the preceding utterances were not only counter to her expectations, but to also imply they were beyond what she considered acceptable (and the subsequent *concurrence* suggests she believed the man at some level should have known they were unacceptable). The *counter* in the line 50 serves a similar function, indicating that the action she describes caught her by surprise. The *counter* and *denial* in line 48 are slightly different; the *counter* presents the first piece of evidence in support of her argument that she has been misclassified and the *denial* bolsters that claim by implying that her cooling off period was multiple months, which is longer than the 'matter of days' she claims 'real' serial killers cool off for. Finally, *concur* was also used in two main ways, either to indicate that the person she was interacting with shared the same knowledge as her, as in line 47, or to indicate that the information in the utterance is a logical continuation of what preceded, as in lines 48-49.

DB used few *pronouncements* (a significantly lower proportion than DR), but when he did it was to declare something, and the other *contraction* types were used to add further comment about those declarations. *Disclaim* resources were used to indicate how and when information or experiences were counter to his expectations/beliefs or how and when his

own views diverged from what he believed his audience was expecting. *Proclaimed* utterances then either conceded some point or bolstered/supported some claim that preceded them. For example:

Table 4.12: Examples of contractions in DB's texts

	Engagement token	Text
51	*I had no women in my life* [deny]. *it was just too much* [pronounce]. *I never felt so hopeless, so powerless against those noisy forces in my neighborhood* [deny]	**crime**
52	*I had to shed blood* [pronounce]—*blood that really wasn't so innocent* [deny]. *I'm not sorry I did it* [deny]	**crime**
53	*Here I was, never wanting to be born in the first place* [deny] *cursing the day I was born* [concur] *only to find out* [counter] *that I wasn't suppose* [sic] *to be born after all* [deny]	**interpersonal**
54	*Oh, I'm fully aware that I committed every single crime* [concur]. *I can, till this day, recall all the fine details, the most trivial events which occurred around about me, etc.* [concur]. *But still* [counter] *I sometimes cannot believe that I could be capable of such destruction* [deny]	**childhood**
55	*No, I cannot explain why I did it* [deny]. *I know of no motive* [deny]. *But I had a compulsion to do this and mess up the hallway* [counter]. *And this act was one of a multitude that I did throughout my life without any rhyme or reason* [concur]	**childhood**

The *disclaim* and *proclaim* resources achieved three main effects. First, the negative self-view described in the *attitude* section above is intensified; the *denials* in lines 51 and 53 emphasize that he viewed himself as **lacking** positive things instead of acknowledging the presence of negative things. The negative sentiment in line 53 is further intensified by the *concurrence* by establishing that not only did he not want to be born, but he harbored intense negative feelings about the day, as well. Second, he reinforced the portrayal of himself as having been mistreated by others—and therefore justified in his actions, which interestingly enough he did not use *justify* resources for very often. This is evident in line 52 through the *pronouncement* that he was obligated to commit the crimes, then using the *denial* to first imply that there was an alternative view that his victims were innocent and then reject that alternative. Finally, lines 54-55 demonstrate how *contraction* resources helped further minimize the amount of responsibility and blame he assigned to himself. The *concurrences* in line 54 acknowledge some responsibility, but the subsequent *counter* and *denial* pairing quickly diminishes it by suggesting that his own actions had surprised him. This sentiment is further demonstrated in line 55 when he *denies* understanding of why he committed various crimes as a child, with the *counter* further implying a lack of full control and the *concurrence* adding further evidence by saying the same 'compulsion' had driven him to commit numerous crimes.

DR used *pronouncements* at a much higher rate than the other authors (as evident in Figure 4.8) and used significantly lower proportions of *disclaim* resources than the other authors. However, an interesting pattern arose in the use of *counters* in the context surrounding certain *pronouncements* that warrants further comment. According to Martin and White (2005), *counters* often occur with *concurrences* (specifically *concessions*) and *denials*. However, DR instead frequently used *pronouncements* first, which gave the impression of a positive evaluation of events, himself, or a person, then he would *counter* those statements with something negative (sometimes also using a *denial* to present the negative). Consider the examples in Table 4.13.

Table 4.13: Examples of contractions in DR's texts

	Engagement token	Text
56	*I was about to enter Wichita State University the next week, on the GI Bill* [pronounce] *but my wife was the breadwinner* [counter]	**crime**
57	*We had a good landlord* [pronounce] *but I was frustrated* [counter] *because we couldn't change it or work on it* [justify]	**interpersonal**
58	*These were good days for us* [pronounce] *but the job at Cessna lasted only nine months* [counter]	**interpersonal**
59	*She baked cookies for me* [pronounce] *but was more of a tomboy* [counter]	**childhood**

The combination of *pronouncement* and *counter* in this way made the shift from positive to negative even more drastic than might be expected when the *counter* is preceded by a *concession* (which would arguably serve to brace the reader for the subsequent shift). These constructions demonstrate the types of connections that DR made between various aspects of his life and experience. In all of the above examples, the initial *pronouncement* is either something positive or neutral and the subsequent *counter* introduces a negative that is being presented as directly related to the positive in some way. In line 56, DR starting university implies a positive self-evaluation, but the immediate *counter* referring to his wife as the *breadwinner* suggests he does not view going back to school as being as positive an assessment of capability as he views being the main source of financial support for the family. In line 59, the initial *pronouncement* contains an arguably positive evaluation (baking cookies for someone is a nice gesture), but in following it with the *counter,* he suggests that her being a *tomboy* detracted from his overall positive view of her. Similarly, in line 57, the *counter* introduces a negative that partially diminishes the positive presented prior. Finally, in line 58, the positive evaluation of his life at that moment is immediately followed by a large leap forward in time to connect it to a negative turn of events. Taken together, this pattern demonstrates a tendency for DR to find negatives in many of the neutral or positive aspects of his life, suggesting that he was consistently dissatisfied and that many things fell short of his expectations and wants.

Finally, IB used the resources of *proclaim* and *disclaim* to align or disalign himself with the positions he either implied or explicitly claimed others held as well as the positions and possibilities he introduced in preceding utterances using the resources of *pronounce* and *entertain*. This pattern is represented in the following examples:

Table 4.14: Examples of contractions in IB's texts

	Engagement token	Text
60	*At this initial stage, some serial killers may still retain the common human tendency to luxuriate in fear-induced guilt* [entertain]. *But* [counter] *once the killer has committed the first or second act of homicide…* [entertain] *he will gradually accept his own acts as normal…* [attribute]	**crime**
61	*Any adverse criticism you may form over the contents* [attribute] *will not cause me to retract one measured word* [deny]	**interpersonal**
62	*Unlike the merely physically free individual* [counter], *no hellish circles of social graces and ersatz respect bind me to censor beliefs* [deny]	**interpersonal**
63	*I was not consciously aware of being out to gain followers* [deny] *but follow they did* [counter], *obviously predisposed to go where I led* [concur]	**childhood**

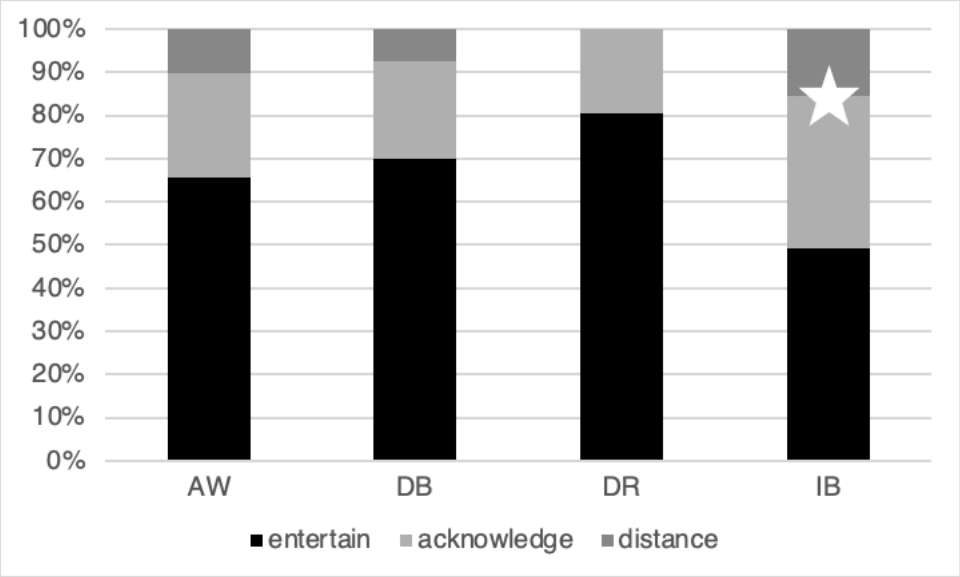
Unlike the other authors, IB used *entertainments* and *attributions* to acknowledge the positions and propositions that he subsequently *countered/denied* as well as to present the replacement propositions. For instance, in line 60, the *entertainment* serves a similar function to a *concession,* acknowledging the possibility that 'serial killers' might share in certain experiences or circumstances with others, then uses the *counter* to suggest that such a state of affairs would not be permanent, thus widening the divide between the 'serial killer' and other members of society that IB spends most of the text arguing for. In the other texts, he also argues for a divide between himself and others, as evident in lines 62 and 63. In line 62, this is done directly using the *counter* to introduce the position that he is different from the *physically free individual* and using the *denial* to indicate how he is different. In line 63, the *denial* implies an evaluation of himself as special (because no effort was apparently needed to draw people to him), which is reinforced by the *counter* and *concurrence*. Finally, in line 61, the *attribution* suggests that IB believes his readers are going to have criticisms (and negative ones at that) and the *denial* both implies his assumption that the criticisms will result in the readers requesting retractions and preemptively declares his response to such a potential request.

Expansions

Table 4.10 shows that IB used a significantly higher proportion of *expansions* overall than both DB and DR as well as a higher proportion of *attributions* than DR. As is evident in Figure 4.9, *attributions* accounted for over half of IB's *expansion* tokens, while only accounting for about 20-35% of *expansions* for the other authors, suggesting a particular

preoccupation with the beliefs of others. The star indicates that IB's proportion of *attribution* overall was significantly higher than at least one other author.

Figure 4.9: Distribution of expansion types



Percentage of total *expansions*

There are a few patterns worth commenting on for AW and DB, who did not differ significantly from any of the other authors in their usage of *expansion* resources. Starting with AW, *expansions* (and especially *attributions*) served a similar function to *contractions*, offering support for the self-defense/victim narrative. While *attributions* were rare—only accounting for 20 of the 216 total *engagement* tokens used by AW across the three texts—they helped introduced important pieces of the narrative. To illustrate, consider the following examples in Table 4.15 below.

Table 4.15: Examples of expansions in AW's texts

	Engagement token	Text
64	*then he said 'do you want to make your money now?'* [acknowledge]	**crime**
65	*he begged for help* [acknowledge]	**crime**
66	*started slashing slanderous crap all through the media* [distance]	**interpersonal**
67	*only being asked callous questions* [distance]	**interpersonal**

Line 64 occurred toward the beginning of the crime text, presenting her first victim as having started the encounter with her in a straightforward, business-like (and thus arguably nonthreatening) manner, which was in stark contrast to the increasingly aggressive actions that she began describing shortly thereafter. The contrast helped emphasize just how surprising and far from the 'norm' the man's actions were and intensified the level of threat

he was depicted as posing to AW, thus offering support to the claim that she had acted in self-defense. (The events in the childhood texts were described in a similar way, adding more support to her depiction of herself as victim and others as malevolent.) Line 65 occurred toward the end of the crime text, marking a significant moment in the narrative where AW briefly contemplated showing some amount of mercy before deciding that if she did, he was *going to tell on* her (a *pronouncement* using the '*be going to*' modal to convey a high level of certainty about the proposition; Lock, 1996). Finally, lines 66-67 were used to offer evidence of how others had misrepresented and mistreated her and therefore provide more support for the self-defense/victim narrative.

For DB, the majority of the *attribution* tokens occurred in the interpersonal text as a result of him recounting an interaction between him and the support group that led to him discovering his adoptive parents lied to him about his birth mother. A few of the tokens, though, highlighted how far he believed the dishonesty reached, such as in line 70 in Table 4.16 below:

Table 4.16: Examples of expansions in DB's texts

	Engagement token	Text
68	*To say what led up to the shootings is very difficult* [entertain]	**crime**
69	*I guess I just exploded* [entertain]	**crime**
70	*I wasn't angry* [deny] *at the Berkowitz' for telling me the "death" story* [distance]. *They sincerely mean't [sic] well* [pronounce]. *They were also told to say this* [acknowledge] *and after all* [concur] *numerous other adoptees were told similar things* [acknowledge]	**interpersonal**
71	*Perhaps you could explain this reaction that I have* [entertain] *because to me its like viewing the actions of a stranger* [justify]	**childhood**

The scare quotes around *death* mark it as something DB knew was a lie (hence why it is coded as *distance*). The *denial* at the beginning and the *pronouncement* of his adoptive parents' sincerity indicate that he placed little (if any) blame on them for the deceit. The final three tokens suggest instead that he believed some larger group or organization must be responsible because multiple other adoptees had been told the same thing. *Entertainments*, on the other hand, worked in conjunction with the *contractions* described above to help minimize the responsibility he took for his own actions primarily in the crime and childhood texts, like the examples in lines 68, 69, and 71, which suggest a lack of full awareness for why he committed the murders.

DR used the lowest proportion of *expansions* (significantly lower than IB) most of which were *entertainments* that helped introduce various plans or thoughts he had in the past, though presented as though they were happening as he wrote them. For instance, saying *I decided that I would take a victim in a house* or *I think deep down, trying to kidnap someone*

again was not long away. IB, on the other hand, used *expansions* often, both *attributions* and *entertainments,* which as mentioned above, introduced certain beliefs that could then be argued against using *disclaim* and *proclaim* resources. Since the crime text described the experiences and life of 'the serial killer', there were necessarily more *attributions* in that text than the other two, but the difference was not large enough to reach significance. Some examples of how IB used *expansion* resources are provided in Table 4.14 above, but some additional discussion is warranted here. More specifically, a number of *entertain* tokens were mitigated declarations of beliefs. Typically, this would likely indicate a lower commitment to and certainty about the propositions (Martin & White, 2005), but most of them occurred in the crime text as part of a description of a hypothetical and generalized type of person. As such, it could just as reasonably be argued that they do not necessarily indicate lower commitment, but rather suggest that IB views 'the serial killer' as multi-faceted but decided to only focus on some of those facets. In the interpersonal text, though, many of the *entertain* tokens (and some of the *attribution* tokens) were questions he posed directly to his audience about various beliefs he assumed they held. For instance:

Table 4.17: Examples of expansions in IB's texts

	Engagement token	Text
72	*Who can truly distinguish the point where self-pity ends and compunction begins?* [entertain]	**interpersonal**
73	*Is it so perversely singular to postulate that compassion for mankind in general is empirically inconceivable?* [entertain]	**interpersonal**
74	*Is such an overambitious, compensatory claim of universal benevolence* [distance] *in reality* [counter] *a clear admission that one has, in fact, no deep feelings worth speaking of?* [acknowledge]	**interpersonal**

The above examples in lines 72-74 of Table 4.17 represent some of the statements that contributed to an overarching condescending tone in IB's texts. Not only do they imply assumptions about what his readers believed, but they also imply negative evaluations of the readers for holding such views.

4.2.3 GRADUATION

The final system of Appraisal, *graduation*, is considered to apply to both *engagement* and to *attitude* (Martin & White, 2005) and "depending on the degree and type of resources used," it can be used to project "the writer's social and individual identities…as more or less authoritative and confident" (Macken-Horarik & Isaac, 2014, p. 77). The two broad categories of graduation are *force* and *focus* (Martin & White, 2005). *Focus* comprises the resources used to indicate whether the stance object is more or less representative of the prototypical qualities of a semantic category. *Sharpening* indicates higher prototypicality—

e.g., *true friend* or *real hero*—while *softening* indicates lower prototypicality—e.g., *sort of nice*. *Force* comprises the resources assessing intensity (*intensification*) or amount (*quantification*), which can be additionally coded for whether they intensify or weaken the evaluation (*scaling*) and *lexical infusion,* which helps describe whether the intensity is encoded in the evaluative item itself (*infused*) or is achieved using a separate lexical item (*isolated*). For this research, *intensification* was expanded slightly from its typical *quality-process* dichotomy to include a category for *repetition* to capture the same or similar meanings that are used multiple times across a text (or in quick succession, as Martin and White, 2005, originally proposed). With *quantification*, there are three categories—*number, mass, extent*—which are all argued to be scalable alongside the *intensification* categories. However, in this research, *scaling* was not coded for *extent* tokens because it is not clear (1) whether it is a necessary aspect of this particular category of meaning and (2) which meanings would be considered upscaled and which would be downscaled. For instance, with tokens such as *next door* and *the other side of town,* would the *upscaled* token be the one that conveys very close proximity or a large distance? Because of the lack of clarity, *extent* tokens are not included in the totals for the *scaling* variables.

Just as with *attitude*, the frequencies for each variable were normalized per 1000 words for the between-author comparisons. Table 4.18 contains the results from the between-author comparisons; the columns represent each of the four authors and the rows represent the graduation variables. The shaded cells indicate where that author used a significantly higher proportion of the given variable (at the level of at least $p<0.05$) than the author denoted by the superscript.

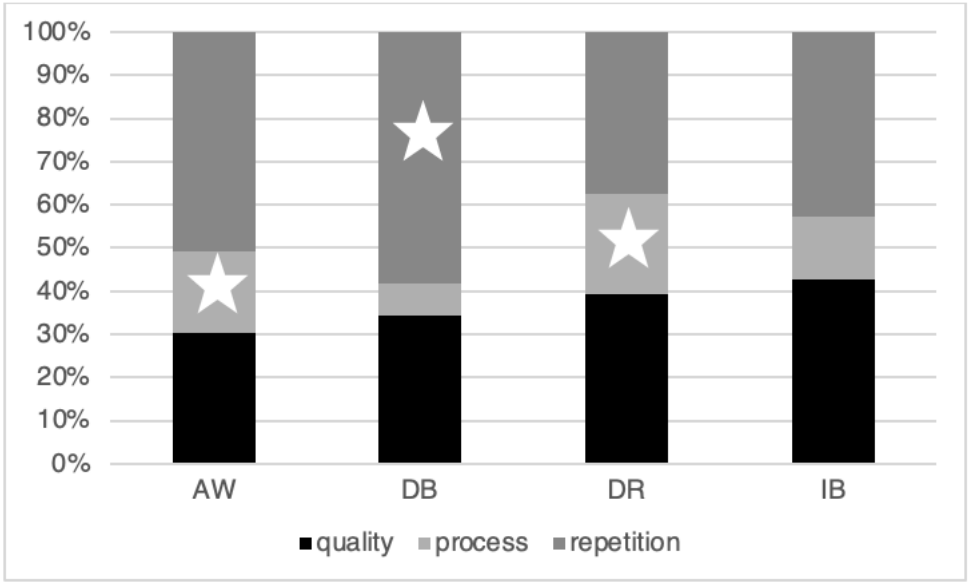
Table 4.18: Between-author comparisons for graduation

	AW	DB	DR	IB
force	164.15	168.51	143.62	207.52
focus	19.00	20.91	10.74	23.44
intensification	118.85	118.08	104.70	159.18
quantification	45.30	50.43	38.93	48.34
quality/degree	36.04	40.59	41.16	67.87
process/vigor	22.41^{DB}	8.61	24.16^{DB}	23.44
repetition	60.40	68.88^{DR}	39.37	67.87
number	19.48	26.45	15.21	17.58
mass	8.28	10.46	9.40	15.63
extent	17.54	13.53	14.32	15.14
soften	6.33	6.15	4.47	7.81
sharpen	12.66	14.76	6.26	15.63
upscale	114.47	111.93	91.28	163.09
downscale	32.15	43.05^{IB}	38.03^{IB}	29.30
isolating	59.43	62.73	46.09	54.69
infusing	104.72	105.78	97.54	152.83

Frequency per 1000 words

As the table shows, there are only significant differences for three of the *graduation* variables, indicating that AW, DB, and IB all used a high proportion of *repetition* (see Figure 4.10)*;* all except DB used a fair amount of *process* tokens; and IB rarely *downscaled* his evaluations.

Figure 4.10: Distributions of intensification categories



Percentage of total *intensification*

Of particular interest here is the usage of *repetition*, which as mentioned above was expanded beyond its original definition, based in part on the work of Gales (2010), to also include themes and attitudes that are repeated across a text. There are two reasons for this that are argued here: (1) such repetition can produce an intensifying effect just as repeated items in quick succession do (Martin & White, 2005), but over the span of an entire text; and (2) it allows for patterns in those repeated themes and attitudes to be observed more easily (e.g., gradual increase or decrease in the intensity of the theme or attitude). The exact themes that were repeated varied by author and by text, but their contributions to the overarching stances remained fairly consistent.

In AW's texts, the main repeated items revolve around violence and distress. With descriptions of violence, the exact items that were used were more variable and the intensity encoded by the items (as they were almost entirely *infused* meanings) increased more over the course of the text for when depicting actions committed **by others**. For instance, in the crime text, she describes the man as first *pushing [her] down*, then escalating to *holding [her] down*, then she declares his determination to *rape* her, *beat [her] up,* and *take [her] money*. In contrast, the only action she described committing in return repeatedly was *shooting him*. Similarly in the childhood text, the man went from having *grabbed* her to

slapping her and later in the text, she claimed to have found out the same man had *raped and killed* a young couple and was wanted in the *beating rape* of another woman. The evaluative items attributed to AW herself that were repeated (apart from her *shooting* her first victim) referred to feelings of distress, such as from going through *withdrawals,* and the *stress*, *hysteria*, and *trauma* experienced during her interrogations from being asked questions during withdrawal and having to recount traumatic events. Overall, the pattern further bolstered the portrayal of herself as victim and others as malevolent forces intent on causing her harm.

For DB, tokens of *repetition* were fairly topic-dependent. In the crime text, there was repetition of the feelings he claimed led to the shootings—such as feeling *hopeless* and *worthless* and being distressed by the *noise* in his life—as well as references to his actions in a way that minimized responsibility by implying a lack of control, saying it was like he *exploded* or like a *volcano erupting.* In the interpersonal text, repeated themes included the *death* of his mother, his belief that he was *unwanted*, and how *miserable* and *unhappy* he was. Finally, in the childhood text, his repeated references to the various crimes he committed as a teenager comprised the majority of the tokens.

DR and IB's tokens of *repetition* were slightly more consistent across multiple texts in terms of their content. For DR, references to *bondage* (and related actions/objects) were found in both the interpersonal and crime texts, as well as references to hiding things (either objects or himself). In his childhood text, though, these themes were not present, instead what was repeated was negative self-evaluations centered around his mental and social functioning, such as being *slow* and *awkward*. For IB, the repeated evaluations might be categorized as either describing **strength** or **weakness** of some kind. This includes, for example, strength or weakness of character (e.g., *compassion, corruption, hypocrisy, superiority*) and of will (e.g., *freedom, selling out, passion, passively accept*). It is a contrast that he makes throughout his texts to separate certain groups (to which he seems to imply he belongs) from the general public of which he harbors a generally negative view.

4.3 Discussion

The above sections were devoted to describing the patterns in the linguistic evaluative resources used by the four authors in this study across three different texts. The purpose of this section is to address RQ 1 by offering possible interpretations of these patterns with respect to each author's psychopathology based on the relevant underlying schemas (which were introduced in chapter 2). Once all four authors have been discussed separately, their patterns are also considered altogether and the relationship between their evaluative

patterns and shared classification as serial murderers is explored to address RQ 2a. Because of the lack of previous research connecting the psychological theories of psychopathology and violent ideation with Appraisal theory (and given the inherent complexities of human psychopathology), it should be acknowledged that the interpretations provided are not necessarily the only ones possible. However, the connections that are made between them are not completely unfounded, they are simply as yet unexplored. Thus, exploring these connections is what is attempted below.

4.3.1 AILEEN WUORNOS

Within *attitude*, AW's use of *-security*, *-capacity, +tenacity,* and *veracity via valuation* were particularly noteworthy both quantitatively and qualitatively. *-Security* conveyed emotional reactions to environmental stimuli; *-capacity* described acts of violence committed by and against her (or ones she believed would be committed against her); *+tenacity* captured her assessments of others' determination to cause her harm; and *veracity via valuation* encoded assessments of the truth value of information others spread and of information she herself provided about her life, crimes, and motives. *Engagement* resources—*attributions* and *contraction* resources, mostly—were then used to flag the actions of the men AW interacted with as far beyond the 'norm' (and helped portray her own actions as attempts to deescalate the situations), which intensified the level of threat they were depicted as posing to her. Finally, *repetition* of evaluative themes relating to violence and distress served to depict those she interacted with as increasingly (and unduly) aggressive or continuously malicious toward her and herself as experiencing high levels of distress that went unacknowledged by others.

The patterns suggest a number of possible core beliefs. Almost all others are portrayed as untrustworthy and malevolent, either intending to cause her physical harm (most evident in combinations of *-capacity* and *+tenacity*) or manipulating the facts for their own gain (most evident in use of *veracity via valuation*). She portrays herself as the victim, as having attempted to be compliant in each situation in order to avoid conflict (e.g., telling the first victim *you don't have to get rough* or trying to tell the interrogators about the assaults that preceded the murders), but the others ignored these attempts and continued on with their harmful actions. As a result, her own violent actions are framed as justified—if she did not act first, they would have only caused her more harm—and support is given to her assertions that she had been misconstrued as the aggressor.

The portrayal of others as untrustworthy and malevolent aligns with core beliefs of BPD (Arntz, 2015; Arntz et al., 1999), as does the depiction of her preemptive actions as

necessary (Bhar et al., 2008). Moreover, the heightened vigilance and tendency to perceive threat from others (as evident in expressions of *-security* and the combinations of *+tenacity* and *-capacity*) are also considered core interpretation biases in BPD (e.g., Arntz, 2015; Harari et al., 2010; Ritter et al., 2011) reflective of the traits of *emotional lability, anxiousness,* and *hostility* (APA, 2013). The level of certainty about these interpretations (most evident in the assessments of *+tenacity* and use of *contracting* resources) may also reflect the diminished differentiation associated with BPD (Semerari et al., 2015). That is, they may reflect a lowered ability to differentiate external reality from internal representations of that reality such that she perceives her "own representations not as subjective and hypothetical scenarios but as objective, unquestionable fact, concreate realities that call for direct action" (Semerari et al., 2015, p. 629).

While most of the patterns appear to reflect core beliefs found in BPD, certain other core beliefs around dependency, helplessness, and a fear of losing emotional control (e.g., Arntz et al., 1999; Butler et al., 2002) are not necessarily evident. Moreover, some of these patterns may also be indicative of underlying schemas associated with ASPD, including the belief is that if one does not act first, they will become the victim (e.g., Beck, 2015; Fournier, 2015) and a negative bias in the interpretation of others' intentions (Bateman et al., 2013; Lobbestael et al., 2013). However, given that different schemas can sometimes initially manifest in similar ways linguistically (Beck et al., 2015), it is necessary to consider the whole picture to determine if one explanation is superior to the other—or, as is argued here, if a combination of traits offers the most comprehensive account of the findings. That is, the depictions of events arguably represent an interaction between beliefs and interpretation biases associated with both PDs. The heightened vigilance and fear of betrayal by others is more likely reflective of core beliefs of BPD as overestimation of threat is not considered a feature of ASPD (Mitchell et al., 2015). However, evidence of a lack of remorse and self-preservation instinct is present in the justifications of her actions in the crime text—i.e., when she said *he begged for help*, her decision to continue shooting him was based both on a belief that he would harm her and turn her in to the authorities. This was not necessarily present in the other texts, but it is possible that is due to those texts not focusing on the details of and justifications for the murders she committed.

The possibility of manipulation and deceit—core features of ASPD and psychopathy (APA, 2013; Hare, 1996)—should be acknowledged, especially given that it was reported that she provided different accounts during different interrogations (Myers et al., 2005). However, the number of consistencies in how the events were depicted in the crime text and in the beginning of the interpersonal text (despite being produced at different times and for

different reasons and audiences) suggests that the more callous account, in which self-defense was not claimed, is more likely to contain embellishments or fabrications.

4.3.2 DAVID BERKOWITZ

For DB, the most notable patterns in *attitude* relate to use of *negative affect* (attributed and self-sourced), *propriety, capacity,* and *veracity.* He employed *-happiness* tokens to describe his own state of consistent misery and attributed tokens of *dis/inclination* and *dis/satisfaction* to reinforce negative assessments of his self-worth that were also evident in his use of self-directed *-capacity*. Evaluations of *propriety* served to depict himself as being in the wrong for crimes he committed, but the responsibility was minimized through the use of outward-directed assessments of *-propriety* and *-veracity* to depict others as having at least partially driven him to it. The diminished responsibility was then also reflective in how he employed *engagement* resources to make connections between the elements of his narratives. Use of *repetition* further reinforced the core evaluative themes of each text, helping to minimize responsibility through implication of a lack of control over his actions.

It should be acknowledged that the least amount of information was available for DB regarding his psychopathology, and as such, the interpretations that can be offered are more limited. With that said, possible explanations can still be explored. Some of the patterns, like the apparent inexplicable urge to commit crimes in childhood and adulthood are possibly in part explained by violence-related schemas, which is discussed in section 4.3.5, but these patterns along with some others also have observable relationships to psychological traits. Three traits were noted by Abrahamsen (1979) as being exhibited by DB: *attention seeking, anxiousness*, and *impulsivity.* The minimization of responsibility by claiming a lack of control over his actions may reflect aspects of *impulsivity,* which involves a lack of planning and forethought about one's actions (APA, 2013). *Attention seeking* might then help explain the negative self-view associated with his beliefs that others viewed him negatively as a lack of external validation fulfilling the need for attention can result in drastic drops in self-esteem (Beck, 2015). There was some possible evidence of *anxiousness* (fear/worry about interpersonal relationships or future events; APA, 2013) in the crime text when he explained why he *just exploded*, stating that there would never *be peace and quiet* and that he would never *have a real girlfriend and intimate companionship*.

DB's assignment of blame to vague others for ill-defined acts of impropriety and deception, his inability to fully explain his motives for his actions may, on the other hand, be indicative of information processing biases and schemas associated with *delusions* and/or *hallucinations*. Both would be distinct possibilities given the diagnosis of schizophrenia

(APA, 2013)—which, even though it was dismissed by Abrahamsen (1979), was still a conclusion reached by the other two psychiatrists who evaluated DB. As mentioned in chapter 2, delusions and hallucinations are thought to result from similar information processing biases (Beck & Rector, 2003, 2005); namely, a "preemptive self-centered focus and external locus of causation" (Beck & Rector, 2005, p. 584). In other words, both symptoms can be the result of tendencies to interpret many environmental stimuli as relating to the self in some way (e.g., believing others are talking about them) alongside a tendency to interpret forces outside of the self as being responsible for various events, including their own actions. Moreover, the objects of delusions—and their precursor of *delusional mood*—can take on a relatively vague form (Henriksen & Parnas, 2019; Freedman, 2010), in that at all stages, they may not be directed at a specific identifiable group, but rather the belief might just be that something is wrong and something external is responsible. Thus, his depiction of others as acting in way that led to his attacks or his belief that some group of individuals instructed all adoptive parents to tell the same lie about birth parents (to name a few) may well reflect paranoid ideation associated with delusions.

4.3.3 DENNIS RADER

DR most notably demonstrated high proportions of *-happiness*, *-capacity*, and multiple *valuation* categories. Tokens of *-happiness* conveyed distress experienced in response to either a real or perceived threat to his interpersonal relationships; *-capacity* was used to often in reference to actions he wanted to carry out against others as well as negative assessments of his own capabilities; and *valuation* resources helped describe the 'normal' aspects of his life (*normality*) which were contrasted with tokens of *veracity* referring to things he hid from his family and tokens of *propriety* describing a *Dark Side* that was used to indicate that he was not fully responsible for his actions. The pattern of *engagement* resources, particularly combinations of *pronouncements* and *counters,* suggest a tendency to connect positive and negative aspects of his life and experiences and view things as falling short of expectations. The use of *repetition* to continuously refer to themes of bondage, deceit, and negative self-evaluations demonstrated particular preoccupations with these topics.

The negative self-evaluations and intense negative emotional reactions to perceived rejection might be indicative of schemas associated with covert narcissism (CN). Unlike the overt narcissism (ON), CN is "characterized by hypersensitivity, vulnerability and dependence on others" (Given-Wilson et al., 2011, p. 1000). The use of *propriety via valuation* to distance himself from his actions through assigning blame to a separate, darker

part of himself, may then be reflective of the tendency of individuals with NPD to not only minimize blame and responsibility, but avoid accepting that they have done anything wrong (Behary & Davis, 2015). The connections made between positives and (usually distantly related) negatives evident in the combinations of *pronouncements* and *counters* may also reflect the core view of the self as inferior, resulting in a hypersensitivity to and preoccupation with perceived failure.

Some of these patterns may also be indicative of beliefs associated with OCD. In particular, the assignment of blame for his actions to his *Dark Side* and description of his fixation on *bondage* might indicate that these were themes of intrusive thoughts. In OCD, intrusive thoughts are assigned a high level of significance, believed to be signs of something more threatening (Rachman, 1998). The preoccupation with a 'normal' life and the intense negative reactions resulting from perceived threats to that 'normal' life suggest such normalcy could have been at least part of what DR used to neutralize the intrusive thoughts. This is further supported by DR's assertion that his 'dark side' became stronger after various mishaps in his personal life. Further, as Knapton (2018) found, individuals with OCD may place their intrusive thoughts as grammatical subject or depict them as the agent of their actions, implying a lack of control over their thoughts and behaviors. As is discussed more in section 4.3.5, there is an element of this 'dark side'/lack of control that might be attributable to act-specific violence-related schemas, but the potential contribution of his psychopathology as described above cannot be ignored.

4.3.4 IAN BRADY

Within *attitude*, IB demonstrated favor for *judgment* and *valuation* resources, for *positive* over *negative* evaluations, and for directing assessments outward rather than inward, and overall, he used a higher density of *attitude* tokens than any other author. His overwhelmingly negative view of others (using a variety of resources including *capacity* and *propriety*) was contrasted with positive self-evaluations. Moreover, many of the positive tokens were coupled with negative ones, demonstrating both negative views of typically positive attributes (his view that *compromise* and *tolerance* are signs of *selling out*) or positive views of typically negative behaviors (e.g., his *boundless energy for criminal pursuits*). The patterns of *engagement* resources further intensified the gap between him and others observable in *attitude*, by *denying* and *countering* beliefs he assumed others held and *entertaining* other possibilities (which were rife with judgment, such as the questions he posed in the interpersonal text), while also declaring his own beliefs with *proclaim* resources.

This gap was then further illustrated in his repetition of evaluations relating to strength and weakness of various traits, including character and will.

These patterns seem to primarily reflect core beliefs of NPD and ASPD—and arguably a combination of the two. It has been noted that both NPD and ASPD can result in similar views of the self and others (Beck, 2015), though at their core, there are slight differences. The positive views of illegal activities and lack of remorse are most reflective of beliefs associated with ASPD involving a disregard for the rule of law and for the impact that one's actions have on others (Mitchell et al., 2015). The judgments of others using *-propriety* and *capacity* (both to evaluate their lack of it and their removal of his capacity through imprisonment) also reflect core beliefs of ASPD around others' weakness and immorality, which serves to justify his actions, or at least minimize the blame (Beck, 2015). Additionally, his higher density of *attitude* and inappropriate combinations of positive and negative tokens is consistent with Gawda's (2013) findings that individuals with ASPD use more emotion words but use inappropriate valence.

Evidence of a more overt presentation of NPD—in contrast to DR's covert presentation—is observable in some of these patterns, as well. Namely, the depiction of himself as superior; this was not necessarily done explicitly, but through evaluating others negatively, repeating evaluations of strength and weakness to highlight the differences between him and members of the general public, and using *engagement* resources to introduce beliefs he thought others held only to criticize them. It reflects the *grandiosity* seen in ON, that can manifest as a need for control (Given-Wilson et al., 2011; Wink, 1991), arguably evident in the combinations of *expansions* and *contractions* to account for and address as many possibilities as he could. There is an argument to be made, though, that some of the fixation on others' viewpoints (especially those concerning what he thought others believed about him) was, at least in part, impacted by the self-centered focus associated with delusions and paranoid ideation (Beck & Rector, 2005). This, however, seems to, at most, play more of a contributing role than a primary one, as a majority of the evidence aligns more with NPD and ASPD schemas and beliefs.

4.3.5 Offender Classification: Serial Murderers

As demonstrated in the sections above, a number of differences were found between the four authors, which could be reasonably linked to certain psychological traits and symptoms and their associated schemas. The focus of this section, however, is on exploring any shared evaluative patterns and whether they might be evidence of schemas associated with the violent act of serial murder based on existing research of the topic.

One pattern in particular was most discernable, but interestingly was more evident in DB's, DR's, and IB's writings than in AW's: the contention that killing was the result of a strong urge. For DB and DR, this was in direct relation to their own crimes, but for IB this occurred in his description of 'the serial killer'. The types of resources used to talk about this 'urge' varies, but the overarching stance is similar. DB used modals of requirement (Lock, 1996) to say he *had to shed blood* while also using resources of *affect* and *appreciation* to further portray himself as having minimal control over his actions. For instance, when he said that he *just exploded* [-satisfaction], that *shooting someone in Queens was an obsession* [-valuation: tenacity], and that he had *sudden urges* [+inclination] *after the shootings began*. In the childhood text, he also described the crimes he had committed when as a child in a similar way, saying he *cannot explain* [negated +composition] why he did it, only that he *had a compulsion* [-valuation: capacity/+inclination]. For DR, this was observed primarily in his use of *propriety* (in *judgment* and *valuation*) to talk about his *Dark Side* [-valuation: propriety], on which he placed the blame for his actions, saying that the dark *crack* [-valuation: propriety] *widened* in response to various life stressors until he eventually *went to the Dark Side* [-propriety]. He also used tokens of *inclination* to talk about *fantasies* he had about harming others and also claimed he had attempted to keep the 'dark side' at bay, but it ultimately took control. While IB did not explicitly discuss the murders he had personally committed, he did describe *the serial killer* with a good deal of authority, suggesting that the description may have held some amount of personal truth. IB used more indirect, metaphorical language, employing tokens of *tenacity* when talking about an *obsessive* [-valuation: tenacity]*…quest for spontaneity* or *an impulse* [-valuation: tenacity] that *compels* [+valuation: tenacity] *him to openly challenge a Supreme Being.* Later, he also states that while some killers may initially experience *fear-induced guilt*, they will eventually view their acts as *normal* [+valuation: normality] *or supranormal* [+valuation: normality] and society as a *microcosmic state of his own in which he alone governs.* These statements do not contain explicit references to murder, but the context suggests that the *quest for spontaneity* and the *challenge* to the *Supreme Being* are representative of committing one's first murder.

The variation in the resources used to describe the urges are arguably, at least in part, the result of the different psychopathologies of the authors. For instance, the indirectness of IB's account contributes to the overarching condescension present in his writings reflective of core beliefs in NPD (Given-Wilson et al., 2011; Wink, 1991), while DR's account of his *dark side* reflects possible intrusive thoughts characteristic of obsessive-compulsive disorder (OCD; Rachman, 1998). However, the shared depiction of 'urges' serving as the primary

drive behind their actions may well be the result of beliefs and thinking styles considered to be core to serial murderers more generally. That is, as discussed in chapter 2, Palermo and Kocsis (2005) argued that serial murderers have a unique *cognitive map* (i.e., set of schemas), which leads them to viewing the world as hostile and getting caught in a circuitous cycle of narcissistic and self-referential thinking that is centered around finding ways to relieve their "inner tension" (p. 60). Various other researchers similarly describe a 'compulsion to kill' that is reported by numerous serial murderers (e.g., Holmes & Holmes, 2001; Schlesinger, 2000). The fact that this pattern was not evident in AW's accounts suggests that she may differ from the other authors in a fairly significant way. For her, the murders (and her other violent actions) were depicted as acts of self-defense; she did not kill because of some indescribable urge, she did so for self-preservation (i.e., to prevent them from turning her in or causing her harm). And, as discussed above, poor differentiation associated with BPD might have resulted in her perceiving her own subjective representations of reality (i.e., that there was immediate danger) as "objective, unquestionable fact, concrete realities that call for direct action" (Semerari et al., 2015, p. 629). Thus, there is evidence that suggests the act-specific schemas seemingly operating in the other authors were not necessarily operating within Wuornos; though, as is discussed more in chapter 8, she still does evince broader violence-related schemas.

The view of the world as hostile (the other aspect of the serial murderer 'cognitive map'; Palermo & Kocsis, 2005) was also evident in all four authors' writings, but in ways that were consistent with their underlying psychopathologies. For instance, in AW's writings, this was in the depiction of her environment and those she came into contact with as threatening, causing her harm, or intending her harm; all consistent with core beliefs of BPD (e.g., Arntz, 2015; Arntz et al., 1999; Bhar et al., 2008). In IB's writings, it was evident in how he *countered* and *denied* others' beliefs and negatively evaluated them to portray them as immoral, deceitful, and judgmental, which aligns with beliefs in ASPD that one can exploit or harm others because those others are exploitative themselves (Beck, 2015; Mitchell et al., 2015). For DR, it was evident in the pairing of positive events with equally negative ones (usually *pronounce* + *counter*), something that resembles the intense reactions to rejection or difficulty seen in the covert type of NPD (Given-Wilson et al., 2011; Wink, 1991). Finally, DB assigned some responsibility for his crimes to others by portraying them as having mistreated or wronged him in some way (e.g., people were *mentally oppressing* him, and he *couldn't please a woman* which meant women were *insatiable*). The deflection of blame is potentially indicative of schemas associated with a number of disorders but is consistent with

externalizing biases seen in delusions in which outside explanations are sought and preferred for events and actions (Beck & Rector, 2005).

Other core beliefs associated with serial murder might exist that reflect differences in motives that are often the basis for distinctions of categories in various typologies (e.g., Dietz, 1986; Holmes & Holmes, 2001). However, identifying the individuals' motives is a near-impossible task when the data is collected remotely, and some studies have shown that motive-based distinctions are not necessarily reliable (e.g., Canter & Wentink, 2004; Salfati & Bateman, 2005). Moreover, it has been posited that the motives of serial and mass murderers overlap even if their methods differ (Fox & Levin, 1998), meaning they might not be a reliable feature for distinguishing offender types. As such, they are not explored here.

4.4 SUMMARY

To summarize the findings of this chapter first with respect to research question 1 and 2a:

- The linguistic evaluative choices exhibited by AW conveyed an overarching negative stance toward almost all others, citing feelings *insecurity* elicited by the violent acts they committed, or she believed they intended to commit against her (via *-capacity* and *+tenacity*), as well as multiple forms of mistreatment (via *-propriety* and *-veracity via valuation*). This depiction of the world as hostile aligns with schemas and beliefs underlying BPD (e.g., Bhar et al., 2008), but is also a pattern observed in serial murderers (Palermo & Kocsis, 2005). However, unlike the other authors, AW did not depict her violent actions as being the result of a strong urge or compulsion, nor as the result of a fantasy. Rather, they were portrayed as the only appropriate defense against the harm she believed she would incur from her victims.
- DB's evaluative choices conveyed a negative stance toward himself as well as others. While he took some responsibility for his actions, he also minimized it by depicting others as malevolent, untrustworthy, and deceitful and citing these traits as reasons for 'exploding'. The patterns aligned somewhat with information processing biases associated with psychotic symptoms: a self-centered locus of control, leading to interpreting outside events as relating to the self (e.g., thinking people are talking about them), and an externalizing bias in which responsibility for events, even one's own actions, is attributed to outside forces (e.g. Beck & Rector, 2005). DB's depiction of the world as hostile and his actions as partly being driven by a strong 'urge' and partly by fantasy (an *obsession,* as he called it) also align with cognitive schemas associated with serial murderers more broadly (Palermo & Kocsis, 2005; Schlesinger, 2000).

- DR's evaluative choices conveyed both a negative stance toward himself and the world more generally. He cited various shortcomings and demonstrated a hypersensitivity to perceived interpersonal stresses, which align with schemas and beliefs associated with the covert presentation of NPD (e.g., Given-Wilson, 2011). He also consistently described the presence of a *dark side*, which he attempted to keep at bay by maintaining a 'normal' life, but which 'took over' after a series of life stressors. The assignment of importance and control to the *dark side* resembles the underlying schemas associated with intrusive thoughts in OCD, and the desire for 'normalcy' aligns with the idea of compulsive behaviors (designed to keep the obsessive thoughts at bay; Taylor, 2002). The use of *pronouncement* plus *counter* combinations to depict positive events as often being accompanied by or tied to negative ones served to paint the world as hostile; the repeated explicit references to 'bondage' as a 'fantasy' of his; and the depiction of his *dark side* as compelling him to act also align with the schemas associated with serial murderers (Palermo & Kocsis, 2005; Schlesinger, 2000).
- IB's evaluative choices conveyed a positive stance toward the self and a negative one toward society. He spent most of his texts making comparisons between himself and members of society at large, expressing his belief that many of their actions showed them to be immoral, hypocritical, deceitful, and incapable. He used *expansions* to acknowledge a range of possible alternative viewpoints and *contractions* to reject them or present a more warrantable view (usually his own). These patterns aligned well with research on the core beliefs of both NPD and ASPD (e.g., Beck, 2015; Mitchell et al., 2015). Moreover, like DR and DB, IB depicted the world as hostile and, albeit indirectly, acknowledged the role of fantasy and compulsion in the acts of 'the serial killer', which all align with beliefs and schemas associated with serial murderers (Palermo & Kocsis, 2005; Schlesinger, 2000).

The patterns identified in this chapter begin to show a relationship between linguistic evaluative patterns and the schemas associated with both the authors' psychopathologies and their shared classification as serial murderers (apart from AW, who diverged from the other three in terms of showing evidence of the act-specific violence-related schemas). The next two chapters explore the evaluative patterns of two more types of violent offenders to enable a more comprehensive discussion of research question 2a and have datasets compiled using slightly different criteria to be able to address research question 1 from more angles.

CHAPTER 5 A LONGITUDINAL CASE STUDY OF TED KACZYNSKI

In May of 1978, a package was left in a parking lot on the University of Illinois at Chicago campus with the return address of a Northwestern University professor. Upon it being returned to him, the professor claimed he had not sent the package and reported it to security. When the security guard opened the package, it exploded, injuring his hand (Fitzgerald, 2004). Over the next 17 years, 15 more bombs would be planted by the *Unabomber*—a moniker created from the associations of early victims, i.e., 'universities and airlines'—causing a total of three deaths, 23 injuries, and sowing widespread panic across the United States (Federal Bureau of Investigation [FBI], n.d.). For much of that 17-year period, there were few leads and little progress in the investigation due to a paucity of forensic evidence. Beginning in 1993, however, the bomber began sending letters to various recipients expounding his ideologies and in 1995, he mailed a 35,000-word manifesto to the *Washington Post* and *New York Times*, demanding it be published (Fitzgerald, 2004). A man named David Kaczynski later saw the manifesto and reported to investigators that he suspected his brother, Ted, might be the author. David and his mother both later provided the FBI with letters Ted had sent them throughout the years to compare linguistically to the Unabomber writings. The analysis revealed a striking number of similarities, which proved to be a crucial piece of evidence in securing the search warrant that, when executed, ended in the arrest of the Unabomber, Ted Kaczynski.

Kaczynski represents a type of offender in between those examined in the chapters preceding and following this one (Fox & Levin, 1998); a serial murderer by definition because of the three kills in separate incidents (Morton & Hilts, 2005), but resembling a type of mass murderer that "employ[s] techniques that will allow them to escape before the deaths they cause actually occur" (Holmes & Holmes, 2001, p. 77). The approach in this study, however, differs from that of the other two studies in that only one author's writings are analyzed. This was primarily based on the vast collection of writings available for Kaczynski, which allowed for a more detailed analysis of his evaluative language patterns *over time*. The collection was compiled by his defense team during his trial to aid the psychiatrist who evaluated his competency to stand trial and issued the subsequent report in which diagnoses of the paranoid type of schizophrenia and paranoid personality disorder (PPD) were noted (Johnson, 1998). The documents used here are different copies of the same collection of writings (see chapter 3). It consists of around 3,600 pages of documents with those authored by Kaczynski himself—mostly journal entries and letters written to

family, friends, and various strangers—accounting for an overwhelming majority that spans almost four decades.

As mentioned above, the goal of this study is to address the first research question (RQ1) from a different perspective, examining changes in evaluative language use over time and how they might relate to changes in his mental health. Therefore, the design considers three main stages of Kaczynski's mental health history based on a timeline proposed in the psychiatric competency report (Johnson, 1998) and a general understanding of the progression of both schizophrenia (e.g., APA, 2013; Freedman, 2010) and PPD. In the coming sections, a more detailed account of Kaczynski's background and mental health history is provided (section 5.1) followed by a description of the data used in this study (section 5.2), the results of the analysis (section 5.3), an exploration of how the results might relate to the underlying schemas associated with his diagnoses (RQ 1) and his classification as a serial bomber (RQ 2a) in section 5.4, and finally a summary of the main findings of the chapter (section 5.5). First, however, a few prefatory comments about the analysis are warranted. The approach that was taken was designed to address the question of how Kaczynski's evaluative language may have changed across three different stages of his illness. Texts written during each stage were selected based on criteria that are outlined in section 5.2 and the entire dataset spanned nearly three decades. The analysis did not reveal many significant quantitative differences (i.e., *key variables*), suggesting changes in his mental state did not have a significant impact on the distribution of evaluative resources he used over time. However, there were trends in the distributions that, while nonsignificant, are worth discussing alongside a few patterns that emerged in the qualitative analysis of *how* resources were employed. Thus, though the statistical results are reported and discussed in sections 5.3 and 5.4, the primary focus is on these trends and patterns.

5.1 BACKGROUND OF TED KACZYNSKI

Ted Kaczynski was born in 1942 in Chicago and started university at the age of 16, received his graduate and doctoral degrees in mathematics by the age of 25, and was subsequently hired by the University of California-Berkeley ("Unabomber (Ted Kaczynski)", 2018). He abruptly resigned from this position only two years later in 1969 and in 1971, he moved to an isolated cabin in the Montana woods. It is during his graduate studies, around 1966, that Johnson (1998) believes the onset of schizophrenia symptoms occurred. She noted that while the severity of his symptoms fluctuated over time, he did not appear to ever experience full remission and exacerbations of symptom severity had been preceded by "depressed mood, insomnia, increased distractibility, and intensification of sexual identity

problems" (Johnson, 1998, p. 45). Johnson reported various symptoms with which Kaczynski presented, including impaired social and occupational functioning—which was evidenced by his lack of close friendships and romantic relationships as well as abrupt resignation in 1969 and later decision to isolate himself in his cabin. The predominant symptom, though, was the presence of delusions centered around two main themes: (1) being controlled by technology and (2) psychological verbal abuse by his parents was the reason for his interpersonal dysfunction.

As explained in chapter 2, delusions are a psychotic symptom defined as fixed false beliefs which are not amenable to change even in the face of contrary evidence (APA, 2013), but importantly they do not typically reach this stage immediately (Fineberg et al., 2015; Freedman, 2010). They often take time to fully solidify in the individual's mind and, even after they have, can still be elaborated upon and refined, and an individual's investment in them can vary over time. Also, as was required for its diagnosis (APA, 2013), Johnson (1998) reported there was evidence of PPD traits predating the onset of schizophrenia symptoms and further noted that Kaczynski demonstrated avoidant and antisocial personality traits, though these did not meet the threshold for the diagnosis of those personality disorders.

The aforementioned psychopathological traits and symptoms could arguably be realized with myriad different combinations of evaluative resources. Moreover, the cycle of exacerbations and partial remissions of symptoms described by Johnson (1998) mean that the most severe symptoms at any given point in time would vary (and perhaps that sometimes the schemas associated with those symptoms might become dominant over those associated with his pathological personality traits; Beck, 2015), potentially further impacting Kaczynski's evaluative choices. Therefore, the data selection criteria that are discussed in the following section were devised to try to maximize the amount of symptom information known for the time at which the texts were written so as to gain the most possible insight into the relationship between particular symptoms/traits and evaluative choices.

5.2 DATA

As was done in the previous chapter, the primary selection criterion for texts was that they needed to be *first-person accounts* (i.e., any texts discussing personal beliefs or experiences and not those that detailed logistical information or the like as those are unlikely to carry much evaluative language). Beyond that, additional criteria were needed to further narrow down the options from the plethora of available texts and minimize the arbitrariness. Since a

longitudinal approach is taken here, the first criterion related to the broad time periods from which texts should be chosen. Based on the information in Johnson's (1998) report about the onset of schizophrenia symptoms, three time periods were established. Broad periods were chosen over more specific ones because of the lack of detailed information about Kaczynski's mental health over time as he never really sought treatment and thus had few or no prior records to use. The first time period consists of the years before the likely onset of the symptoms of schizophrenia (i.e., pre-1966) but after evidence of PPD appeared (Johnson, 1998). The second time period consists of the years just after the schizophrenia symptoms began, but before Kaczynski completely isolated himself, which marked a severe exacerbation of symptoms and social and occupational impairment (i.e., between 1966 and 1969). Finally, the third time period consists of the few years just before his first bombing until his arrest (i.e., around 1975 to 1996).

The second criterion concerned topic, audience, and mode of communication. Unlike the previous chapter, it was possible to control for the latter two variables, but it was not feasible to control for topic given the considerable changes in Kaczynski's circumstances between time periods. Therefore, audience, mode, and total word count were focused on. For audience and mode, only letters to immediate family were available in all three time periods, so those are the types of texts that comprise the dataset. The final criterion related to the number of texts chosen and the total word count for each time period. Only two or three letters were chosen from each, and the total word counts needed to be at least somewhat balanced. The final dataset compiled based on these criteria consists of eight texts: three from the first time period, two from the second, and three from the third. A breakdown of the dataset can be found in Table 5.1 below.

Table 5.1: Breakdown of texts

	Date	Audience	Word Count
Time period 1 (TP1)	January 1961	Parents	546
	April 1962	Parents	479
	March 1963	Parents	727
			1752
Time period 2 (TP2)	February 1967	Parents	1102
	August 1968	Parents	964
			2066
Time period 3 (TP3)	March 1975	Parents	850
	January 1982	David (brother)	536
	November 1990	Mother	769
			2155

5.2.1 TIME PERIOD 1

To increase the chances of getting a clearer picture of Kaczynski's worldview before the initial impact of schizophrenia (i.e., the worldview impacted primarily by PPD), the latest of the texts from the first time period was written about three years prior to the proposed onset of symptoms. The *January 1961* letter was written during exam time and discussed two main topics: his stress over the exams and his frustration about and disapproval of draft job application letters his parents wrote for him. The *April 1962* letter was written presumably just before his graduation (he mentioned not wanting a graduation present) but it focuses mostly on his views toward U.S. actions in Vietnam at the time. Finally, the *March 1963* letter was written during the first year of his graduate studies at the University of Michigan but centered around what he thought about the shortcomings of his brother's school.

5.2.2 TIME PERIOD 2

The second time period was intended to capture the time just after the onset of schizophrenia symptoms but before they, and their impact on social and occupational functioning, had progressed to the point of him resigning from his job and isolating himself. The choices of letters that were not solely logistical from this time period tended to be either very long (around 3,000 or more words) or very short (less than 300 words), so a decision was made to take excerpts from longer ones. The excerpts start at the beginnings of the letters and end at a point where the topic changed. The *February 1967* excerpt contained Kaczynski's views on communism, the draft for the Vietnam War, and the activists who opposed it. The boundary was drawn at the point when he changed the topic and began explaining a math problem to his mother. The *August 1968* letter consisted of anecdotes about multiple 'adventures' he had gone on in the months prior and the excerpt used here contained the first adventure story only.

5.2.3 TIME PERIOD 3

Unlike the first two time periods which only spanned two or three years, the final time period spanned 15 years, which was due primarily to the relative stability of the cycle of his symptoms after onset. Johnson (1998) speculated based on the information she had that Kaczynski likely experienced symptoms continuously with periodic exacerbations (i.e., active phases) that were preceded by prodromal periods (i.e., phases of mild forms of symptoms; APA, 2013). Knowing this made it possible to determine, to some extent, whether he may have been experiencing exacerbated symptoms at any given time. However, it is unclear if this would have impacted his evaluative choices because even in an attenuated form, the

content of the delusional beliefs would have remained even if his investment in them waned slightly (APA, 2013; Freedman, 2010). The only other major event that might have indicated as significant a shift in his psychopathology as the actual onset of schizophrenia symptoms was his first bombing, when he actually committed a real-world violent act. His lack of treatment, though, makes it near impossible to know exactly how big of a shift this actually was. Thus, it was decided that there should be at least one letter from before the bombing and at least one from after to determine if there is any linguistic evidence suggesting a change.

The *March 1975* letter was written about three years before his first bombing (which was 1978; Fitzgerald, 2004) and was an excerpt from a longer letter giving updates to his parents about his activities. This letter contained a number of stories, so the beginning paragraph was used along with the third story because, unlike the first two, it was a decent length and contained interpersonal interactions. The *January 1982* letter was written to his brother, David, and contained a series of complaints Kaczynski had about David's apparent 'self-deception'. The final letter, from *November 1990*, was written to his mother, explaining why he and David had stopped talking to each other (which were similar to the complaints in the 1982 letter).

5.3 ANALYSIS

As mentioned in chapter 3, chi-square tests were used to determine the *key variables*—those which were used significantly more in one text or time period over another (Baker, 2006) with the conventional significance threshold of $p<0.05$—which then guided the qualitative analysis. (Other statistical tests were considered for this chapter because of its longitudinal nature, the thought being that another test might provide a better account of change over time, but it was decided that testing for keyness was still the most informative approach.) The focus of the quantitative analysis is on between-time period comparisons, but within-time period analyses were also conducted to aid in the qualitative analysis by helping identify fluctuations in evaluative resource patterns in the shorter intervals between individual texts that could reflect subtle changes in symptom severity that might not have been known given Kaczynski did not receive treatment before his arrest (Johnson, 1998). Just as with chapter 4, because chi-square tests become too complex and difficult to interpret with multiple factors and levels (Grant et al., 2017), only two time periods or texts were compared at a time. For the between-time period analyses, this resulted in three comparisons (TP1 x TP2; TP1 x TP3; TP2 x TP3). There were 28 within-time period comparisons, which as mentioned above are not discussed specifically, but the distributions

across the eight individual texts are examined alongside the broader time period distributions when relevant.

The raw frequencies of all the Appraisal variables were collected, but because the word counts for the time periods varied, the frequencies were normalized, and those values were used for the quantitative analysis. *Attitude* and *graduation* were normalized per 1000 words for the between-time period comparisons as this represents the highest (neat) common denominator; *engagement* frequencies were normalized per 100 instances for between-time period comparisons. The results of the quantitative analyses were then used to help guide the subsequent qualitative analysis, the results of which for each of the three systems of Appraisal are presented in turn before exploring the relationship between them and Kaczynski's psychopathology (RQ 1) and classification as a serial bomber (RQ 2) in section 5.4.

5.3.1 ATTITUDE

As was outlined in chapter 3, Appraisal provides the means to analyze in great detail the patterns of linguistic resources authors use to express their *stances* (Martin & White, 2005). The system of *attitude* encompasses the resources used to convey the core feelings of those stances and is divided into three types—*affect, judgment,* and *appreciation. Affect* is considered to be at the core, covering **personal** emotions while *judgment* and *appreciation* **institutionalized** feelings, i.e., ones that have been shaped by society. *Judgment* concerns feelings of praise/condemnation or admiration/criticism directed at the behaviors of oneself and others and *appreciation* concerns feelings directed at 'things' and their value (Martin & White, 2005, p. 45). Each *attitude* type can then be further divided into categories that help better distinguish between the kinds of evaluations being made. There are additional variables that can be coded for every *attitude* type: *polarity, explicitness, appraiser,* and *appraised*.

Polarity distinguishes between positive and negative evaluations (Martin & White, 2005) and was expanded for this chapter and the subsequent chapters to include negated versions of both. *Explicitness* differentiates between attitudes that are conveyed directly through the word or phrase used (*inscribed*)—such as with *happy* or *successful*—and those that are implied and thus require shared knowledge or context to interpret (*invoked*), such as metaphors. In other words, *inscribed* tokens rely on a word's **denotation**, or its dictionary definition, and *invoked* tokens rely on **connotation**, or the positive or negative value it has been assigned by society. Coding for the *appraiser* makes it possible to not only see how the authors themselves view the world, but also their perception of how others view it and

coding for the *appraised* makes it possible to track the distribution of inward and outward directed evaluations. For the purposes of this analysis, both of these variables were expanded beyond the 'self-other' dichotomy to include a third option of *we* to capture instances where the author grouped themselves with others to either suggest a shared belief about something (as the *appraiser*) or a shared trait or behavior (as the *appraised*).

As discussed in chapter 3, the category of *valuation* within *appreciation* can be usefully subdivided into the five categories of meaning traditionally found under *judgment*: *normality, capacity, tenacity, propriety*, and *veracity* (Hurt, 2020). Since it is the same categories of meaning, simply directed at different stance objects, the frequencies from *judgment* and *valuation* were combined for the chi-square tests and the combined frequencies are shown in Table 5.2 below. It should be noted that the *judgment* and *valuation* frequencies were also tested separately, but because it is the same types of meanings being employed, it seemed important to examine the overall distribution of the five categories, then discuss the more specific distributions in the qualitative analysis where relevant.

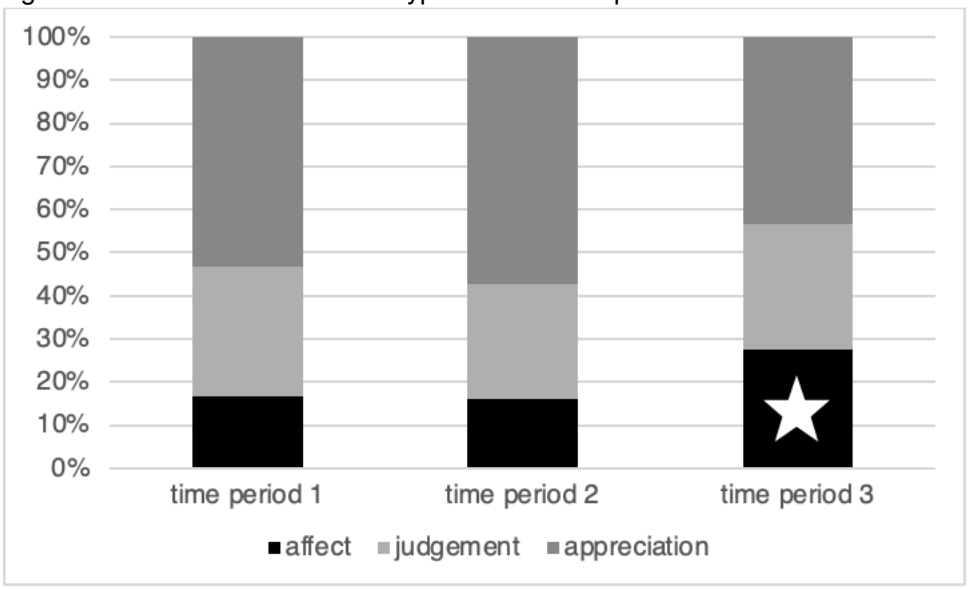
Table 5.2: Between-time period comparisons for attitude

		Time period 1	Time period 2	Time period 3
Attitude	*affect*	25.11	21.30	38.52[1,2]
	judgment	45.09	34.85	40.84
	appreciation	80.48	75.51	60.79
Affect	*un/happiness*	2.85	0.00	3.71
	dis/satisfaction	4.00	7.26	8.82
	in/security	4.57	4.36	12.99
	dis/inclination	13.70	9.68	12.99
Judgment (*incl. valuation*)	*normality*	13.70	12.10	8.35
	capacity	53.65[3]	38.72	21.81
	tenacity	8.56	9.20	10.21
	propriety	18.26	18.39	13.46
	veracity	10.84	4.84	21.81[1,2]
Appreciation	*reaction*	2.85	8.23	7.89[1]
	composition	17.69	18.88	18.10
	valuation	59.93	48.40	34.80
Polarity	*positive*	70.21	59.05	70.07
	negative	66.78	58.08	53.36
	negated-positive	9.70	11.13	10.67
	negated-negative	4.00	3.39	6.03
Explicitness	*inscribed*	119.86	111.81	127.15
	invoked	30.82[3]	19.85	12.99
Appraiser	*writer*	126.71	102.13	107.19
	other	23.97	28.56	32.02
Appraised	*self*	9.13	10.65	12.99
	other	141.55	121.01	127.15

Frequency per 1000 words

The results of the between-time period comparisons for overall *attitude* are in Table 5.2 above. The columns represent the three time periods, and the rows represent the *attitude* variables; cell values represent the normalized frequencies per 1000 words of each variable in the given time period. The shaded cells indicate where Kaczynski used a significantly higher proportion of the given variable (at the level of at least $p<0.05$) in that time period than the time period denoted by the superscript. As the table shows, there are few differences in the distributions of Appraisal resources over time, but those that are evident are between TP3 and at least one of the other two. The visual representation of the distributions can be found in Figure 5.1 below, demonstrating that TP1 and TP2 contained fairly similar proportions of *attitude* types while TP3 contained a slightly higher proportion of *affect* (which was significant, as indicated by the star), a slightly lower proportion of *appreciation,* and a similar proportion of *judgment.*

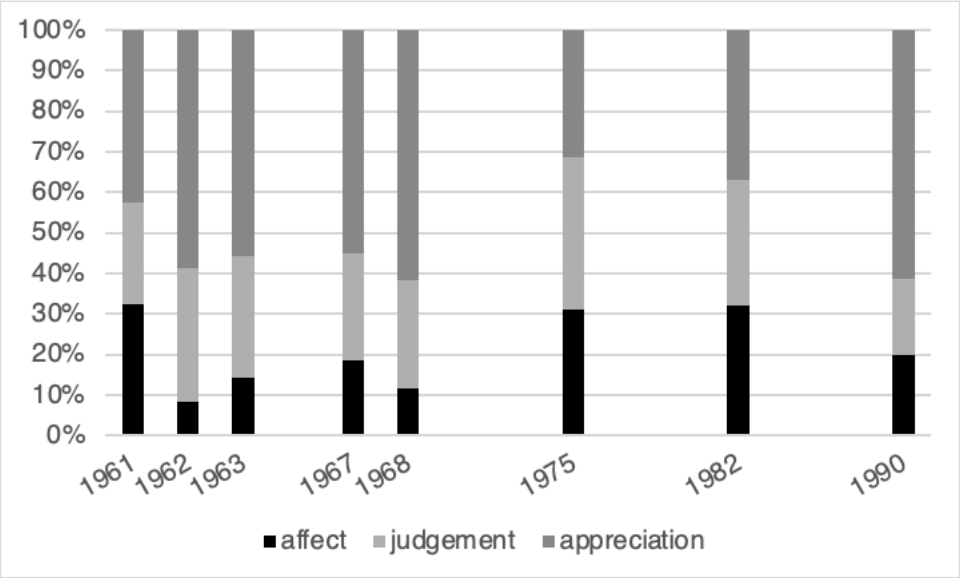
Figure 5.1: Distribution of attitude types across time periods



Percentage of total *attitude*

Across the individual texts, a similar pattern is observed (see Figure 5.2), though there appears to be slightly more variation than between time periods. What is evident in both graphs is that the proportions of *affect* and *appreciation* are what change the most, while the proportion of *judgment* remains more stable. Since *valuation* was the most used *appreciation* category, the distributions in Figure 5.2 suggest that in the first two time periods and in the *1990* text, Kaczynski directed evaluations mostly at broader (and possibly vaguer) entities, phenomena, and processes instead of assigning characteristics directly to individuals or groups. Moreover, it appears that communicating emotions directly (i.e., where agency for the emotion is assigned to himself or someone else) was rarer in these texts.

Figure 5.2: Distribution of attitude types across texts



Percentage of total *attitude*

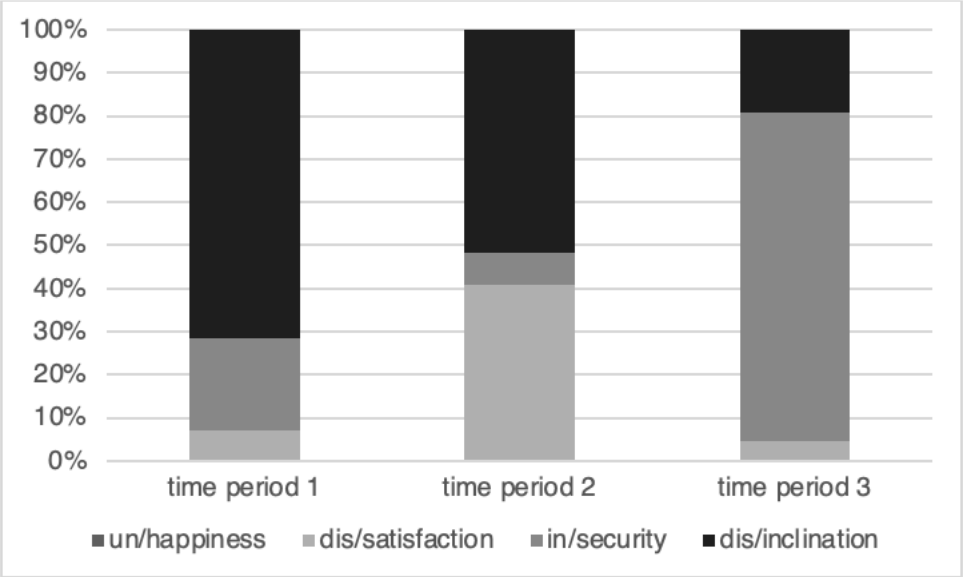
As the distributions across time periods and texts were somewhat stable, the qualitative analyses of the various categories are more likely to provide insight into any changes in linguistic evaluative choices. As such, they are focused on more in the coming subsections than the quantitative analyses.

Affect

As evident in Table 5.2, there were no significant differences in any *affect* type between time periods. Some of the differences in the proportion of overall *affect* that can be observed in Figure 5.2 were found to be significant between texts, but no such significant differences were found between *affect* subcategories. A discussion of the qualitative findings is warranted, though.

What was readily apparent was the amount of attributed *affect*, which accounted for at least 25% of the total *affect* tokens in each time period. The proportions varied more by text, but broadly speaking, there tended to be more attributed *affect* when the text consisted mostly of Kaczynski views about other people's or group's actions and less when the focus was on an event in which he was personally involved. As Figure 5.3 below shows, in TP1, the majority of attributed *affect* tokens were *dis/inclination*; in TP2, they were split more evenly between mostly *dis/inclination* and *dis/satisfaction*; and in TP3, the overwhelming majority were *in/security* (and no instances of attributed *un/happiness* were found in any of the time periods).

Figure 5.3: Distribution of attributed affect across time periods



Percentage of total *attributed affect*

Within these attributed tokens, a distinction can be made between tokens denoting an inferred internal state (e.g., lines 75-78 in Table 5.3 below) versus a token denoting an external, observable "surge of emotion" (e.g., lines 79-80; Martin & White, 2005, p. 47).

Table 5.3: Examples of attributed affect

	Example	Text
	'Internal' Tokens	
75	If they are **interested** [attributed +inclination] they would send an application right away	**1961**
76	I think any eminent professor of math or science **would agree** [attributed +satisfaction] with me on this point here.	**1963**
77	The student "activists" are rebelling because they **want** [attributed +inclination] to follow the flaming torch of left-liberalism	**1967**
78	You could readily be excused for submitting such a story diffidently and **with grave doubts** [attributed -security]… but that **wasn't the frame of mind** [negated attributed -security] in which you submitted it	**1982**
	'External' Tokens	
79	…many people are **clamouring** [attributed -satisfaction] that boxing should be outlawed	**1962**
80	The student "activists" are **rebelling** [attributed -satisfaction]	**1967**

The 'internal' tokens represent Kaczynski's inferences about the emotional states of others—something that cannot truly be known to him as an outsider unless the person told him. Conversely, the 'external' tokens represent his own personal observations and descriptions of others' behaviors. Internal tokens outnumbered external ones overall but in the earlier texts, mitigating language was used more often around the internal tokens than in the later texts. For instance, in lines 75 and 76, TK introduces the attributed tokens with *if*

and *I think* as if acknowledging them as mere possibilities. Conversely, in lines 77 and 78, they are presented as the only warrantable possibilities by being declared as such (line 77) and by rejecting alternatives (line 78). Therefore, not only was he inferring the internal states of another, but over time, he appeared to become more confident in those inferences.

Across the three time periods, tokens of attributed *affect* were consistently paired with other value-laden items that implied Kaczynski's own stances about the person(s) to whom the emotions were attributed. Consider the examples in Table 5.4 below.

Table 5.4: Examples of TK combining attributed affect with judgment

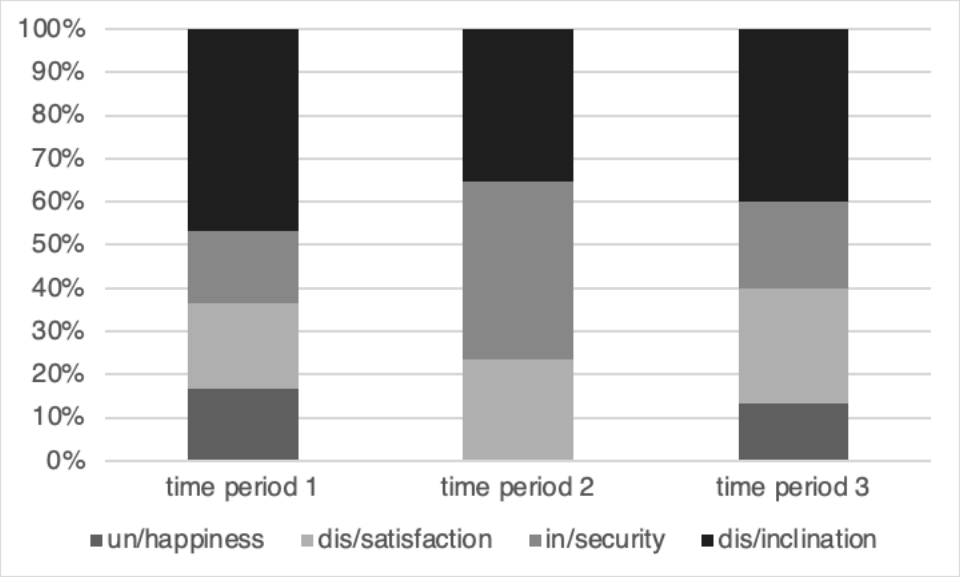
	Example	Text
81	The student **"**activists**"** [-valuation: veracity]… **want** [attributed +inclination] to stand up for [+propriety] the Right vs. the Wrong, because they **want** [attributed +inclination] reform [+composition] the world…	**1967**
82	…but mainly because they **want** [attributed +inclination] to be able to have liquor, women, and marijuana in their dormitory rooms [-propriety]	
83	…because they **want** [attributed +inclination] to…**do away with** [attributed -satisfaction] old-fashioned tradition-bound things like hard studying [+valuation: tenacity]	
84	I don't understand women – they seem so inconsistent [-tenacity]. I **don't think they quite know** [attributed negated +security] what they are doing themselves	**1975**
85	Also at about that age you **insisted** [attributed +security] that your injured hand was stronger than the other… In adulthood you admitted that this was self-deception [-valuation: veracity]	**1982**

In lines 81-83, Kaczynski talks about the wants of *student "activists*". The scare quotes around *activist* convey TK's disagreement with the accuracy of that term as a descriptor for the group. The positive judgments that follow in line 81 are canceled out by the series of negative ones immediately after, like the assessment of impropriety in line 82 or assessment of laziness implied in line 83. A similar pattern is observed with tokens of *in/security*, mostly within the *1975* and *1982* texts. For example, in line 85, when TK states that his brother's insistence about his injured hand is one example of his *habitual self-deception* [-valuation: veracity], or in line 84 where he calls women *inconsistent*, adding *I don't think they quite know what they are doing themselves* after one gave him her number but then later ignored his calls. Taken together, this pattern suggests a fairly cynical and harsh view of others, using attributed emotions to depict others as wanting or believing things that imply that they are lazy, immoral, deceitful, and unreliable.

Kaczynski's own *affect* was less varied over the three time periods, as shown in Figure 5.4. TP1 and TP3 are the most similar; TP2 contained similar proportions of *dis/inclination* and *dis/satisfaction* but contained no instances of *un/happiness* and a higher proportion of *in/security*. The higher *in/security*, however, was due to mostly to instances in the *1968* text

when he was in a dangerous situation during an exploration of the cliffs and rocks at the beach he visited.

Figure 5.4: Distribution of TK's affect across time periods



Percentage of total author-sourced *affect*

Dis/inclination served primarily to convey Kaczynski's personal desires and intentions as well as to introduce his beliefs (though this is more relevant in the *engagement* section). When expressing his personal wants, Kaczynski tended to pair the *dis/inclination* tokens with some kind of negative. For instance, using negation—as in *I don't want any graduation present*—or another negative evaluative item—such as saying that he was *constantly nagged* [-satisfaction] *by a desire* [+inclination] *for women* or that he was *going to* [+inclination] *say some things* that he thought David would *find highly unpleasant* [-reaction]. He even later called the desire to find a partner *hedonism* [-tenacity], adding that *succumbing* [-capacity/-tenacity] to it was a *great defeat* [-valuation: capacity]. This pattern suggests a negative view of experiences that might generally be considered positive (such as receiving graduation presents or finding a romantic partner) and that expressing his views was justified, even when he seems to have understood that they would be taken negatively by others.

When introducing his beliefs with *dis/inclination* tokens (which occurred only in the earlier texts), they mitigated the evaluations that followed, serving almost as politeness markers (e.g., *I am inclined* [+inclination] *to doubt the competence* [-capacity] *of H.S. teachers to teach these subjects*). These occurred alongside instances of *in/security* to mark Kaczynski's (un)certainty about various propositions. Over time, these helped convey more confidence in his assertions, using statements like *I am convinced* [+security] *that exams*

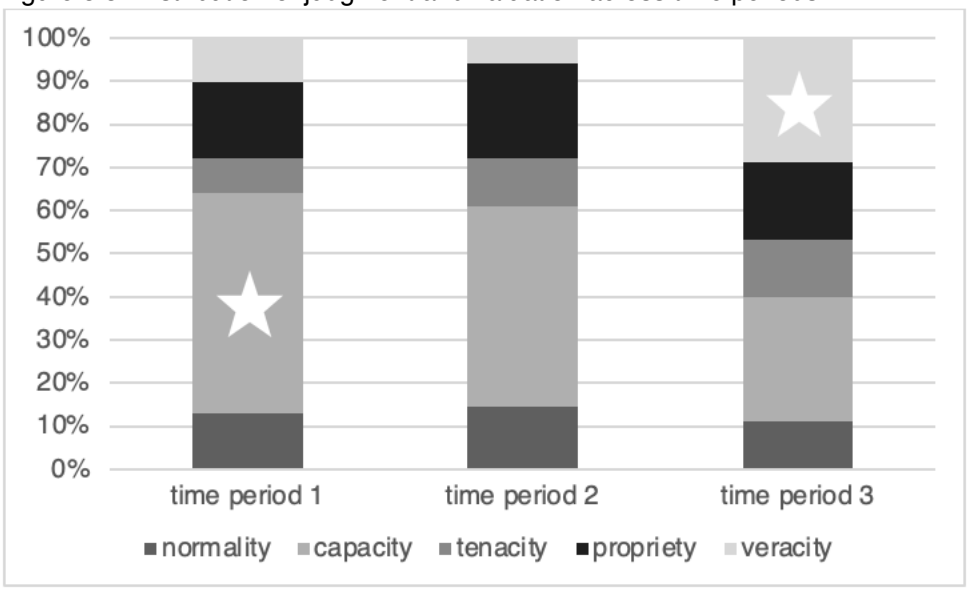
cheat me of my due or *I am just speculating* [-security] in earlier texts, but using phrases like *I trust* [+security] *you know better* in later texts.

Dis/satisfaction was used by Kaczynski at fairly similar rates in all three time periods, though it should be noted more *affect* was used overall in TP3 meaning that the raw frequency of tokens was higher in that time period than the others. The earlier instances were directed at various elements of his life—such as deciding to *quit playing basketball* or being *tired of this studying*—or to express (dis)agreement with others' views or actions (e.g., *I have two objections to this kind of thing* and *I don't agree with their argument*). In TP3, the emotions became more intense and were directed primarily at things others did that Kaczynski viewed negatively. For example, saying he found his brother *irritating*, or that he considered it *difficult to refrain from pointing out the holes in [David's] rationalizations*, or implying dissatisfaction with his mother by saying *look, stupid, how many times must I tell you not to send me magazines*. The higher number of tokens in the later texts is at least partially the result of the topic (he was writing about things his brother did that he viewed negatively). However, it is worth noting that the intensity of the tokens increased over time from expressing *objections* or points of disagreement, to expressing irritation and anger at the actions of others.

Judgment

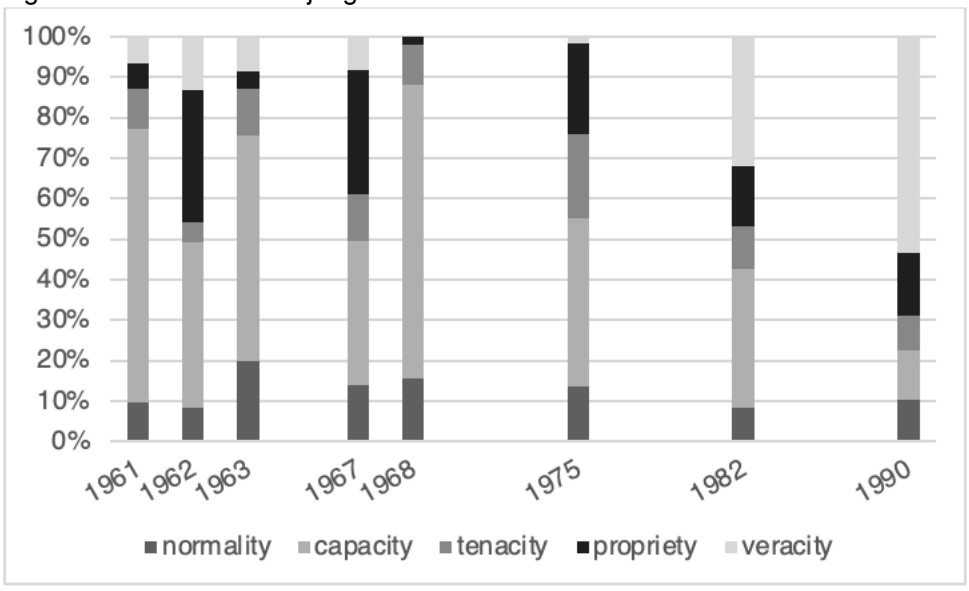
As indicated in Table 5.2, the only significant differences within *judgment* categories occurred with *capacity* and *veracity* (the difference in *capacity* held for *judgment* alone and the difference in *veracity* held for both *judgment* and *valuation*). Figure 5.5 shows that the distributions of *normality, tenacity*, and *propriety* were fairly stable across time periods and that the proportions of *capacity* and *veracity* were stable in the first two time periods, but *veracity* increased in TP3 while *capacity* decreased. It becomes apparent in Figure 5.6, however, that there was more variation across the individual texts and that some of the *judgment* categories were more common in some texts than others. Stars are used in Figure 5.5 to indicate the variables for which the proportion was significantly higher in that time period than at least one other.

Figure 5.5: Distribution of judgment and valuation across time periods



Percentage of total *judgment+valuation*

Figure 5.6: Distribution of judgment and valuation across texts



Percentage of total *judgment+valuation*

It appears that the main fluctuations occur with *capacity, propriety,* and *veracity*. It is perhaps unsurprising that *propriety* would be more common in the *1962* and *1967* texts as they contained Kaczynski's views on the Vietnam war and the military draft (e.g., referring to *Communism* and *tyranny* and the *unfair* nature of the draft). The only slightly lower proportions in the TP3 texts, however, are more interesting as they involve his personal relationships and interpersonal interactions. Some of these TP3 *propriety* tokens were self-directed, such as him admitting that he *insulted* and *harrassed* [sic] his brother or saying he was *not motivated by antagonism.* There were also a few instances of him attributing

negative evaluations of himself to his brother, saying that David saw TK as *threatening his ego*. Of the outward-directed TP3 *propriety* tokens, most were positive, but much like with *affect* resources, the positivity was sometimes offset by the negative backdrop. For instance, describing his brother as *kind and generous* before saying he had *certain other traits that I find irritating* [-satisfaction] or telling David that the belief that he was *going to change the lives of many students* was an *illusion* [-valuation: veracity]. In the *1975* text, the woman that he had met was described as *friendly* and *cordial*, but when she did not answer his calls, he called her *discourteous*. He also says that he *no longer seem[s] to resent attractive women for attracting* him, which with the *dis/inclination* patterns described above further suggests a negative view of seemingly positive things.

Capacity resources represented the highest proportion of *judgment* in all three time periods and the highest proportion of *valuation* in TP1 and TP2, but not TP3 where *veracity* was instead dominant (mostly due to the last two texts). Within *judgment,* tokens of *capacity* encoded assessments of physical and mental abilities, which were made with directed evaluations, like in lines 89 and 92 in Table 5.5 below, or through the use of comparative adjectives, like in lines 86, 87, and 92 (which imply a positive evaluation of one person and a negative evaluation of the other).

Table 5.5: Examples of capacity via judgment and valuation

	Example	Text
86	…he seems to **have considerable difficulty** [-capacity] with the last assignment. Also he **asked me a question** [-capacity] before the hour exam which showed I **understood** [+capacity] partial differentiation **better than he** [-capacity]	1961
87	So why did **he do so much better** [+capacity] on the hour exam **than I** [-capacity] did? It proved [+valuation: veracity] that this system of examinations is unfair [-valuation: propriety]	
88	…this boxer was **killed** [-capacity] in a fight, and many people are clamouring that boxing should be **outlawed** [-valuation: capacity]	1962
89	I am inclined to **doubt the competence** [-capacity] of H.S. teachers to teach these subjects properly	1963
90	I think it is significant that here at Michigan there has been a great deal of complaint about rules that **restrict** [-valuation: capacity] the student' sex activities	1967
91	…but the cliffs were **too high and steep** [-valuation: capacity] to climb down	1968
92	Obviously, you are **incapable** [-capacity] of the slightest self-control	1975
93	I **can** [+capacity] live on straight venison, being **smarter** [+capacity] **than** [-capacity] the local game warden	1975

In instances of self-directed *-capacity*, there was usually additional context that implied the failure was not in his control. For instance, in line 86, he talks about a classmate who seemed to not understand the material but in line 87, he admits that classmate tested better than him, which he claims is because the system is *unfair* rather than acknowledging it could

have been a failure on his part. Incapacitation-type meanings were also common, but instead of attributing violent removal of capacity by a person (as in the first part of line 88), *valuation* was more often used to depict actions (not ascribed to any particular person or group) or obstacles which limited what an individual was allowed to do. For instance, the 'outlawing' of boxing in line 88, or the *rules* and *cliffs* mentioned in lines 90 and 91, respectively.

Resources of *capacity* also worked in conjunction with resources of *tenacity* to convey an overall negative view of others—not necessarily through negation or a directly negative evaluation, but usually through use of positive items against a broader negative backdrop. For example, when he expressed his belief that a Communist society was made up of people who *are completely dedicated* [+tenacity] *to the whole.* There is no negation of the 'dedication' and as such, it is still a positive token, but within the broader context, it is clear that he viewed this dedication as being at the cost of individuality, saying they *have no desires* [negated +inclination] *of their own*. Kaczynski achieved a similar result in other ways, such as by placing it after countering language—e.g., *instead of facing the problem* [+tenacity]—or within a hypothetical, like saying to his brother *you could readily be excused for submitting such a story diffidently* [-tenacity]. In some cases, he also combined *tenacity* with other types of negative *judgment*, intensifying the negative evaluation, such as when he said to his parents their *insane* [-normality], *mindless* [-capacity] *persistence* [+tenacity] in sending magazines he did not want was *irritating* [-satisfaction].

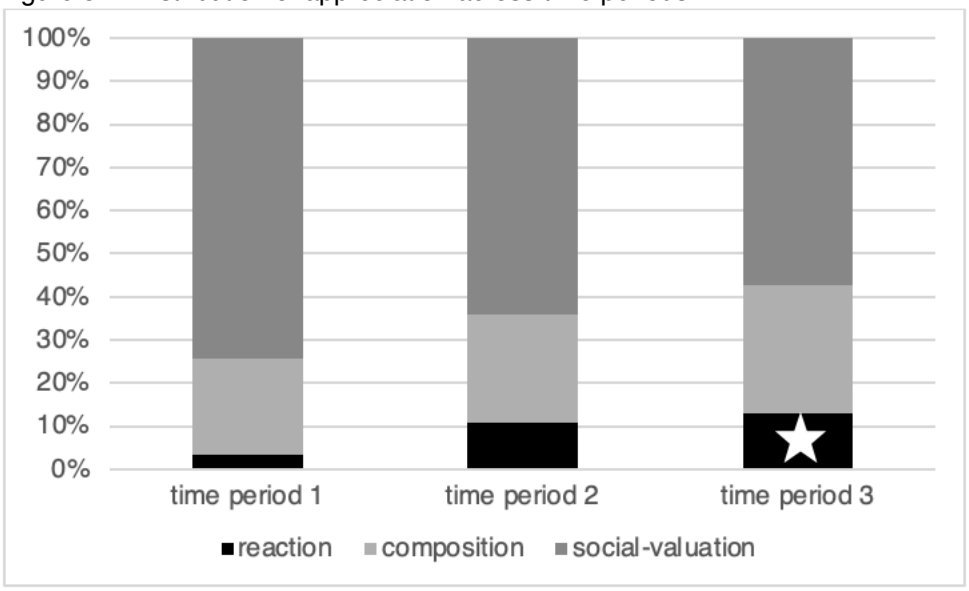
Finally, the resources of *veracity* within both *judgment* and *valuation* were used at a much higher rate in the later texts than any of the earlier ones. Those relating to Kaczynski himself helped depict him as the protagonist of the narrative who was just trying to be honest (even when what followed was generally negative evaluations of others). This included him saying he was just *pointing out* [+valuation: veracity] things that bothered him or that he was *warning* [+veracity] David his goals would not be easy to achieve. Even some of the instances of the self-directed *-veracity* achieved the same effect, such as saying how he was tired of *having to conceal* [-veracity] his opinions (i.e., he had been dishonest, but for the sake of David's feelings). Outward-directed evaluations of *veracity,* on the other hand, were primarily used to indicate the perceived truth value of a proposition or to assess another person as deceitful. Within *judgment*, these assessments were mostly directed at Kaczynski's brother, calling him a *habitual rationalizer* and talking about his *habitual self-deception* (tokens that were repeated throughout the texts in which they occurred). Within *valuation*, an interesting pattern arose in how truth values were indicated for propositions originating from Kaczynski versus those originating from others. Those relating to

Kaczynski's beliefs were most commonly positive tokens and implied he was being direct and honest (e.g., *pointing out* various things or preceding a statement with *frankly*). For those originating from others, tokens marked them as deceitful to some extent, such as talking about David's *rationalizations* or saying that David had made *concessions* and *admitted* to various things, implying that different statements had been made previously. Overall, the use of *veracity* further suggests a stance of mistrust and suspiciousness of others and what they say.

Appreciation

Table 5.2 indicated that within *appreciation*, there was only a significant difference in the proportion of *reaction* between TP1 and TP3 and as evident in Figure 5.2, *appreciation* accounted for over half of the *attitude* tokens in five out of the eight texts. As the graph below shows, the proportion of *reaction* gradually increased while the proportion of *valuation* gradually decreased, and the proportion of *composition* remained stable over the three time periods (the star indicates that the proportion of *reaction* in TP3 was significantly higher than at least one other time period).

Figure 5.7: Distribution of appreciation across time periods



Percentage of total *appreciation*

The distributions across individual texts are more varied, as has been the case for all of the systems thus far. As Figure 5.8 shows, apart from the *1961* and *1962* texts, the proportion of *composition* was the relatively stable, accounting for about 25-30% of total *appreciation. +Composition* was used mostly to evaluate the make-up of both abstract and concrete things as well as to describe actions that would improve or preserve the make-up of those things. For example, referring to the *pure sciences*, how to *improve the curriculum*, or the

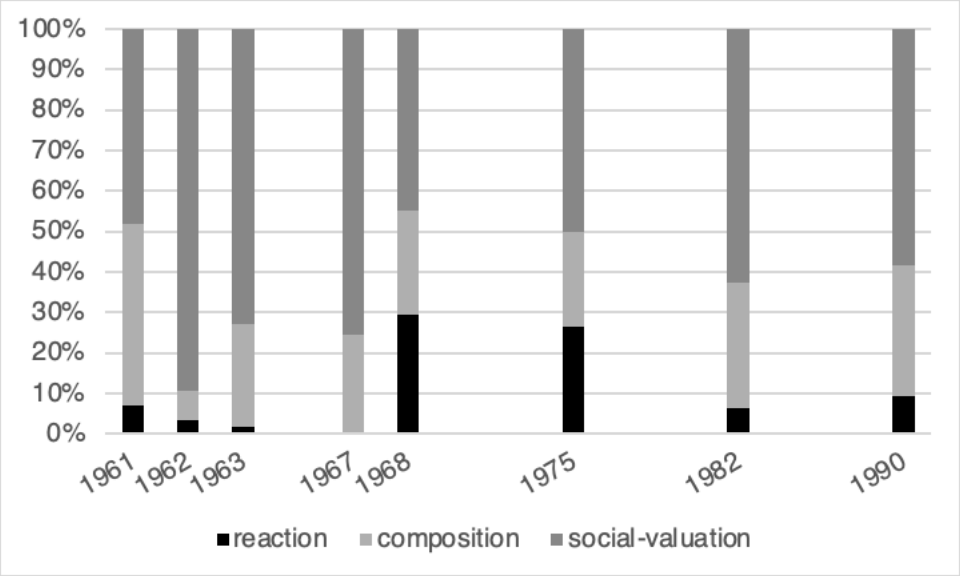
reasoning behind his actions (i.e., implying they were well thought out). *-Composition* similarly assessed the make-up of stance objects and disorder caused by objects (as discussed in chapter 3 based on Hurt, 2020). For instance, saying teachers gave a *sketchy and possibly inaccurate coverage of advanced things* or saying David's writing *could never have been accepted* by even *the cheapest pulp magazine*. He also depicted the actions of *student "activists"* using tokens of *-composition*, saying they made a *stink about Vietnam* and *staged riots over sending class ranks to draft boards.* A small percentage were also attributed to others, mostly in conjunction with negative evaluations of those others, as in the following examples:

Table 5.6: Examples of attributed composition

	Example	Text
94	In Viet Nam we [the US] have been herding peasants forcibly [-propriety] into "**strategic villages**" [attributed +composition]	**1962**
95	…and when they instruct people in their propaganda [-valuation: veracity] to "**foster** [attributed +composition] what is public and **destroy** [attributed -composition] what is private"	**1962**
96	You said repeatedly, "I think it **will be accepted**" [attributed +composition], which seems to me a rather gross instance of self-deception [-veracity].	**1982**

The pattern of usage of both positive and negative composition suggests an overall negative view of others and their actions by evaluating some shortcoming (e.g., suggesting the current curriculum is poor by saying it should be 'improved') or attributing evaluations to others and then introducing his own negative views on the matters (e.g., saying David's confidence in his writing was an instance of self-deception).

Figure 5.8: Distribution of appreciation across texts



Percentage of total *appreciation*

Valuation and *reaction* varied more drastically across texts, with the higher proportions of *reaction* in TP2 and TP3 owing to just one text each. (As *valuation* was already discussed in the previous section, it is not discussed again here.) As detailed in chapter 3, *reaction* consists of meanings similar to those in *affect*, but the focus is placed on the trigger of the emotion rather than the person feeling it (Martin & White, 2005). For instance, *I find him irritating* would fall under *-satisfaction* but *his irritating traits* would fall under *-reaction* because the focus has been shifted to the trigger of the feeling (the *traits*) and away from the Emoter (Kaczynski). The majority of *reaction* tokens in all three time periods was negative but they were often used alongside positive tokens to evaluate different aspects of the same situation. For instance, to use the above example, Kaczynski described his brother as having *irritating traits*, but said he also had *attractive ones*. He also in the *1975* text talks about how he was having all these *terrible ideas* about *mushy love stuff*, but that he would settle down if he *found a woman who shared [his] interests*. This is similar to the pattern seen in previous sections where Kaczynski evaluates typically positive things in a negative way.

5.3.2 ENGAGEMENT

As detailed in chapter 3, the system of *engagement* comprises the resources for communicating commitment to or certainty about a proposition and for the author to align or disalign (i.e., agree or disagree) with their own propositions or with other persons or viewpoints (Martin & White, 2005). The system approaches utterances from the dialogic perspective, which emphasizes the relationship between the speaker/writer and the "background of other concrete utterances on the same theme…made up of contradictory opinions, points of view and value judgments" (Bakhtin, 1981, p. 281). It is made up of two broad types of utterances: *monoglossic* (which make no reference to other viewpoints) and *heteroglossic* (which either *expand* or *contract* the dialogic space to alternative viewpoints; Martin & White, 2005).

Monoglossic utterances, in this research, are considered to be rare, partly based on Gales' (2010) argument that when there is an expectation of disagreement with or dissent from the audience, utterances can no longer be said to contain information that is unproblematic or widely-accepted, as is an essential feature of such utterances (White, 2003, p. 263). The argument here is that the texts used in this chapter (and other chapters) were all likely produced under the assumption that the information contained within them was not "generally 'known' or 'accepted' in the… communicative context" and that the audiences did not share "the same knowledge, beliefs and values as those relied upon by

the proposition" (White, 2003, p. 263). This is because all of the texts were written either to plead the case to their audience for their version of events—which is necessarily set against the backdrop of other versions of events—or to recount information otherwise unknown to the audience (i.e., information not known or accepted in that communicative context).

Instead, *heteroglossic* utterances are the most often encountered type, which as mentioned above, are divided into those that *expand* the dialogic space and those that *contract* it (Martin & White, 2005). There are two main categories of *expansions*: *entertain* and *attribute*. *Entertained* propositions present the viewpoint as one possibility of many, while *attributed* propositions present the viewpoint as belonging to someone else, either with (*distance*) or without (*acknowledge*) an indication as to the author's position on the attributed proposition. *Contractions* are divided into two broad subcategories—*disclaim* and *proclaim*—which are each divided into further categories. *Disclaimed* propositions are either *denied* (i.e., one position is invoked and then rejected) or *countered* (i.e., the authorial position supplants or replaces an expected alternative). *Proclaimed* utterances, in the original framework, can be *pronounced* (i.e., interpolation, emphasis, or intervention by the author to present the proposition as highly warrantable), *concurred* (i.e., the author presents themselves as sharing knowledge with the audience or a proposition as being logically or sequentially connected to surrounding propositions), or *endorsed* (i.e., externally-sourced propositions that are construed as undeniable). A fourth type of *proclamation,* however, is possible, as acknowledged by O'Donnell (2019) and White (2003). *Justified* propositions present viewpoints as "justified, substantiated or otherwise argued for" (White, 2003, p. 274) through explicit markers like *because, therefore, for this reason* or other linguistic formulations that achieve the same effect implicitly.

As briefly mentioned above, frequencies for *engagement* resources are normalized per 100 instances for the between-time period comparisons. The *monoglossic* and *endorse* variables were removed, though, because there were only two *monoglossic* tokens in the entire dataset and zero tokens of *endorse*. Table 5.7 shows the results from the statistical comparisons, which revealed no significant differences between time periods for any of the *engagement* variables. However, it is of course still worth exploring qualitatively how the resources were used and whether any similarities or differences arise.

Table 5.7: Between-time period comparisons for engagement

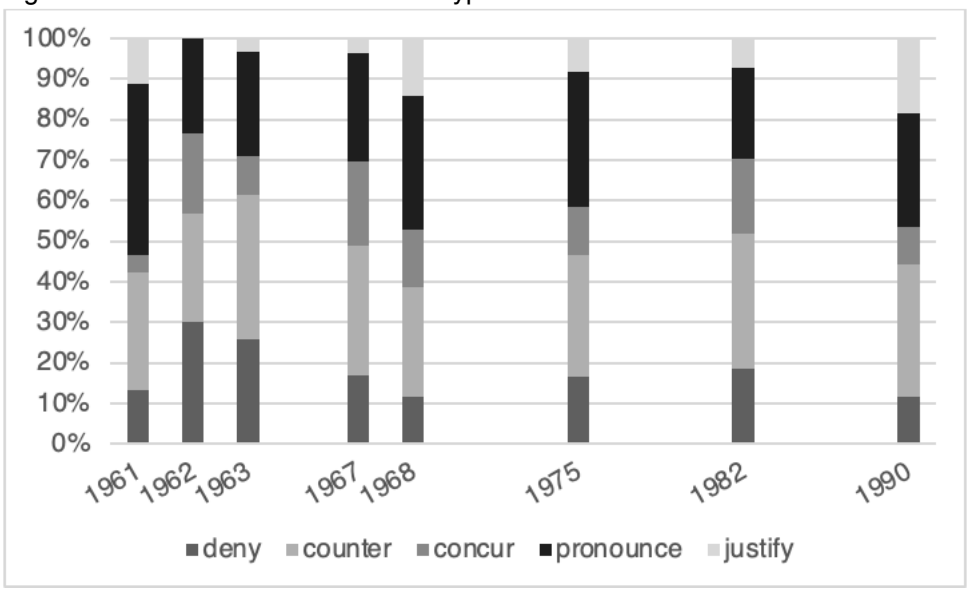
	Time period 1	Time period 2	Time period 3
contract	55.21	64.49	61.03
expand	43.75	35.51	38.97
disclaim	28.65	27.57	28.64
proclaim	26.56	36.92	32.39
deny	11.98	8.88	9.39
counter	16.67	18.69	19.25
concur	5.73	10.75	7.51
pronounce	17.71	19.63	17.84
justify	3.13	6.54	7.04
entertain	32.29	21.96	24.41
attribute	11.46	13.55	14.55
acknowledge	6.77	8.41	7.51
distance	4.69	5.14	7.04

Frequency per 100 instances

Contractions

Across time periods, the distributions of *engagement* resources were fairly stable, but across texts, there was more variation for all of the variables in the first five texts and less variation (or at least less erratic variation) in the final three. For *contraction* resources, the graph in Figure 5.9 shows that the proportion of *pronounce* and *counter* remained the most stable across texts, but the other three types varied more (especially in the first five texts).

Figure 5.9: Distribution of contraction types across texts



Percentage of total *contractions*

Since quantitatively, there are no significant differences, the question becomes what does a qualitative analysis reveal? Kaczynski's letters tended to have an overall argumentative tone; he would essentially play out an entire argument on a topic within the letter, though not

necessarily with the recipient. Rather, alternatives would be acknowledged in some way (usually using *expansion* and *proclaim* resources), then his own interpretations and evaluations of situations and people would be presented or reinforced through *counters* and *denials*—which comprised at least 40% of the *contractions* in each text. Interestingly, it was with the *disclaim* resources that Kaczynski's own views were most often conveyed, instead of through *pronouncements*. In doing so, his views are set against a backdrop of alternatives, and his opinions are ultimately portrayed as less flawed than others or as being a more accurate depiction of events. To illustrate, consider the following examples in Table 5.8:

Table 5.8: Examples of disclaim tokens

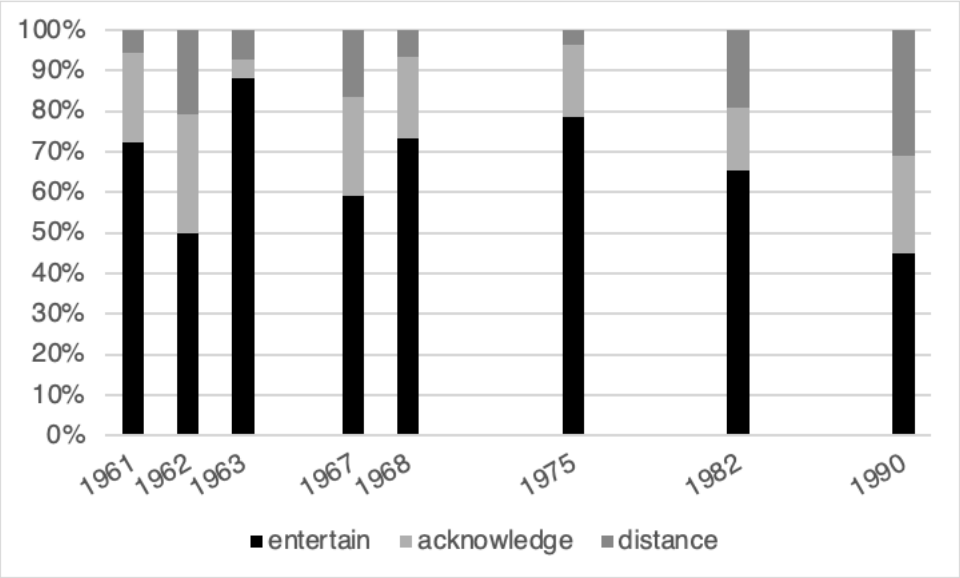
	Engagement token	Text
97	*You will say why should anyone have the right to box* [acknowledge]…*their fight does not interfere with anyone else's rights* [deny]…*thus* [concur] *boxing can't justly be outlawed* [deny]	**1962**
98	*Their usual argument is that college draft deferment is unfair to the "culturally deprived"* [acknowledge]…*but* [counter] *if you consistently follow that line of reasoning* [entertain] *you have to maintain* [entertain] *that no one should be punished for any crime* [deny]	**1967**
99	*I recall suggesting to you* [entertain] *that you were only telling yourself this because it was an attractive idea* [counter]. *But still* [counter] *you insisted that your left hand was stronger* [distance]	**1982**

In all three examples, there is some kind of acknowledgement of a position before a *counter* or a *denial* of that position. In lines 97-98, the first position originates from some vague other person or group, and the *counter* or *denial* serve to point out flaws Kaczynski's sees in those positions. The example in line 99 shows how these resources bolstered his own positions by demonstrating how David had continued with his 'self-deception' despite Kaczynski's efforts to prevent it. This pattern of usage not only depicts Kaczynski as more knowledgeable than others, but also paints them in a negative light—as people who fight to take 'rights' away and as impractical people with have flawed arguments.

Expansions

The distribution of *expansion* types below shows that *entertain* and *distance* varied more than *acknowledge*, which was fairly stable across texts except for the *1963* text. The variation was more erratic in the earlier five texts, while the changes across the final three texts were steadier.

Figure 5.10: Distribution of expansion types across texts



Percentage of total *expansions*

Instances of *entertain* were realized through a variety of formulations, though mostly with questions, hypotheticals/conditionals, hedged evaluations, and subjective statements. These functioned to convey a lower level of commitment to the position and/or reduce the intensity of the evaluation contained within them. For instance:

Table 5.9: Examples of expansions

	Engagement token	Text
100	*I am convinced that exams cheat me of my due*	**1961**
101	*I am inclined to doubt the competence of H.S. teachers to teach these subjects properly* [entertain]…*they give a probably sketchy and possibly inaccurate coverage of advanced things* [entertain]	**1963**
102	*I am inclined to think* [entertain]…*that the current turmoil is not primarily caused by any desire for personal power as such* [deny]. *I suspect that the top leaders in China are sincerely devoted to the cause* [entertain]	**1967**
103	*She had seemed so friendly when I talked to her on the street* [entertain]. *So anyway I wrote her off* [pronounce] *and merely sent her a somewhat sarcastic note* [counter] *which probably led her to conclude that I was an escapee from a mental institution* [entertain]	**1975**

Line 100 in Table 5.9 above appears to have a high level of commitment but being placed within such a highly subjective framing still leaves it open to other possibilities. In lines 101-103, the mitigating language of the *entertainments* weakens the negative evaluations presented within and alongside them. Though, as mentioned in the *affect* section above, mitigating language became less common in instances of attributed *affect*, going from statements like *if they are interested* [entertain] or *even if he should decide* [entertain] to higher commitment statements *that wasn't the frame of mind in which you submitted* [deny].

This pattern suggests an increase in commitment to and confidence in his assertions and evaluations over time.

Primarily in the texts where Kaczynski talked about his opinions of others and their actions, *attributions* were fairly common, and *acknowledge* tokens usually outnumbered *distance* tokens slightly. Kaczynski used both to introduce others' viewpoints; the *acknowledgements* were often followed by evaluations of the person he cited, while the *distancing* attributions contained an evaluation of the person within them, which was then typically followed by yet another evaluation of them. For example:

Table 5.10: Examples of attribute tokens

	Engagement token	Text
104	*Skip that B.S. about…* [distance]. *if they are interested* [entertain] *they would send the application right away* [entertain]. *I will not send those letters* [deny] *because they would be embarrassing* [justify]	**1961**
105	*Some of the slogans Diem and our people there have been using* [acknowledge] *are just as hypocritical as any of the twisted nonsense the Communists put out* [counter]	**1962**
106	*They don't want to have to study too hard* [acknowledge]. *Of course, there are a few who have deep and sincere convictions* [concur], *but most of them are just a bunch of jerks* [counter]	**1967**
107	*You have lately given some faint signs of admitting your moral fallibility* [distance] *though not nearly to the extent you should* [counter]	**1975**
108	*"No", you said, "I think I could become a published author. It wouldn't be hard"* [acknowledge]. *By this time I trust you know better* [entertain]	**1982**

As the examples in Table 5.10 show, *attributed* utterances were often accompanied by (or contained) evaluations of the persons to whom they were attributed and more often than not, these evaluations were negative. In line 104, the *distance* token contains a negative evaluation of the content his parents had produced, which is reinforced through the *justification* shortly thereafter. Similarly in line 107, saying that his parents showed *faint signs of admitting* suggests that the *moral fallibility* was something Kaczynski was already aware of, but they had not necessarily acknowledged as yet. In the lines 105, 106, and 108, the *acknowledgements* present the information in a more unbiased manner but are immediately followed by negative evaluations contained in *counter* propositions. This further reinforces the overarching stance that Kaczynski is more knowledgeable and that others hold impractical, unrealistic, and/or flawed beliefs.

5.3.3 GRADUATION

The final system of Appraisal, *graduation*, is considered to apply to both *engagement* and to *attitude* (Martin & White, 2005) and "depending on the degree and type of resources used," it

can be used to project "the writer's social and individual identities…as more or less authoritative and confident" (Macken-Horarik & Isaac, 2014, p. 77). The two broad categories of graduation are *force* and *focus* (Martin & White, 2005). *Focus* comprises the resources used to indicate whether the stance object is more or less representative of the prototypical qualities of a semantic category. *Sharpening* indicates higher prototypicality—e.g., *true friend* or *real hero*—while *softening* indicates lower prototypicality—e.g., *sort of nice*. *Force* comprises the resources assessing intensity (*intensification*) or amount (*quantification*), which can be additionally coded for whether they intensify or weaken the evaluation (*scaling*) and *lexical infusion,* which helps describe whether the intensity is encoded in the evaluative item itself (*infused*) or is achieved using a separate lexical item (*isolated*). For this research, *intensification* was expanded slightly from its typical *quality-process* dichotomy to include a category for *repetition* to capture the same or similar meanings that are used multiple times across a text (or in quick succession, as Martin and White (2005) originally proposed). With *quantification*, there are three categories—*number, mass, extent*—which are all argued to be scalable alongside the *intensification* categories. However, in this research, *scaling* was not coded for *extent* tokens because it is not clear (1) whether it is a necessary aspect of this particular category of meaning and (2) which meanings would be considered upscaled and which would be downscaled. For instance, with tokens such as *next door* and *the other side of town,* would the *upscaled* token be the one that conveys very close proximity or a large distance? Because of the lack of clarity, *extent* tokens are not included in the totals for the *scaling* variables.

Just as with *attitude*, the frequencies for each variable were normalized per 1000 words for the between-time period comparisons. Table 5.11 contains the results from the between-time period comparisons; the columns represent each of three time periods and the rows represent the *graduation* variables. None of the comparisons yielded significant results, but a few qualitative findings warrant comment.

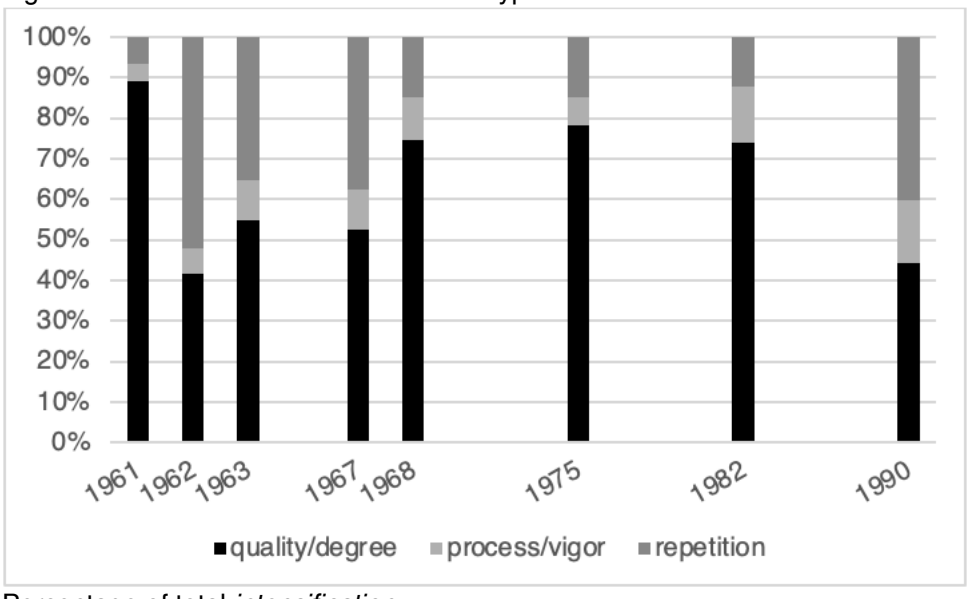
Table 5.11: Between-time period comparisons for graduation

	Time period 1	Time period 2	Time period 3
force	152.97	120.52	134.57
focus	15.98	20.33	19.95
intensification	105.02	87.61	100.23
quantification	47.95	32.91	34.34
quality/degree	61.64	53.24	64.97
process/vigor	7.42	8.71	12.06
repetition	35.96	25.65	23.20
number	22.26	16.46	17.63
mass	15.98	11.13	10.21
extent	9.70	5.32	6.50
soften	4.57	6.29	8.35
sharpen	11.42	14.04	11.60
upscale	109.59	84.22	91.88
downscale	33.68	30.98	36.19
isolating	54.79	48.89	58.47
infusing	98.17	71.64	76.10

Frequency per 1000 words

Across texts, the proportions of *intensification* and *quantification* broadly were fairly consistent, with *intensification* accounting for a majority of the overall tokens. More specifically, *quality* and *repetition* accounted for at least 50% of *graduation* tokens, meaning that Kaczynski more often scaled the degree of qualities and repeated certain evaluative themes throughout his texts. As Figure 5.11 shows, *process* was the most consistent in terms of proportion; *quality* was the most common resource except in the *1962* and *1990* texts while the highest proportions of *repetition* occurred in the *1962, 1963, 1967,* and *1990* texts.

Figure 5.11: Distribution of intensification types across texts



Percentage of total *intensification*

With regard to *quality*, tokens were overwhelmingly used to upscale, but there was a difference in the type of *downscaled* tokens that were used in earlier versus later texts. In the earlier ones, they were used to hedge evaluations, thus weakening the perceived commitment to them (Martin & White, 2005); for example, saying he was *inclined to think* or that he thought teachers would give a *probably sketchy and possibly inaccurate* lesson about advanced topics. In the later texts, conversely, the *downscaled* tokens were more often just less intense qualities rather than hedges; for instance, talking about his *affection* for his brother or saying he was in a *comparatively mellow mood*.

With regard to *repetition*, the themes that were reiterated depended on the topic of the text. In the *1962* text, the main repeated themes related to *freedom* and individual's *rights* as well as perceived threats to both—e.g., *Communism*, *tyranny, infringement*. In the *1963* text, the tokens centered around the main theme of perceived incompetence of his brother's high school (and sometimes high schools more generally), such as discussing ways to *improve* the curriculum or the *inadequate* teaching of advanced subjects and the need for coverage of the *pure* and *basic* sciences. The themes of the *1967* text echoed those of the *1962* text, but instead of directing evaluations at overseas threats, they were focused on those who had opposed and protested the war stateside—e.g., *student commies* who were *rebelling* and *mak[ing] a stink*—and where the flaws were in their arguments about why the draft was *unfair*. In the *1982* and *1990* texts, since both were about his brother and similar complaints, the themes were similar, referring repeatedly to David's *self-deception* (1982) and *rationalizing* (1990). The usage pattern of *repetition* revealed a tendency for Kaczynski to shape entire texts around a particular theme or set of related themes, which usually consisted of negative portrayals of others. It added to the argumentative tone of the texts and seemed to be an attempt to provide as many examples as possible of the impracticality of or flaws in the beliefs of others to reinforce the depiction of his own views as more accurate and himself as more knowledgeable.

5.4 Discussion

The aim of this study was to approach the first research question from a different perspective, examining changes in evaluative choices over time and determining how they may relate to changes in symptom and trait severity. While there were not many significant quantitative differences between time periods, the qualitative analysis revealed trends and patterns in *how* certain resources were used that could be at least partially explained by particular traits and symptoms (RQ 1), which is the focus of section 5.4.1. With regard to RQ 2a, as mentioned at the start of this chapter, TK has been argued to overlap partially with

serial murderers and partially with mass murderers (e.g. Fox & Levin, 1998). As such, research on both offender types are considered in the discussion in section 5.4.2 of how TK's evaluative patterns might be impacted by act-specific violence-related schemas.

5.4.1 PSYCHOPATHOLOGY

One of the major patterns that spanned Appraisal systems relates to how Kaczynski assigned praise and blame for events. Across the eight texts, negative events were mentioned more often than positive, and most were attributed to an external source, with different patterns used for events that were attributed to a person versus those attributed to situational factors. In the earlier five texts, when the event was smaller-scale in its impact—e.g., his academic performance or his brother's class choices—attributions were more often made to situational factors (usually signaled by the use of *valuation*). For instance, saying he did poorly on an exam because the *system of examinations is unfair* or that a class he took was inadequate because they *did not have sufficient background to teach* it properly. In both examples, the way they are worded attributes most of the blame to something out of the control of any particular person. In the final three texts, the events were smaller-scale (in that they impacted Kaczynski or someone else, like his brother) and there were fewer of them than in the other texts. Instead of recalling multiple positive or negative things, the texts typically centered around just a few events and the leftover parts were dedicated to providing support for the attribution that was made. For instance, in the 1990 letter to his mother, Kaczynski explains why he had ceased communication with his brother (the negative event), citing multiple examples of the personal trait that earned David the 'blame' for the situation. For some positive events that impacted Kaczynski directly, he seemed more willing to take responsibility, but quickly shifted that responsibility if the circumstances changed. For example, when he talked about the woman he met, he took credit for having gotten her contact information (he approached her and initiated the interaction and she gave him her number *without hesitation*), but when she did not answer his phone calls, it was because women do not *quite know what they are doing themselves*. With larger-scale events (like the military draft or Mao's rule in China), attributions were more often made more directly to another person or group of people, such as saying Communists *instruct people…to "foster what is public and destroy what is private" in themselves* or that *individual liberty is being trampelled [sic] on in all parts of the world* (the agent here is omitted, but it is implied that some vague persons or groups are responsible).

This externalizing attributional style is also evident in the patterns of appraisal resources described in the earlier sections. Attributed *affect*, especially the 'internal' tokens, introduced

Kaczynski's presumptions about others' feelings and their motivations for the behaviors that he subsequently evaluated. This set him up to be able to portray them as responsible for the negative events that happened to them or the negative events they caused. For instance, when he talks about *Mao's main objective* [+inclination] being to create a society where the people *have no desires of their own* [-capacity], the blame for the loss of autonomy is placed on Mao because of his 'objective'. The use of the various *judgment* types also contributes to this externalizing attributional style. Rarely are they self-directed, and when they are, it more often functioned to lessen the blame. For example, how he uses *-veracity* so often in reference to his brother's apparent *self-deception* but then uses *+veracity* in reference to himself to absolve him of wrongdoing for saying arguably offensive things in his letters. *Valuation* then more often helped establish situational blame as it removed the agency for the action from the person to whom it was tied. The *engagement* and *graduation* resources then helped shape the overarching argumentative tone of many of the texts, which suggested a belief that he was more knowledgeable than others and that his opinions were more well-reasoned and practical and less flawed than theirs (which was apparent through the range of negative evaluations he made of those others).

These aforementioned patterns align with the externalizing biases and schemas associated with PPD and delusions (the predominant symptom of schizophrenia that Kaczynski experienced; Johnson, 1998). The fixation with personal rights and the portrayal of himself as always being right and always being **in** the right while others are deceptive and exploitative (especially those with whom he personally interacted) aligns with the core beliefs in PPD that one is righteous and clever, but others are likely to mistreat them (Beck, 2015; Renton & Mankiewicz, 2015). The avoidance of assigning responsibility for negative events to himself and instead assigning it to others and situational factors aligns with the externalizing biases associated with both PPD (mostly the paranoid ideation aspect; Langdon et al., 2010; Murphy et al., 2018) and persecutory delusions (e.g., Beck & Rector, 2005; Kinderman & Bentall, 1997; Martin & Penn, 2002). Additionally, the *repetition* of evaluative themes and the overall argumentative tone of his texts and portrayal of his own views as more sound than those of others might be at least partially explained by the presence of delusions. Being strongly-held beliefs unamenable to change (APA, 2013), they would most likely be presented using *contractive* resources to frame them as the most warrantable option (Fineberg et al., 2015; Hinzen et al., 2016), with flaws being seen with views that do not align with them.

The fluctuation in many of the distributions of Appraisal resources that was more pronounced in the earlier texts than the later texts might best be explained by the

developmental course of schizophrenia, and particularly delusions. The formation of full-blown delusions often takes time, and the individual's commitment to them can fluctuate over time with the severity of their symptoms (Fineberg et al., 2015; Freedman, 2010). The amount of hedging observed in the earlier texts and the instability in distributions of resources earlier on might reflect the start of changes to Kaczynski's perception and interpretation of stimuli associated with the 'pre-delusional' stage, when there is a vague sense that something is different without certainty about what it is (Henriksen & Parnas, 2019). The last time period occurred well after the onset of the delusions, though, at a point when they would have more likely solidified, which would have been accompanied by more certainty and stability in his beliefs (Fineberg et al., 2015).

5.4.2 Offender Classification: Serial Bomber

As mentioned above, Kaczynski's actions resembled aspects of both serial and mass murder (e.g., Fox & Levin, 1998). This is because while he did meet the definition for a serial murderer (i.e., two or more killed in separate incidents; Morton & Hilts, 2005), his method is argued to more closely resemble a category of mass murderer called the *set-and-run killer* (Fox & Levin, 1998) who employs "techniques allowing themselves the possibility of escape before the deaths occur" (Dietz, 1986, p. 482). Moreover, his ideological motives—i.e., wanting to "save humanity from enslavement by technology" (Fox & Levin, 2003, p. 59)—resemble the *revenge* category of mass murderer, in which the individual believes others are "out to do him harm" (or have already done so) and killing them is a way to 'get back' at them (Fox & Levin, 2003, p. 56). However, the use of less-destructive bombs for targeted attacks instead of large-scale damage and his eluding capture for nearly two decades is more in line with behaviors observed in serial murderers (e.g., Fox & Levin, 2003; Holmes & Holmes, 2001; Miller, 2014a).

Given the overlap, what is explored here is the patterns he exhibited in his writings and how they relate to schemas and core beliefs associated with each type of violent act. A few prefatory comments are warranted, however, about the difficulties introduced by the audience variable. Unlike the other eight authors in this project, TK's texts were all written to family members prior to his capture, meaning there was no real chance for him to offer descriptions of his crimes or motivations (like if there was an element of fantasy or compulsion with them). This makes it impossible to explore the resources used to talk about his crimes like was done in chapter 4. Nonetheless, the longitudinal nature of this dataset provides a unique opportunity that is not available in the other chapters to explore any

changes in evaluative resources over time that might indicate a shift in his mindset to deciding to commit acts of violence.

Indeed, one major pattern and shift was with regard his views of society and his role within it. To be sure, Kaczynski's views of others and societal rules/norms were not positive during any of the three time periods, but there is difference in the amount of tolerance he expresses for certain rules between the earlier and later texts. In the first two time periods, there is disapproval of certain practices and institutions (e.g., blaming the *system of examinations* for his bad grade [1961] or expressing disagreement with the military draft [1967]), but he was still engaging with them. In the third time period, there is a noticeable shift to him explicitly negatively evaluating societal practices and institutions and also expressing a refusal, or at least a strong reluctance, to adhere to or engage with them. For example, when he referred to finding a partner as *succumbing* [-capacity/-tenacity] to *hedonism* [-tenacity] and a *great defeat* [-valuation: capacity] for him (*1975*) or when he claimed that he no longer wished to *conceal* [-veracity] *his opinions* or *put up with* his brother's *irritating* [-reaction] *traits* to spare his feelings. The shift to a lack of regard for (and event flouting of) social norms and practices does align with general features of the 'cognitive map' observed in serial murderers (Palermo & Kocsis, 2005). There is also evidence of a view of the world as hostile (another aspect of the 'cognitive map') present throughout Kaczynski's writings. However, given the nature of schemas associated with paranoid PD and persecutory delusions (e.g., Beck, 2015; Beck & Rector, 2005; Kinderman & Bentall, 1997), it is difficult to determine whether such views, especially in the later texts, might have stemmed from the traits and symptoms or from his shift to becoming a serial offender (or, more likely, both).

With respect to the claim that Kaczynski also demonstrated similarities to perpetrators of mass violence, there is one notable pattern that is arguably not better explained by just the presence of delusions and paranoid ideation. Some patterns, like the over-generalized negative evaluations of people and institutions, are consistent with views commonly observed in individuals with persecutory delusions (e.g., Beck & Rector, 2005) or more general paranoid beliefs (Renton & Mankiewicz, 2015), suggesting they are more reflective of paranoid ideation/delusions than any violence-related schemas. The notable pattern that is less likely a result of delusions or paranoia, though, concerns the portrayal of his harmful (albeit non-violent) actions as an obligation, something that is more ethical for him to do than not to do. This included, for instance voicing his complaints about character flaws he saw in his brother in the 1982 and 1990 texts. Even though the actions described as an obligation were not violent, this pattern still diverges from how the chapter 4 authors (apart from

Wuornos, who diverges from the others) more often depicted both their non-violent and violent actions, which was as being the result of a compulsion. This was something that was not observed in Kaczynski's writings. Thus, Kaczynski does indeed appear to exhibit similarities to perpetrators of both serial and mass violence, as Fox and Levin (1998, 2003) noted.

5.5 SUMMARY

While there was little evidence of obvious changes quantitatively in evaluative patterns over time that might have reflected fluctuations in symptom or trait severity, there were changes in *how* the resources were used over time that seemed to align with different stages of development of delusions as well as patterns consistent throughout that aligned with schemas underlying PPD. Thus, to summarize the findings as they pertain to research question 1:

- Kaczynski demonstrated an externalizing attributional style, using various Appraisal resources to deflect responsibility from himself for negative events in his own life to other people or situational factors. These resources included direct *judgments* of others and circumstances, attributing 'internal' emotional states to others via *affect* (i.e., making assumptions about how they felt toward certain things), and attributing beliefs to others via *attribution* resources. Such patterns are consistent with schemas and core beliefs associated with both PPD (Langdon et al., 2010; Murphy et al., 2018) and persecutory delusions (e.g., Beck & Rector, 2005; Kinderman & Bentall, 1997; Martin & Penn, 2002).
- Kaczynski exhibited a fixation on personal rights and freedoms, depicting himself as being right and **in** the right, while others were exploitative and had malicious intentions. These patterns align with core beliefs of PPD that one is righteous and clever, but that others are likely to mistreat them (Beck, 2015; Renton & Mankiewicz, 2015).
- In the earlier texts, Kaczynski used *expansion* resources more often to acknowledge his positions as mere possibilities. In the later texts, the *expansions* were used to introduce other viewpoints before using *contractive* resources to declare flaws with them and depict his positions as the most warrantable. Additionally, the distributions of other Appraisal resources demonstrated greater instability in earlier texts than in later ones. These patterns align with the developmental course of delusional beliefs, which at the beginning can take on a vaguer form, with the individual beginning to interpret information differently but being unable to tell with certainty what has

changed (Henriksen & Parnas, 2019). When they become fully solidified, however, there is a greater commitment to and certainty about the beliefs, which arguably helps explain the greater stability in resource distributions and the shift to expressing his positions using *contractive* resources in the later texts (e.g., Fineberg et al., 2015; Hinzen et al., 2016).

In addition to the above, some of Kaczynski's evaluative choices also aligned with core beliefs associated with both serial and mass violent offenders (research question 2a) and the longitudinal nature of the dataset made it so that changes in these patterns over time could be observed. These included:

- A shift from engaging with societal rules in norms—even in spite of declared negative views toward them—in the earlier texts (which were written a decade or more before his first bombing) to a lack of regard for, and refusal to engage in, them in the later texts (one written three years before his first bombing and the other two written years after). This was done through the use of *attitude* resources to negatively evaluate himself for engaging in certain practices, like wanting a relationship or keeping opinions to himself to spare his brother's feelings. The shift aligns with part of the 'cognitive map' of serial murderers proposed by Palermo and Kocsis (2005), though it also aligns with core beliefs associated with PPD and persecutory delusions (e.g., Beck, 2015; Beck & Rector, 2005; Kinderman & Bentall, 1997), meaning it is difficult to determine how much of a contribution each set of schemas might have made.
- A shift from showing a willingness to consider the impact of his actions on others to depicting his harmful, albeit non-violent, actions as a moral obligation. This pattern is more consistent with research on perpetrators of mass violence (e.g., Holmes & Holmes, 2001; Hurt, 2020) than serial violence who, like the authors in chapter 4 (except Wuornos), describe their actions as resulting from some internal compulsion (Palermo & Kocsis, 2005; Schlesinger, 2000). This is also a pattern that is not necessarily better explained by beliefs and schemas associated with his underlying psychopathology.

The findings of this chapter add more support to the contention that certain linguistic evaluative patterns have observable connections to schemas and beliefs associated with psychopathological traits (research question 1) and violent acts (research question 2a). The dataset also offered a unique opportunity to observe changes in evaluative resources over time and explore whether those changes might reflect fluctuations in symptom/trait severity (RQ 1), including violent ideation (RQ 2a).

CHAPTER 6 PERPETRATORS OF MASS VIOLENCE

Just after midnight on July 20, 2012, James Holmes parked his car outside the exit door of theater 9 of the Century 16 movie theater in Aurora, Colorado, which was full of moviegoers attending the premiere of *The Dark Knight Rises* (Metzner, 2013). He entered the theater during previews and left minutes later through the exit door, pretending he had received a phone call, and propped the door open so he could get back in with his weapons. He then went to his car and put on full body armor, a gas mask, a helmet, and headphones (so he would hear nothing but music while he committed the shooting) and, finally, grabbed his weapons. These included multiple firearms, tear gas, and hundreds of extra rounds of ammunition. Holmes re-entered the theater shortly after and began firing indiscriminately into the crowd, ultimately using three different firearms to kill 12 and injure 70 before leaving through the exit door after being unable to unjam his rifle. As police arrived, he determined he would not be able to escape and decided to put down all of his weapons so he "'would not get shot'" (Metzner, 2013, p. 7).

Holmes' act was one of many events that can be classified under the broad heading of *mass violence* (Huff-Corzine & Corzine, 2020)—which constitutes the final offender type explored in this research—as well as the more specific heading of *mass murder* (Dietz, 1986; Fox & Levin, 1998, 2003). Holmes' case, though, is actually a rarity. That is, the number of incidents fitting the stricter definition of mass murder put forth by various organizations such as the FBI—four or more people killed (excluding the perpetrator, if relevant) in one incident by an offender (Huff-Corzine & Corzine, 2020)—is quite low compared to the number of incidents of mass violence. In fact, *The Violence Project* found that 169 shooting incidents (as firearms are the most common weapon used in these types of attacks; Fox & Levin, 2022) satisfying the FBI definition occurred between 1966 and February of 2020 (Peterson & Densley, 2021). When expanded to include just shooting incidents in the United States falling under the broader heading of mass violence—i.e., three or more injuries and/or deaths (Weller, 2016, p. 4)—the numbers reach the thousands according to the Gun Violence Archive[5].

In the literature, the focus has been primarily on perpetrators whose actions meet the requirements laid out above and less so on those who may have intended to do more harm but were prevented from doing so either by circumstance or intervention (Silva, 2021b). Of course, this is not an unreasonable approach given that including such cases would not only increase the number of incidents drastically, but it would also introduce numerous additional

[5] https://www.gunviolencearchive.org/

variables in need of consideration. Some studies have begun to explore differences between incidents that reached different stages of 'completion', for lack of a better term, but have proposed different criteria for deciding where the line between classifications should be drawn (Agnich, 2015; Silva, 2021a, 2021b). For instance, Silva (2021b) proposed four classifications of mass shooting based on the number of victims and whether they reached their target. Completed and attempted shootings included those where the perpetrator reached their target and caused at least one injury or death, with completed shootings resulting in four or more *fatalities* and attempted shootings in one or more *casualties* (death or injury). Failed and foiled shootings were defined as those that incurred zero casualties, but for different reasons. With failed shootings, the perpetrator reached their target, but something prevented them from carrying out their plans whereas with foiled shootings, the perpetrator never reached their target. Findings from these kinds of studies have shown that there are some differences between incidents that reach the level of a mass murder and those that lie just below the threshold.

From the linguistic perspective, Hurt (2020) compared pledges to harm—a form of threatening communication in which the target is not addressed directly—written by individuals who carried out their threats (the *realized* group) with those written by individuals who did not (the *unrealized* group). The realized group all committed acts of mass violence (two of the authors used in Hurt's study, Alex Hribal and Kip Kinkel, are also used in this study), with three of the six reaching the level of mass murder. A number of patterns were found to distinguish the two groups, such as findings that the unrealized group used more intense and violent language (coded under *-capacity*) and that the realized group tended to generalize their judgments of *propriety* toward non-victims and ascribe intensely negative ethical qualities to others. There are many other patterns that were found, which are discussed where relevant below, but the overall takeaway from Hurt's (2020) work is that those who committed acts of mass violence, whether they reached the threshold for classification as mass murder, did demonstrate similar linguistic patterns. The relevance of this work comes into play more in section 6.3 when discussing the patterns that might be most related to schemas associated with possible act-specific violent ideation, though it is referenced where appropriate in the coming sections.

In the following sections, the writings comprising the dataset and the backgrounds of their authors are given (section 6.1), the findings from the Appraisal analysis are presented (section 6.2), and the relationship of the findings to the symptoms and traits associated with the authors' diagnoses (research question 1) and shared classification as perpetrators of mass violence (research question 2a) is explored (section 6.3).

6.1 DATA

Instead of controlling for linguistic factors as was done in the previous chapters (i.e., topic in chapter 4 and audience and mode of communication in chapter 5), the primary data selection criterion centered around matching, to the extent possible, the offenders' psychopathologies. That is, the aim was to identify individuals who had committed an act of mass violence and presented with similar combinations of psychological traits. This was done so that a different approach than the previous chapters could be taken toward addressing the first research question in that controlling for psychopathology allows for observation of the potential effects of the shared **as well as** distinguishing traits on the authors' evaluative choices.

The *schoolshooters.info* database[6], created by Dr. Peter Langman, was used to identify the authors whose writings were used for this study. It is a compilation of information about and documents relating to over 100 perpetrators of mass violence. Most of these were, as the database name suggests, school shooters, but there are some who used other kinds of weapons (e.g., knives) and some who targeted locations that were not schools. The database can easily be searched to help narrow the list based on specific criteria such as the country where the attacks happened, what year they happened, whether the perpetrator survived the attack, and so on. With these filters, additional constraints were put in place to identify the set of authors used in this study. These constraints were as follows:

- **Country:** Only attacks that occurred within the United States by native English speakers were included to control for the impact of dialectal variation.
- **Date Range:** Only attacks that occurred between 1995 and 2021 were included to ensure offenders would have been assessed using the two most recent editions of the *DSM* (APA, 2000, 2013).
- **Survival of Attack:** Only perpetrators who survived their attacks were included to limit the list to those who would have received a psychological evaluation after the attacks. Typically, these involve not only assessments of their current mental state, but also retroactive assessments of sanity at the time of the attacks to determine level of responsibility for their actions.
- **Number of victims:** Only attacks that resulted in at least 3 victims (killed and/or wounded) were included to ensure they satisfied the requirements for classification as an incident of mass violence.

[6] https://schoolshooters.info/

These constraints yielded a list of 37 perpetrators from which to select the authors for this study. To be included in this dataset, they needed to have (1) writings from before the attack available and (2) court documents containing information about the psychological assessment and its findings. Based on findings from *The Violence Project* (Peterson & Densley, 2021) about the prevalence of psychosis and major depression in mass shooters, it was decided that individuals exhibiting at least psychotic symptoms (and optionally concurrent depressive symptoms) would be focused on. This yielded **four** authors, all of which exhibited at least one psychotic symptom and three of which were found to exhibit depressive symptoms. Table 6.1 below contains the main diagnostic information for each author as well as the basic information about each of their attacks.

Table 6.1: Author information

	Date of attack (Age at time)	Number of victims	Diagnostic Information
Alvaro Castillo (AC)	August 30, 2006 (18)	1 dead 2 injured	- Psychotic disorder - Manic & depressive symptoms (*North Carolina v. Castillo*, 2010)
James Holmes (JH)	July 20, 2012 (24)	12 dead 70 injured	- Schizotypal personality disorder - Delusional disorder (Reid, 2014)
Alex Hribal (AH)	April 9, 2014 (16)	0 dead 20 injured	- Major depressive disorder - Psychotic symptoms (*Pennsylvania v. Hribal*, 2016)
Kip Kinkel (KK)	May 20-21, 1998 (15)	4 dead 25 injured	- Psychotic symptoms - Depressive symptoms ("111 Years Without Parole," 2000)

As this shows, two of the four authors' attacks (JH and KK) met the victim threshold for classification of their attacks as mass murders, while the other two's attacks (AC and AH) did not, but all four can broadly be characterized as incidents of mass violence. In all four cases, there was some disagreement amongst the evaluating psychiatrists/psychologists as to which psychotic disorder diagnosis best fit the symptoms the authors presented with, but there was always agreement that a psychotic disorder or at least psychotic symptoms were present.

As the primary concern in this study was controlling for the psychopathology, more flexibility was given for the topics, audiences, and modes of the writings, but the genre remained the same as previous chapters: *first-person accounts*. Despite the leeway, it was possible to find similar writings in terms of all three variables for all four authors. A breakdown of the texts is in Table 6.2[7] below and further description of the contents of the writings for each author can be found in the following subsections. Generally, all of their

[7] All of the texts used are from files available on the *schoolshooters.info* database, but only KK's texts were transcribed copies (Langman, 2021) instead of scans of the originals.

writings included their views about others and themselves as well as some mention of their plans for their attacks or desire to commit an attack. They also all appeared to be written with the knowledge (and perhaps even intent) that they would be read by unspecified others after their attacks and almost all of the selected writings were journal entries, or excerpts from journal entries apart from KK's note and AH's letter. (Both of these texts were part of the realized corpus in Hurt's (2020) study, but because of differences in approaches, the findings discussed for these texts are different.)

Table 6.2: Breakdown of texts by author

	Text	Word Count
Alvaro Castillo	(1) Journal Entry March 29, 2006	175
	(2) Journal Entry June 12, 2006	144
	(3) Journal Entry August 8, 2006	147
	(4) Journal Entry August 23, 2006	153
	(5) Journal Entry August 30, 2006	63
	Total	**682**
James Holmes	(1) Journal Excerpt	250
	(2) Journal Excerpt	271
	Total	**521**
Alex Hribal	(1) Letter	957
	Total	**957**
Kip Kinkel	(1) Journal Entry	846
	(2) Note after killing parents	187
	Total	**1033**

In the cases of AC's journal entries, only the fourth and fifth ones were available in their entirety; only the first page of each of the other three was available, which were transcribed through the nearest full sentence to the end of the page. In the cases of JH's writings, excerpts were taken from different parts of the journal, excluding parts that were either not language (e.g., diagrams or pictures) or not related to his view of himself or others.

6.1.1 ALVARO CASTILLO

On April 20, 2006—the seventh anniversary of the Columbine High School shooting—Alvaro Castillo intended to commit suicide but was stopped by his father (*North Carolina v. Castillo,* 2009). In the months that followed, Castillo began believing that his failed suicide attempt was a sign that God had saved him and wanted him to replicate the Columbine massacre to save his fellow students from evil. Four months after the attempt, on August 30, 2006, Castillo killed his father at their home, wrote a note and made a video apologizing for his actions. He then drove to his old high school (from which he graduated a year prior) with multiple guns, smoke bombs, and homemade pipe bombs. Once he arrived at the school, he set off a smoke bomb and started firing his rifle into the air and toward the building, injuring two students in the process. His gun jammed and the school resource officer ran to him and

ordered him to get on the ground, later saying that Castillo said to him, “kill me. Shoot me. You’ll like it. You’ll like it” (*North Carolina v. Castillo*, 2009, p. 18). At Castillo’s trial, there were at least four psychiatrists who testified about his mental health. While there was some disagreement as to the exact diagnosis, there was agreement that he exhibited signs of a psychotic disorder alongside manic and depressive symptoms. The psychotic symptoms mostly consisted of magical thinking (that events were signs from God) related to delusions about God telling him to kill others to save them.

His journal entries mostly consisted of him detailing different aspects of his plan for his later attack. The first one was about his desire to die and plans to commit suicide (written just before his suicide attempt); the second about the weapons he bought and planned to use in his attack; the third focused on his depression and wanting it to end; the fourth (just before the attack) about his plans and mental health; and the final one about how he felt after he killed his father.

6.1.2 JAMES HOLMES

On July 20, 2012, the midnight premiere of *The Dark Knight Rises* was showing across the United States, including at the Century 16 movie theater in Aurora, Colorado (Metzner, 2013). James Holmes, a former graduate student at the University of Colorado-Anschutz Medical Campus, had parked his car just outside theater 9, where the midnight showing was taking place. He had gone into the theater briefly so that he could prop open the exit door leading out to his car, where he had multiple guns, incendiary devices, and body armor for himself. He walked into the full theater and began shooting at moviegoers indiscriminately, killing 12 and injuring 70 before his gun jammed and he decided to give up. He walked outside and began putting his weapons down in anticipation of the police arriving, in a desire to survive his encounter with law enforcement. At his trial, a number of psychologists and psychiatrists testified or provided assessments of Holmes’ mental state. There was not full agreement about the exact diagnoses, but it was agreed that (1) he was **not** insane and understood his actions and their consequences and (2) that he exhibited evidence of delusions (specifically about himself being flawed and killing others being a way to accrue ‘value’ for his life from the ones he took) and schizotypal personality disorder (Reid, 2014).

The journal from which the texts were taken contained a number of entries that were not entirely comprehensible. However, the two that were chosen appeared to be more coherent. The first contains descriptions of symptoms Holmes claims to have experienced over the years; other symptoms were described in this entry, but those not relating to a view of himself or of others or a description of experience were not used as they did not contain

much evaluation. The second entry is about experiences with therapy and treatment; this also contained other points that were removed because they did not contain much evaluation or reference to experiences or views of himself or others.

6.1.3 ALEX HRIBAL

On April 9, 2014, 16-year-old sophomore, Alex Hribal, went to his high school carrying two large butcher knives and pulled the fire alarm to force all students and staff to exit their classrooms and go out into the hallways (*Pennsylvania v. Hribal*, 2016). Once they had, he began randomly stabbing and slashing the students around him. He injured 20 total people (19 students and 1 security guard) before being stopped by one of the assistant principals, who said that upon asking Hribal to drop the knives, Hribal replied, "I'm not going to drop the knives. My work isn't finished. There's more people to kill" (*Pennsylvania v. Hribal*, 2016, p. 4). At his trial, there were at least two psychiatrists who evaluated him and testified that he exhibited symptoms of major depression and psychosis (namely, delusions, though without full specification about what the content of those delusions was).

The letter, titled 'RAGNAROK', contains Hribal's views about others (and rarely about himself), reasoning for his violent actions, and speculations about how he thinks others will talk about his attack and where they will assign the blame.

6.1.4 KIP KINKEL

On May 20, 1998, Kip Kinkel was expelled from his high school for buying a gun on school grounds ("111 Years Without Parole," 2000). After his father had picked him up and brought him home, he grabbed a .22 caliber rifle from his room and ammunition from his parents' room, went to the kitchen where his father was, and shot him once in the back of the head. When his mother arrived home later that afternoon, he met her in the garage, reportedly told her he loved her and shot her twice in the back of the head, three times in the face, and once in the heart. The next morning, he took three guns and a backpack full of ammunition with him to school, taking his mother's car and parking one block away. He walked down the hallway toward the cafeteria, shooting two students on the way, before open firing into the cafeteria. He killed two and wounded 25 more before being tackled by five classmates. During his trial, KK was assessed by at least two psychiatrists who agreed that he exhibited tell-tale signs of some kind of psychotic disorder as well as major depression. Due to his age—he was 15—however, a formal diagnosis of any psychotic disorder was not considered to be justifiable. He was determined to be suffering from multiple different delusions—including one about the world ending, society falling apart, and him and others being evil—

as well as hallucinations, including command hallucinations in which voices told him to kill (which was interwoven with the delusions about him and others being evil).

His journal entry (Langman, 2021)[8] is primarily about his negative views of himself and others, his desire to kill others, his need for help but perception that no one would give it to him (and overall negative emotionality), and how he believed others viewed him. The note primarily contained expressions of remorse for killing his parents as well as reasoning for committing the violent acts and further negative self-evaluations and descriptions of his negative emotionality.

6.2 ANALYSIS

As with the previous two chapters, chi-square tests were used to determine the *key variables*—those which were used significantly more in one author over another (Baker, 2006) with the conventional significance threshold of $p<0.05$—which then guided the qualitative analysis. Because chi-square tests become too complex and difficult to interpret with multiple factors and levels (Grant et al., 2017), only two authors were compared at a time. Thus, just like chapter 4, each author was compared to every other author resulting in six total pairs.

Since the register features of the writings from each author were fairly similar, they were treated as one text for the analysis. That is, the total word counts of the combined writings for each author were used for normalization, rather than normalizing the counts for each shorter text. (For the coding, however, they were treated separately; this primarily affects decisions about relative *upscaling* or *downscaling* of tokens within *graduation*.) Variable frequencies were normalized just as they were for the previous two chapters because of the range in total word counts. For *attitude* and *graduation,* this was done per 500 words as the lowest word count was 521; for *engagement,* a decision was made to normalize per 100 instances, despite two authors have counts just under 100 (AC had 88 and JH had 92). Typically, normalizing up is avoided wherever possible, but in this case, the alternative was to normalize per 80 or per 90 instances, which was deemed unreasonable when the counts were so close to 100.

6.2.1 ATTITUDE

As was outlined in chapter 3, Appraisal provides the means to analyze in great detail the patterns of linguistic resources authors use to express their *stances* (Martin & White, 2005). The system of *attitude* encompasses the resources used to convey the core feelings of

[8] Langman transcribed the journal entries and note.

those stances and is divided into three types—*affect, judgment,* and *appreciation. Affect* is considered to be at the core, covering **personal** emotions while *judgment* and *appreciation* **institutionalized** feelings, i.e., ones that have been shaped by society. *Judgment* concerns feelings of praise/condemnation or admiration/criticism directed at the behaviors of oneself and others and *appreciation* concerns feelings directed at 'things' and their value (Martin & White, 2005, p. 45). Each *attitude* type can then be further divided into categories that help better distinguish between the kinds of evaluations being made. There are additional variables that can be coded for every *attitude* type: *polarity, explicitness, appraiser,* and *appraised*.

Polarity distinguishes between positive and negative evaluations (Martin & White, 2005) and was expanded for this chapter and the subsequent chapters to include negated versions of both. *Explicitness* differentiates between attitudes that are conveyed directly through the word or phrase used (*inscribed*)—such as with *happy* or *successful*—and those that are implied and thus require shared knowledge or context to interpret (*invoked*), such as metaphors. In other words, *inscribed* tokens rely on a word's **denotation**, or its dictionary definition, and *invoked* tokens rely on **connotation**, or the positive or negative value it has been assigned by society. Coding for the *appraiser* makes it possible to not only see how the authors themselves view the world, but also their perception of how others view it and coding for the *appraised* makes it possible to track the distribution of inward and outward directed evaluations. Unlike the previous analyses, the 'we' option in both of these variables was removed as there were only 9 tokens in the entire dataset (out of 695).

As discussed in chapter 3, the category of *valuation* within *appreciation* can be usefully subdivided into the five categories of meaning traditionally found under *judgment*: *normality, capacity, tenacity, propriety*, and *veracity* (Hurt, 2020). Since it is the same categories of meaning, simply directed at different stance objects, the frequencies from *judgment* and *valuation* were combined for the chi-square tests and the combined frequencies are shown in Table 6.3 below. It should be noted that the *judgment* and *valuation* frequencies were also tested separately, but because it is the same types of meanings being employed, it seemed important to examine the overall distribution of the five categories, then discuss the more specific distributions in the qualitative analysis where relevant.

Table 6.3 shows the between-author comparisons for all of the *attitude* variables. The columns represent each of the four authors, the rows represent the different *attitude* variables, and the cell values are the normalized frequencies of the variables per 500 words. The shaded cells indicate where that author used a significantly higher proportion of the given variable (at the level of at least $p<0.05$) than the author denoted by the superscript.

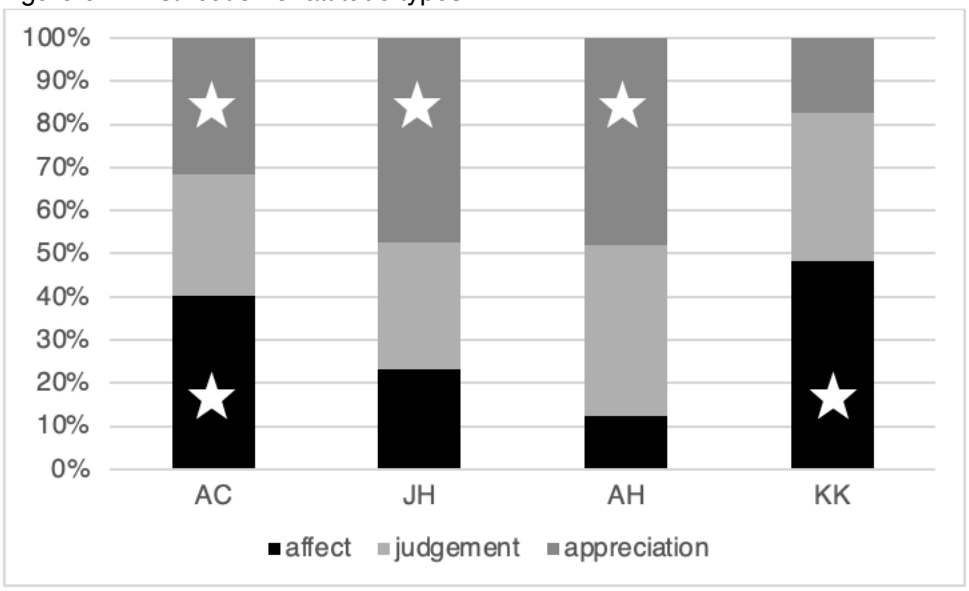
Table 6.3: Between-author comparisons for attitude

		AC	JH	AH	KK
Attitude	*affect*	34.46$^{JH, AH}$	37.43	12.10	52.25$^{JH, AH}$
	judgment	24.19	47.98	38.72	37.10
	appreciation	27.13^{KK}	76.78^{KK}	46.95^{KK}	18.81
Affect	*un/happiness*	8.80	9.60	4.84	17.24
	dis/satisfaction	4.40	2.88	1.94	5.75
	in/security	1.47	10.56^{AC}	1.45	10.97^{AC}
	dis/inclination	19.79	14.40	3.87	18.29
Judgment (*incl. valuation*)	*normality*	2.93	13.44	10.65	6.79
	capacity	18.33^{AH}	38.39	18.88	18.29
	tenacity	2.20	25.91$^{AC, AH, KK}$	7.26	3.13
	propriety	10.26^{JH}	2.88	31.46^{JH}	15.67^{JH}
	veracity	1.47	12.48	9.68	1.04
Appreciation	*reaction*	1.47	2.88	3.87	2.09
	composition	14.66^{AH}	28.79^{AH}	3.87	8.88^{AH}
	valuation	11.00	45.11	39.21^{AC}	7.84
Polarity	*positive*	43.26^{KK}	57.58	45.98	35.01
	negative	36.66	84.45	43.56	51.20
	negated-positive	5.13	11.52	5.32	17.76$^{AC, JH, AH}$
	negated-negative	0.73	8.64	2.90	4.18
Explicitness	*inscribed*	70.38	149.71	87.12	84.64
	invoked	15.40^{JH}	12.48	10.65	23.51^{JH}
Appraiser	*writer*	82.11	156.43	76.96	93.00
	other	2.93	4.80	20.33$^{AC, JH}$	14.11$^{AC, JH}$
Appraised	*self*	20.53^{AH}	50.86^{AH}	8.71	32.92^{AH}
	other	61.58	108.45	87.61^{JH}	75.24

Frequency per 500 words

As this table shows, significant differences occurred at the broadest levels of *affect* and *appreciation*, though not *judgment*, and further differences occurred at the lower levels, as well. First addressing the broad-level differences, it appears as though all four authors employed *judgment* at similar rates, accounting for between 30% and 40% of total *attitude*. For *affect*, AC and KK used significantly higher proportions than JH and AH, and AC, JH, and AH all used significantly higher proportions of *appreciation* than KK. Figure 6.1 below shows that JH and AH actually used almost equal proportions of *appreciation* (accounting for nearly half of their total *attitude*) and used very little *affect*. AC and KK, on the other hand, used more *affect* than *appreciation*, though the difference was slightly less pronounced for AC who used all three *attitude* types at very similar rates. The stars on the graph indicate the key variables—i.e., those for which the proportion used by that author is significantly higher than at least one other author.

Figure 6.1: Distribution of attitude types



Percentage of total *attitude*

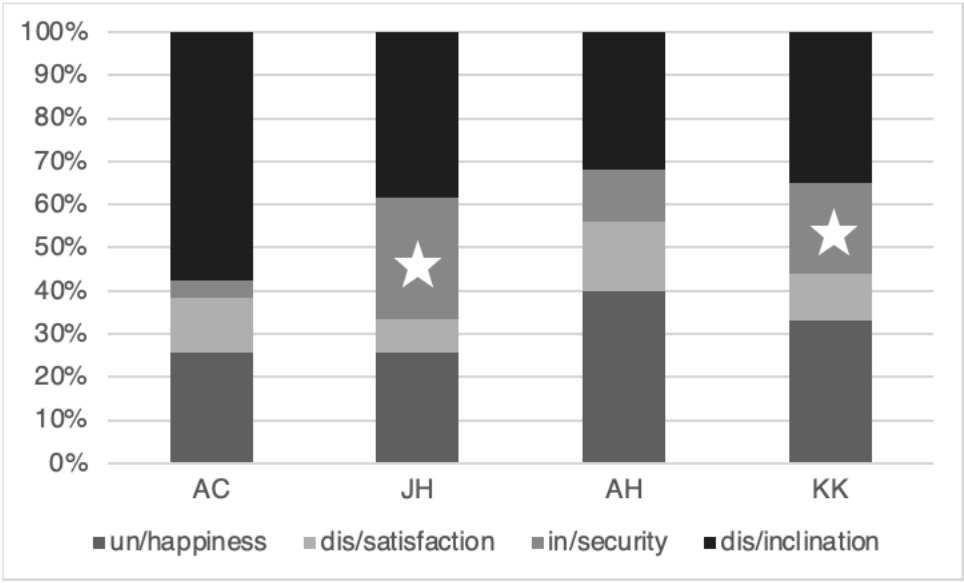
Before delving into each system, a few comments on the polarity variables are warranted, specifically the two negation variables. Each of the authors used negation to some extent, but the context in which it occurred and the effect it had varied. While KK's proportion of *negated-positive* evaluations was significantly higher than all three other authors, both he and AC used them to negatively evaluate themselves and the things they **lack** in their lives. For example, AC talks about how he *can't even cry* and that he *do[es]n't deserve anyone* and how people like him *can't change*. Similarly, KK talks about how his head *just doesn't work right,* how *no one will* help him, how he had *never been happy* and had *no other choice* but to kill his parents and commit his attack. JH, on the other hand, used negation to describe the lack of things that would or could present obstacles to his goals, such as *no more fear*, *no consequence, love gone*, or *no reason to seek self-actualization.* Finally, AH's use of negation was more varied and while there were some self-evaluations (e.g., *I am incapable of loving them* or *I don't belong with them*), they were mostly evaluations of others or external phenomena which served to frame his actions in a more positive light. For example, saying that *evil does not exist* or that *there are no such things as "universal evils"* or that *you don't have to live* or *endure this harsh and evil world*.

Affect

The only significant difference within *affect* was due to JH and KK both using a significantly higher proportion of *in/security* than AC. As Figure 6.2 below shows (with stars indicating the key variables), AC used very little *in/security*, and instead opted for mostly *dis/inclination* (accounting for over half of his total *affect*) and *un/happiness*. For AC, AH, and KK, in fact,

dis/inclination and *un/happiness* were the most common *affect* types; for JH, *in/security* slightly outnumbered *un/happiness*.

Figure 6.2: Distributions of affect types



Percentage of total *affect*

In/security can be used for a variety of emotions, from expressing anxiety or unease to declaring one's (un)certainty about a proposition. In JH's case, many of these tokens were negative, often referencing his *anxiety* and *fear* (which is typically coded as *dis/inclination*, but can be coded as *in/security* when directed toward a realis stimulus; Martin & White, 2005). In many cases, these feelings were represented as obstacles that he needed to overcome in order to achieve his goals. KK similarly used *in/security* often to talk about his anxieties and uncertainties about his life and about his relationship with the world, saying *I sit here all alone* and *I don't know what is happening* and *I can't eat…I can't sleep*. Along with the other *affect* resources, KK depicted a particularly negative self-view and worldview; he felt something was wrong with him, but believed others would not help him.

The category of *dis/inclination* can be used to communicate feelings about as yet unrealized events or actions, ranging from desiderative *want* or *wish* to modals of intent like *will* or *have to* (Mardigian, 2008, as cited in Gales, 2010, p. 26). For AC, declarations of intent were common and demonstrated a high level of commitment to the action that followed—and further suggested a level of eagerness to enact his plan—such as in lines 109 and 110 in Table 6.4 below. Interestingly, unlike the other authors, many of the declarations of intent or of desire were about harming himself rather than others, reflecting the suicidal ideation noted by the psychiatrists who assessed him (e.g., the example in line 111). JH did not use many tokens of *dis/inclination*, and when he did it was most often referencing fear

(or lack thereof) of something, like in the beginning of line 113, or avoidance of it, like in line 112 and the end of line 113. AH used few tokens of *dis/inclination,* and those referencing his planned attack were about his desire to avoid harm to his family and friends, like the example shown in line 114. Finally, KK used mostly the desiderative meaning, but did have a few declarations of intent in reference to violent actions, like in line 117. The desiderative tokens were more wide-ranging in terms of the 'triggers' of the emotion, such as a repeated general feeling of *hope* about the future (line 115), a desire to be happy (line 116), and a desire to kill others (e.g., *I want nothing more than to put a hole in his head*). He also attributed a few tokens to others to convey a belief that they did not want to help him (line 117). Throughout his writings, he cycled through these various uses of *dis/inclination*, expressing hope alongside deep sadness and a desire to die alongside a desire to kill.

Table 6.4: Examples of dis/inclination

	Example	Author
109	I am **going to** [+inclination] buy a shotgun and I am **going to** [+inclination] commit suicide	AC
110	I **will** [+inclination] also call <redacted> and confess to him what I **will** [+inclination] do. I **have to** [+inclination] do this	
111	I just **want** [+inclination] to die. I **don't want** [negated +inclination] to live like this anymore	
112	And finally, the last **escape** [+inclination], mass murder at the movies	JH
113	No consequence, **no fear** [negated -inclination], alone, isolated, no work for distractions, **no reason to seek** [negated +inclination] self-actualization. Embraced the hatred	
114	As with any crime, family will be at the center of it all, something I **wish** [+inclination] was avoidable	AH
115	The only reason I stay alive is because of **hope** [+inclination]	KK
116	I just **want** [+inclination] to be happy	
117	Help me. **No one will** [attributed negated +inclination]. I **will** [+inclination] kill every last mother fucking one of you	

Un/happiness was the other resource used at high rates by all four authors, accounting for at least a quarter of the total *affect* for each. Generally speaking, many of the tokens of *un/happiness* belonged within the traditional *love/hate* and *happiness/sadness* dichotomies. For AC, they were almost exclusively either about love or his depression. The tokens about love were often *invoked* because they were actions he appeared to view as displays of his affection (though not necessarily seen that way by the general public), such as in the example in line 118 in Table 6.5 below. The negative tokens were more direct, such as explicit references to his *depression* as in line 119. For JH and KK, negative *happiness* seemed to be dominant. In JH's writings, there was a repeated negative sentiment about people in general, like in line 121 when he mentions *hatred* of and *aversion* to people.

Additionally, as seen in line 120, he had a negative view of love, saying that *falling in love* was something he *succumbed to*, as though it is something that should be avoided. Alongside the other *affect* resources, this helps JH portrays himself as being hindered by a number of obstacles, both personal and interpersonal. For KK, many of the mentions of *love* were against a negative backdrop, like in line 123 when he denies the possibility his love for someone would be returned or in line 125 when he says it *isn't real*. Most often, tokens of *un/happiness* were negative, referring to *hate* (which was typically directed nowhere in particular, but expressed as though it were his mood), like in line 122, or to his reaction to rejection like in line 124. This further reinforced the negative self- and world-view KK depicted throughout his texts. Finally, the majority of AH's *un/happiness* were attributed to vague others and set against a negative evaluation of those others, such as in lines 126-127, when he attributes feelings of happiness to others for committing harmful/unethical acts. This helped reinforce the negative portrayal of others, serving to introduce evidence for the depiction of his actions as justified.

Table 6.5: Examples of un/happiness

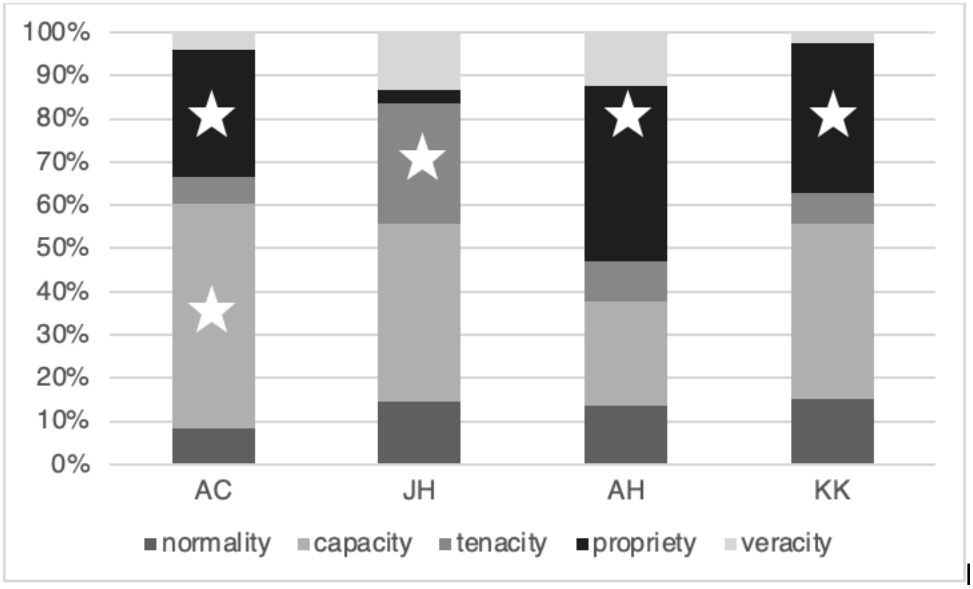
	Example	Author
118	I will tell her that I **would pass by her house** [+happiness] and that I **named my shotgun or rifle after her** [+happiness]	AC
119	I am feeling very **depressed** [-happiness] these days. I drown my **sadness** [-happiness] and **depression** [-happiness] with work, cleaning, and movies	
120	The latest battle I lost was when I finally succumbed to **falling in love** [+happiness]	JH
121	Primary drive reversion to **hatred** [-happiness] of mankind. Intense **aversion** [-happiness] of people, cause unknown	
122	I **hate** [-happiness] myself for what I've become… I **hate** [-happiness] every person on this earth	KK
123	I think I **love** [+happiness] her, but she **could never love** [attributed negated +happiness] me.	
124	I feel like my **heart has been ripped open and ripped apart** [-happiness].	
125	**Love** [+happiness] isn't real, only **hate** [-happiness] remains.	
126	A world where most people can only find **happiness** [attributed +happiness] or **enjoyment** [attributed +happiness] in doing drugs, drinking alcohol, and making your fellow man suffer	AH
127	People kill, people steal, people stain the world with sins **for fun** [+happiness]	

Judgment

Table 6.3 shows that the only significant between-author differences for the combined *judgment* and *valuation* resources occur within *capacity* (AC, JH > AH), *tenacity* (JH > AC, AH, KK), and *propriety* (AC, AH, KK > JH). These same categories were also found to

significantly differ within *valuation* and *judgment* separately in mostly the same ways, except *tenacity* was only significant within *judgment* and for *capacity*, the difference between AC and AH was significant within *judgment* and the difference between JH and AH was significant within *valuation*. Figure 6.3 shows the distribution of the combined resources for all four authors, with the stars indicating the variables for which the combined *judgment* and *valuation* frequencies represented a significantly higher proportion for that author than at least one other author. What is immediately evident is that for AC, AH, and KK, the most used resources are *capacity* and *propriety*, but for JH the most used are *capacity* and *tenacity*.

Figure 6.3: Distributions of combined judgment and valuation



Percentage of total *judgment+valuation*

With *capacity,* assessments were typically made about mental or physical capabilities as well as the giving (e.g., helping someone do something) or removing of capacity (e.g., causing someone harm). Consider the examples shown in Table 6.6 below. For AC, the majority of *capacity* tokens were within *negative judgment*, either in reference to violent actions that would end his or someone else's life by his hand, like in lines 128-129 or to his own mental capacity like in line 130, in which he also states the need for people 'like him' to be *sacrificed*. For JH, *-capacity* tokens were primarily about removal of capacity (like in line 132), but also included direct assessments of incapability, like in line 133, or when he *succumbed to falling in love* as shown in line 120 above. Within *valuation,* these include examples, like that seen in line 131, or the contrast between his *biological self* [-valuation: capacity] and his 'real' *thinking* self [+valuation: capacity]. The reason these were coded under *valuation* instead of *judgment* was because the way they were introduced removed their agency; he did not seem to be describing himself, per se, but rather pieces of his being.

The *+capacity* tokens for JH occur mostly within *judgment*, co-occurring with or accompanying at times evaluations of *+tenacity*, especially when referring to his abilities to achieve certain hypothetical goals, like in line 133.

Table 6.6: Examples of capacity via judgment and valuation

	Example	Author
128	I am going to **commit suicide** [-capacity]	AC
129	I just **killed** [-capacity] my father	
130	I know I am **sick** [-capacity]. What do you do with **sick people like me** [-capacity]… you have to **sacrifice** [-capacity] them	
131	Despite my biological **shortcomings** [-valuation: capacity] I have fought and fought [+tenacity]	JH
132	Decided to dedicate [+tenacity] life to **killing** [-capacity] others so that I **could live** [+capacity]	
133	Fear of **failure** [-capacity] drove determination [+tenacity] to **improve** [+capacity/+tenacity], **better** [+capacity/+tenacity] and **succeed** [+capacity] in life	
134	They worked hard to **achieve freedom** [+capacity] in heaven	AH
135	They also possessed three **crucial** [+valuation: capacity] things a person **needs** [+valuation: capacity] in order to become a **god** [+capacity]: **intelligence** [+valuation: capacity], ideology, and malice (or cruelty)	
136	I could say life is evil, because it **blocks** [-valuation: capacity] everyone in the world of heaven where all is good	
137	I want to be something I **can never be** [negated +capacity]	KK
138	I want to **kill** [-capacity]. I want nothing more than to **put a hole in his head** [-capacity]	
139	I want to **die** [-capacity]. I want **to be gone** [-capacity]	

AH, who used lower proportions of *capacity* than the other three authors, rarely talked about incapacitating others himself, though he did attribute such violent acts to others, saying *people kill* and they make *their fellow man suffer*. He also uses *-capacity* via *valuation* to talk about 'things' which presented obstacles, such as in line 136 when he says *evil blocks everyone* from getting to heaven. Many of the *+capacity* tokens both via *judgment* and *valuation* were assessments of people as highly capable (as shown in line 134 or the reference to people becoming *a god* in line 135) or traits that would provide someone with capacity or imply the possessor is capable, as shown in line 135 in the reference to *crucial* things people need to *become a god*. For KK, all of the *capacity* tokens were within *judgment*; *-capacity* consisted of many tokens referring to harm he planned to cause others, as shown in line 138, as well as assessments of incapability like in line 137. In the note he wrote after killing his parents, he also expressed a desire to die, though not necessarily by his own hand, as shown in line 139.

Tenacity was not used by the other authors nearly as much as it was by JH, who made a number of assessments within *judgment* that were, as mentioned above, double-coded as *capacity* and *tenacity*—i.e., traits or behaviors that imply both capability and effort (or a lack thereof). There were also single-coded tokens assessing his own perseverance and bravery, such as saying he has *fought and fought [,] always defending against pre-determination* or his determination to *face death* and *dedicate life to killing others.* The *+tenacity* tokens via *valuation* were similarly centered around determination, such as saying the *real me is fighting the biological me* and *there is one more battle to fight with life*. In terms of *-tenacity*, there were not as many tokens; those that were self-directed were about weakness in some way, such as how he *succumbed to falling in love* or aimed to *deflect incriminating questions* from his therapists or had an *obsession* [-valuation: tenacity] with the idea of killing others. The few tokens that were other-directed were negative assessments about a lack of persistence from these others when inquiring about his mental state. For instance, after declaring he would avoid revealing his plans to his therapist, said *oddly, they don't pursue or delve further into harmful omissions* indicating surprise at the apparent lack of diligence.

The other three authors used very few tokens of *tenacity* (AC only used three between *judgment* and *valuation*). KK used it in a similar way to JH to assess himself as someone who persevered in life despite his 'depression' and 'hatred', saying *I try so hard every day* and *the only reason I stay alive is because of hope.* AH, conversely, used *tenacity* resources more often to assess others, and paired these with assessments of *propriety*, as shown in Table 6.7 below.

Table 6.7: Examples of tenacity + propriety combinations in AH's text

	Example	Author
140	They **worked hard** [+tenacity] to achieve freedom [+capacity] in **heaven** [+valuation: propriety]	AH
141	…they saw something **wrong** [-valuation: propriety] in the world and moved away the **herd of sheep** [-tenacity] to **do something about it** [+tenacity]	
142	I'm only explaining my **ideology** [+valuation: propriety] so people **don't jump to conclusions** [negated -tenacity]	
143	All public school is is **trash** [-propriety] teaching **trash** [-propriety]. **Laziness** [-valuation: tenacity] teaching **ecstasy** [-valuation: capacity]. **Selfishness** [-valuation: propriety] teaching **addiction** [-valuation: capacity]	

When evaluating people he respected, *tenacity* often appeared alongside *+propriety,* such as in lines 140 and 141, which reference the hard work of the Columbine shooters. He then repeatedly referred to the Columbine shooters (and others, like Vladimir Lenin) as *gods* [+propriety/+capacity], like in the example in line 135 above, claiming they possessed the

necessary traits to do so, which included *intelligence, ideology* [+valuation: propriety] *and malice (or cruelty)* [-valuation: propriety].

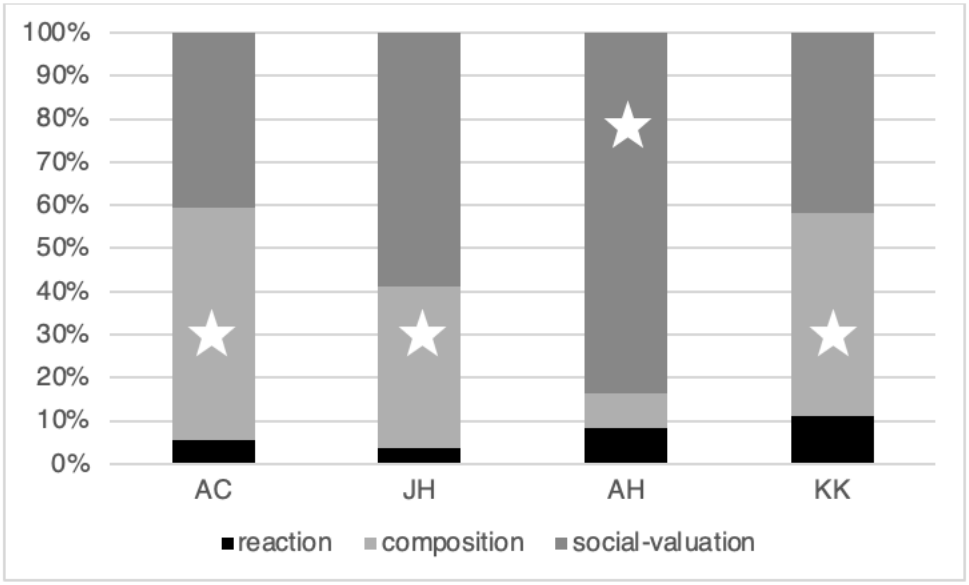
When evaluating those outside of the few he 'admired', AH's assessments of others were typically negative and over-generalized, like in line 143 when he refers to all the problems he sees with public school. He later gave reasons for why he felt the need to explain his 'ideology', as shown in line 142, later adding that *a dozen different things will be speculated* [-tenacity] *to be at fault* after he commits his attack. The evaluations of others' 'impropriety' were also prevalent without being combined with *tenacity,* saying for example, *the only way is for these evil people to accuse* [attributed -propriety] *other people of being "evil"* or that *people kill, people steal, people stain the world with sins for fun*. Over the course of the letter with this combination of resources, he depicts a backwards society where people who commit violent acts are 'righteous' (god-like, even) and everyone else are the 'bad guys' who are hasty and harsh in their judgments.

For AC and KK, there was a slightly different pattern that emerged, with both self- and other-directed assessments of *propriety*. For AC, a number of these were directly and indirectly used to evaluate himself, saying the *evil twin brother* in his fantasies *represents my dark side* [-valuation: propriety] and that he *do[es] not deserve anyone* and even expressing some remorse for certain actions including killing his father. KK evaluated himself and others in a similar way, saying that his attack is how he *will repay* [+propriety] *all you mother fuckers* [-propriety] *for all you put me through* [-propriety] while also calling himself *evil*, claiming that he *didn't deserve* his parents, and stating *I hate myself for what I've become*. The use of *repay* is particularly interesting because it suggests that he views his actions as positive and justified, instead of using a more negative token like *revenge* which would imply impropriety on his part and the part of those who wronged him.

Appreciation

Table 6.3 shows that AC, JH, and KK used significantly higher proportions of *composition* than AH and AH used a significantly higher proportion of *valuation* than AC. As is shown in Figure 6.4 below (with the stars indicating the key variables), AC and KK have very similar distributions, both using *composition* roughly half of the time. Theirs differ slightly from JH—who uses *composition* about 38% of the time and *valuation* about 58% of the time—and more drastically from AH, who uses *valuation* over 80% of the time and the other two only about 8% of the time. Since *valuation* has been discussed in the previous section and *reaction* is very rarely used by all four authors, the focus here is on *composition.*

Figure 6.4: Distributions of appreciation types



Percentage of total *appreciation*

Composition is a versatile variable, able to capture a wide range of related meanings. At its core, it is used for coding evaluations of *complexity* and *balance* (Martin & White, 2005), which can include assessments of how (il)logical or (in)elegant something is. As detailed in chapter 3, Gales (2010) and Hurt (2020) have also proposed this category be expanded for use on forensic texts to capture evaluations having to do with *order* and *disorder* (especially that which is caused by weapons).

Apart from AH, who rarely used *composition*, negative tokens outnumbered positive. When *+composition* was used, it was often for more straightforward assessments of how well put together, logical, or coherent something was. For AC, these mostly centered around things being (or him making them be) how he envisioned them, such as *I gave Arlene* [shotgun] *a complete makeover* or *everything is falling into place* or *just putting the finishing touches on my autobiography*. This use of *composition* suggested a belief that his plan was well-structured and was going well, implying a level of confidence that it would succeed. For JH, *composition* was used for assessments of how well things functioned or soundness of ideas, such as talking about what was needed to *rehabilitate* [+composition] *the broken mind* [-composition], including his soul being *eviscerated* [-composition], or his *ideal* [+composition] *enactment of hatred*. It worked in conjunction with the *judgment* and *valuation* resources discussed above to portray him as lacking something that he must work to regain. AH employed very few tokens of *+composition* but used it to depict his actions or views as rational and defensible, referring to his attack as *art* or talking about his *reasoning for such a "monstrosity"*. Even with the minimal use, AH further depicted his actions in a positive light suggesting they were well-reasoned and justified. Finally, KK also had very few

positive tokens, using them to evaluate things the logic or clarity of something, such as *taking the easy way out* or that *it is clear that no one will help me*. The negative tokens most often referenced weapons (e.g., *Semtex*) or literal and metaphorical damage, such as *blowing the school up*, saying his *head just doesn't work right*, or his heart being *ripped open and ripped apart* by a girl's rejection. This added to the negative self-view and the negative view of others; not only was something wrong with him, but the world had caused him harm, sentiments which served to justify his actions.

6.2.2 ENGAGEMENT

As detailed in chapter 3, the system of *engagement* comprises the resources for communicating commitment to or certainty about a proposition and for the author to align or disalign (i.e., agree or disagree) with their own propositions or with other persons or viewpoints (Martin & White, 2005). The system approaches utterances from the dialogic perspective, which emphasizes the relationship between the speaker/writer and the "background of other concrete utterances on the same theme…made up of contradictory opinions, points of view and value judgments" (Bakhtin, 1981, p. 281). It is made up of two broad types of utterances: *monoglossic* (which make no reference to other viewpoints) and *heteroglossic* (which either *expand* or *contract* the dialogic space to alternative viewpoints; Martin & White, 2005).

Monoglossic utterances, in this research, are considered to be rare, partly based on Gales' (2010) argument that when there is an expectation of disagreement with or dissent from the audience, utterances can no longer be said to contain information that is unproblematic or widely-accepted, as is an essential feature of such utterances (White, 2003, p. 263). The argument here is that the texts used in this chapter (and other chapters) were all likely produced under the assumption that the information contained within them was not "generally 'known' or 'accepted' in the… communicative context" and that the audiences did not share "the same knowledge, beliefs and values as those relied upon by the proposition" (White, 2003, p. 263). This is because all of the texts were written either to plead the case to their audience for their version of events—which is necessarily set against the backdrop of other versions of events—or to recount information otherwise unknown to the audience (i.e., information not known or accepted in that communicative context).

Instead, *heteroglossic* utterances are the most often encountered type, which as mentioned above, are divided into those that *expand* the dialogic space and those that *contract* it (Martin & White, 2005). There are two main categories of *expansions*: *entertain* and *attribute*. *Entertained* propositions present the viewpoint as one possibility of many,

while *attributed* propositions present the viewpoint as belonging to someone else, either with (*distance*) or without (*acknowledge*) an indication as to the author's position on the attributed proposition. *Contractions* are divided into two broad subcategories—*disclaim* and *proclaim*—which are each divided into further categories. *Disclaimed* propositions are either *denied* (i.e., one position is invoked and then rejected) or *countered* (i.e., the authorial position supplants or replaces an expected alternative). *Proclaimed* utterances, in the original framework, can be *pronounced* (i.e., interpolation, emphasis, or intervention by the author to present the proposition as highly warrantable), *concurred* (i.e., the author presents themselves as sharing knowledge with the audience or a proposition as being logically or sequentially connected to surrounding propositions), or *endorsed* (i.e., externally-sourced propositions that are construed as undeniable). A fourth type of *proclamation,* however, is possible, as acknowledged by O'Donnell (2019) and White (2003). *Justified* propositions present viewpoints as "justified, substantiated or otherwise argued for" (White, 2003, p. 274) through explicit markers like *because, therefore, for this reason* or other linguistic formulations that achieve the same effect implicitly.

As briefly mentioned above, frequencies for *engagement* resources are normalized per 100 instances. The *monoglossic* and *endorse* variables were removed, though, because there was only one *monoglossic* token in the entire dataset and zero tokens of *endorse*. Additionally, the further categories of *attribute—distance* and *acknowledge*—were not included in the analysis separately because *distance* tokens were especially rare, and apart from AH, *attribute* was not used often. Table 6.8 contains the results from the between-author comparisons; the columns represent the four authors, and the rows represent the *engagement* variables. The shaded cells indicate where that author used a significantly higher proportion of the given variable (at the level of at least $p<0.05$) than the author denoted by the superscript.

Table 6.8: Between-author comparisons for engagement

	AC	JH	AH	KK
contract	81.11	76.29	68.18	60.12
expand	18.89	23.71	31.82	$39.29^{AC, JH}$
disclaim	22.22	27.84	26.52	28.57^{AC}
proclaim	58.89	48.45	41.67	31.55
deny	8.89	19.59	14.39	15.48
counter	13.33	8.25	12.12	13.10
concur	8.89	3.09	9.09^{JH}	5.36
pronounce	46.67	42.27	25.00	25.00
justify	3.33	3.09	7.58	1.19
entertain	17.78	21.65	15.91	35.12
attribute	1.11	2.06	$15.91^{AC, JH, KK}$	4.17

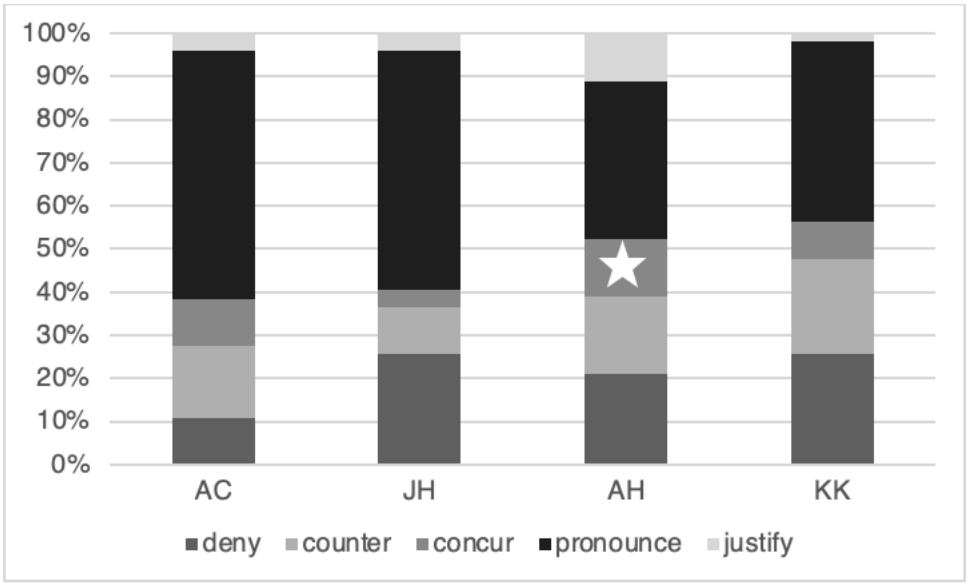
Frequency per 100 instances

There were not many significant between-author differences within *engagement* and only KK and AH were found to have significantly higher proportions of certain variables over other authors. At the broadest levels, all four authors were found to use *contraction* resources most often, but KK employed them the least (only about 60% of the time) while AC and JH employed them the most (about 75-80% of the time). This means the authors opted generally to present propositions in a way that closed off rather than opened up the dialogic space to alternative viewpoints (Martin & White, 2005).

Contractions

Despite using the lowest proportion of *contractions* overall, KK used the highest proportion of *disclaim* resources, accounting for just shy of one-third of his total *engagement* tokens and nearly half of his total *contraction* tokens. For the other three authors, on the other hand, *proclaim* resources made up the majority of *contraction* tokens, with AC and JH employing a similarly high proportion of *pronouncements* and AH employing more *justifications* than the other authors. These distributions can be found in Figure 6.5 below, where the star is used to indicate the key variable.

Figure 6.5: Distribution of contraction types



Percentage of total *contractions*

Starting with AC, *pronouncements* were used to make declarations relating to enacting his plan was the most informative. Consider the examples in Table 6.9 below:

Table 6.9: Examples of pronouncements in AC's texts

	Engagement token	Author
144	*I am going to do it!* [pronounce]…*I am going to buy a shotgun* [pronounce] *and I am going to commit suicide* [pronounce]	AC
145	*On August 29, my depression will end permanently* [pronounce]	
146	*Today is the big day for Operation Columbine* [pronounce]. *It is time that the world be reminded of Columbine* [pronounce] *I will die today!* [pronounce]	

These examples contain declarations of intent and demonstrate an interesting shift that occurred from *be going to* in the earlier entry (line 144) to *will* in the later entries (lines 145-146). Lock (1996) drew a distinction between intent expressed via *will* and intent expressed via *be going to*, stating that the former implies the decision was "made more or less at the moment of speaking" while the latter implies "the speaker has already made up his or her mind to carry out the action" (p. 210). It does not appear that this was necessarily the case here, however, it might be argued that the shift to using *will* indicates a slight decrease in his confidence that he will follow through or be successful with the proposed action. This is partially supported by the fact that even within the first entry, *be going to* was used at the beginning to declare his intent to commit suicide, but he switched to *will* to express his intent to declare his feelings for his crush and call someone to confess what he was planning to do, actions which arguably would have increased the chances of someone thwarting the attempt.

AC also demonstrated an interesting pattern of describing some as aspect of his experience or expressing a belief through *expansions* or *proclamations* and then following it with a *denial* or *counter*, which served almost as tacit explanations for his actions. For example:

Table 6.10: Examples of disclaim resources in AC's texts

	Engagement token	Author
147	*I drown my sadness and depression with work, cleaning, and movies* [pronounce]. *Still, it just keeps coming back* [counter]	AC
148	*She is so beautiful* [pronounce]. *I don't deserve her* [deny] *though* [counter] *I do not deserve anyone* [deny]	
149	*I assume that he represents my dark side* [entertain]. *I can't even cry* [deny]. *The anti-depressant I am taking doesn't seem to be working* [deny]	
150	*I know I am sick* [concur]. *What do you do with sick people like me* [entertain]. *They can't change* [deny]. *you have to sacrifice them* [entertain] *bad things could happen* [entertain]	

All of the above examples contain a pessimistic outlook and a negative depiction of himself or his experience and suggest that despite his efforts, there was no remedy that would alleviate the negative feelings. In depicting his experience so negatively and as essentially

resistant to intervention, he implies reasons for being so intent on dying, though not necessarily why he decided others would die with him.

JH used *pronouncements* to describe his reality (*entertainments* then helped depict his fantasy situations, as is discussed more below), which were oftentimes followed by *counters* and *denials* such as in the following examples:

Table 6.11: Examples of contractions in JH's texts

	Engagement token	Author
151	*The real me is fighting the biological me* [pronounce]. *The real me, namely thinking me does things not because I'm programmed to* [deny] *but* [counter] *because I choose to* [justify]	JH
152	*No more fear* [deny]. *No more fear of failure* [deny]. *Fear of failure drove determination to improve, better, and succeed in life* [pronounce]. *no fear of consequences* [deny]. *primary drive reversion to hatred of mankind* [pronounce]	
153	*Prevent building a false sense of rapport* [pronounce]. *speak truthfully and deflect incriminating questions* [pronounce]. *oddly* [counter] *they don't pursue or delve further into harmful omissions* [deny]	

In line 151, JH is making a distinction between two sides of himself, and in using the *denial* and *counter*, he implies that the *biological* self is a completely separate entity from his conscious self which does things because of programming (implying a lack of *capacity*) instead of choice. This theme of aspects of himself which are not necessarily within his control, or which fell short of his expectations, is repeated throughout the entries, referring to his mind as *broken* and talking about *unknown* causes to his *aversion of people*. These uncontrollable feelings or aspects of himself were also portrayed as obstacles which he had a determination to overcome. The assertion about a divided sense of self is further reinforced with the contrast represented in lines 152 and 153. In line 152, JH depicts changes in circumstances, in which the motivations for his non-violent existence are supplanted by a more aggressive one (his *hatred of mankind*). As a result, his goals and his reality shifted from one extreme to another. Then, in line 153, he *pronounces* that he took steps to ensure his plans would not be thwarted by his therapists. Though the *counter-denial* pair immediately after suggests a level of surprise that they did not catch on to his evasions, which may indicate some part of him was not as certain about his plans. Overall, in the entries, JH depicts himself as experiencing various shifts in his reality and experience that he could not explain but was determined to resolve.

AH used *justifications* more than any other author, which either served to provide reasons for his actions or evidence for his assertions. For instance:

Table 6.12: Examples of contractions in AH's text

	Engagement token	Author
154	*I realize* [concur] *people value their lives* [acknowledge] *and am taking revenge on them for being so goddamn stupid* [justify]	**AH**
155	*This whole event would never occur* [deny] *if it weren't for Eric Harris and Dylan Klebold of Columbine High School* [justify]	
156	*Most people in the world are hypocrites* [pronounce] *because* [justify] *they only care about themselves* [acknowledge]	
157	*As I mention heaven* [justify] *some will say religion* [acknowledge]	
158	*I am not trying to justify my actions whatsoever here* [deny]. *I'm only explaining my ideology* [counter] *so people don't jump to conclusions* [justify]	

Lines 154-155 represent some of the reasons AH offered for his actions, citing both his negative view of others and his positive view of previous mass shooters. Lines 156-158 all represent reasons for the statements that preceded or followed. In line 156, he declares a belief about others which is then *justified* with an assertion about their personal feelings. Similarly, in line 157, AH makes a claim about what others will think in the future, with the preceding utterance containing the evidence *justifying* that claim. Finally, in line 158, AH *denies* the proposition that his letter is for justifying his actions (implying an assumption that others will view it that way) and uses the *justification* to present an alternative reason. Despite the claim in line 158, though, the *justifications* provided reasons for his actions and evidence for his assertions (evidence which portrayed others negatively and him and his actions as well-reasoned).

KK, despite using the lowest proportion of *contractions*, used the highest proportion of *disclaim* tokens. Both *counters* and *denials* served to reinforce the negative portrayal of himself and his reality, such as in the following examples:

Table 6.13: Examples of contractions in KK's texts

	Engagement token	Author
159	*I want to be something* [entertain] *I can never be* [deny]. *I try so hard every day* [pronounce], *but in the end* [counter] *I hate myself for what I've become* [pronounce]	**KK**
160	*I know I should be happy with what I have* [concur] *but I hate living* [counter]	
161	*There is one person that could help* [pronounce] *but* [counter] *she won't* [deny]. *I need to find someone else* [entertain] *I think I love her* [entertain] *but* [counter] *she could never love me* [deny]	
162	*I want to be gone* [entertain] *but* [counter] *I have to kill people* [pronounce]…*why did God do this to me* [entertain]. *I have never been happy* [deny]	

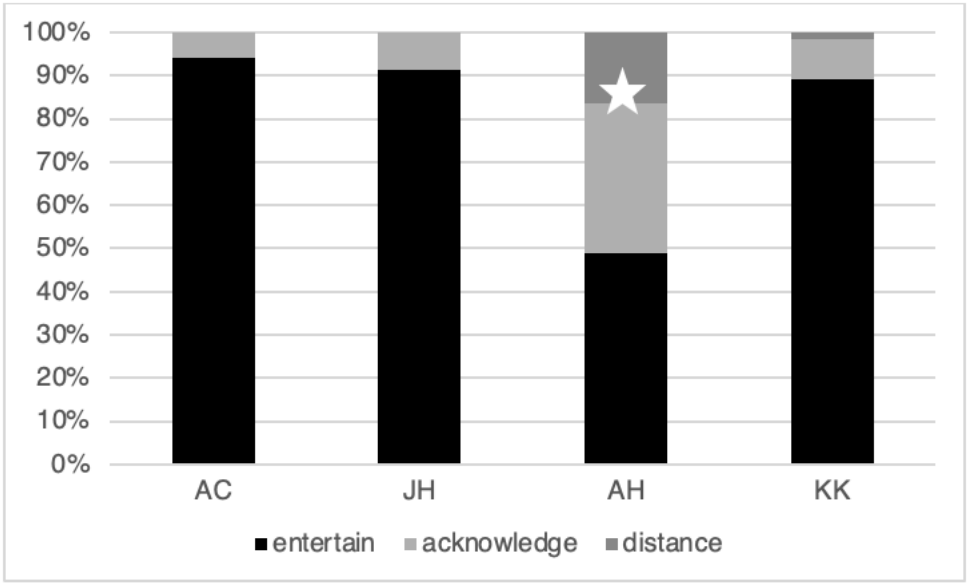
Evident in all of the examples is KK's negative view of himself and his reality. In lines 159 and 162, he appears to imply that he did not necessarily condone his actions or feelings but

also that he did not feel he was in complete control of them. This sentiment is reinforced in line 160, where he states that he thinks he should feel differently, but despite this he is still miserable. Then, in line 161, he first claims that another person is unwilling to support him, then shifts to describing himself as unlovable. This pattern of depicting himself and others in a negative light is consistent throughout KK's writings and ultimately serves to place blame on both himself and others for his later violent acts—though, he avoids taking full responsibility by framing his feelings and actions as being, to some extent, out of his control.

Expansions

In terms of *expansions, entertainments* dominated for AC, JH, and KK, but *attributions* dominated (slightly) for AH. In fact, AH's proportion of *attribution* was found to be significantly higher than all three of the other authors (see Table 6.8). As is evident in Figure 6.6, the majority of the *attributions* in the dataset were *acknowledgements* (the star indicates the combined *attribution* types represented a significantly higher proportion for AH than at least one other author).

Figure 6.6: Distributions of expansion types



Percentage of total *expansions*

AC only used one token of *acknowledge* to recognize the effect he believed his actions had on another person, saying he felt sorry *for scaring her*. The remaining *expansions* were *entertainments* which were mostly used to describe irrealis events. This included conveying what he wanted or believed and to acknowledge possible situations as the first part of a conditional. Consider the following examples in Table 6.14 below:

Table 6.14: Examples of expansions in AC's texts

	Engagement token	Author
163	*I plan to commit suicide on either April 20th or April 21st* [entertain]…*if <redacted> is there* [entertain] *I will wait until he leaves* [pronounce]	**AC**
164	*If I was mentally well* [entertain] *maybe I could've told her my feelings* [entertain]	
165	*What do you do with sick people like me* [entertain]. *They can't change* [deny]. *you have to sacrifice them* [entertain]. *Bad things could happen* [entertain]. *We have to learn to sacrifice ourselves* [entertain].	

Line 163 occurred almost immediately after the declarations of intent to commit suicide (i.e., the *be going to* statements discussed above). It suggests that while he had decided by that point that he would *commit suicide*, he had not yet solidified aspects of the plan for how he would do it. The conditional that followed only a few utterances later demonstrated, however, that he had considered certain factors that might interfere with his plan and how to handle them. In lines 164-165, AC reinforces the negative depiction of himself, demonstrating a level of awareness that something was 'wrong' while suggesting an inability to do anything about it. Line 165, in particular, lends support to this, stating that 'people like him' *can't change* (implying a lack of control over their actions) and that the only way to prevent *bad things* is to *sacrifice* (i.e., incapacitate) them.

For JH, *entertainments* were used in a similar way to describe various irrealis events, such as methods of attack he had considered in the past and various possible steps he could take to achieve his *ideal enactment on hatred*. For instance:

Table 6.15: Examples of expansions in JH's texts

	Engagement token	Author
166	*Started as the entire world with nuclear bombs* [entertain]. *Then shifted to biological agent that destroys the mind* [entertain]. *Most recently serial murder via cell phone stun gun and folding knife in national forests* [entertain]. *And finally, the last escape, mass murder at the movies* [entertain]	**JH**
167	*In order to rehabilitate the broken mind* [entertain] *my soul must be eviscerated* [pronounce]. *I could not sacrifice my soul to have a "normal" mind* [deny]	
168	*Can't tell the mind rapists plan* [deny]. *if plan is disclosed* [entertain] *both "normal" life and ideal enactment on hatred foiled* [pronounce]	
169	*Attempt to see if can pass exams as myself and not by fear* [entertain]. *Fail* [pronounce]. *I was fear incarnate* [pronounce]. *love gone* [pronounce]. *motivation directed to hate and obsessions* [pronounce]	

Line 166 represents a pattern that occurred throughout JH's writings in which he described various violent fantasies he had (and later the steps he believed would need to be taken in order to realize those fantasies). In line 167, he conveys what he believes would need to

happen to ‘fix’ his mind, but immediately rejects the possibility. This further reinforces the portrayal of himself as tenacious despite the constant ‘battle’ within him (from the ‘broken’ mind). In line 168, he conveys a desire to keep his plan secret so that he could carry on with his life and plan unincumbered. The mention of wanting to prevent his “normal” life from being affected, though, might suggest that he had not completely made up his mind by that point to follow through with his plans. However, in line 169, it appears that failing his exams served as his breaking point, at which time his decision to follow through with his plans became solidified.

AH used *entertainments* mostly to recognize various future possibilities, which served as part of the evidence for framing his actions as justified. The *attributions* also contributed to this by portraying others as antagonists by presenting what he assumed they believed, felt, or would do. Below are some examples of both *expansion* types in context:

Table 6.16: Examples of expansions in AH's text

	Engagement token	Author
170	*This world would undoubtedly be better* [entertain] *if we were all in heaven* [entertain]	**AH**
171	*When you preach that humans should be nice to each other* [distance] *then you are only concerned about yourself* [acknowledge]. *Makes you an exhibit of hypocrisy* [pronounce]	
172	*Also, people usually exploit each other* [entertain] *if they get enjoyment out of it* [acknowledge]	
173	*The only way is* [pronounce] *for these evil people to accuse other people of being “evil” when they do these things for a just cause* [distance]	
174	*A dozen different things will be speculated to be at fault* [distance]. *as I mention heaven* [justify] *some will say religion* [acknowledge]. *It’s a violent action* [pronounce] *so mental issues and video games will certainly make the news (coincidentally?) right after this* [entertain]	

Lines 170 and 174 contain expressions of a high degree of certainty about, and thus a high degree of commitment to, a proposition. However, as even high probability assessments leave some room for other possibilities, they qualify as *expansions* (Martin & White, 2005). Line 170 set the tone for the remainder of the text, introducing the belief that the world is a bad place, while lines 171-174 depict the people that occupy the world as selfish, exploitative, evil, and judgmental. As a result, he frames his actions as not only justified (because those he harmed ‘deserved’ it), but as a necessary step toward improving this so-called evil world.

Finally, KK used the highest proportion of *expansions* (significantly higher than AC and JH), which were primarily *entertainments.* Most of the *entertainments* included expressions

of his interpretations of and feelings about past and present events as well as beliefs and musings about possible future events. For instance:

Table 6.17: Examples of expansions in KK's texts

	Engagement token	Author
175	*Even though I am repulsive and few people know who I am* [concur] *I still feel* [counter] *that things might, maybe, just a little bit, get better* [entertain]	KK
176	*I have feelings* [concur], *but* [counter] *do I have a heart that's not black and full of animosity?* [entertain]	
177	*I feel like everyone is against me* [entertain] *but no one ever makes fun of me* [counter]	
178	*all humans are evil* [pronounce]. *I just want to end the world of evil* [entertain]	
179	*I have no other choice* [deny]. *what have I become?* [entertain]	

What is most evident in the above examples is KK's negative self-view, which was apparent throughout his writings. At times (like line 175) he expressed a small amount of optimism about the future, but these were rare. Lines 176 and 179 then both reinforce the portrayal of himself as not being keen to commit the violent actions but feeling as though he could not stop it. Lines 177 and 178 then convey his belief that others are mean and immoral (even evil), which help frame his actions as necessary in order to *end the world of evil*. While *attributions* were rare, some bolstered the negative depiction of others by presenting them as harshly judging him, such as saying *they think I am a psycho* or *people would laugh at this if they read it* or *he is scared of me*.

6.2.3 GRADUATION

The final system of Appraisal, *graduation*, is considered to apply to both *engagement* and to *attitude* (Martin & White, 2005) and "depending on the degree and type of resources used," it can be used to project "the writer's social and individual identities…as more or less authoritative and confident" (Macken-Horarik & Isaac, 2014, p. 77). The two broad categories of graduation are *force* and *focus* (Martin & White, 2005). *Focus* comprises the resources used to indicate whether the stance object is more or less representative of the prototypical qualities of a semantic category. *Sharpening* indicates higher prototypicality—e.g., *true friend* or *real hero*—while *softening* indicates lower prototypicality—e.g., *sort of nice*. *Force* comprises the resources assessing intensity (*intensification*) or amount (*quantification*), which can be additionally coded for whether they intensify or weaken the evaluation (*scaling*) and *lexical infusion,* which helps describe whether the intensity is encoded in the evaluative item itself (*infused*) or is achieved using a separate lexical item (*isolated*). For this research, *intensification* was expanded slightly from its typical *quality-*

process dichotomy to include a category for *repetition* to capture the same or similar meanings that are used multiple times across a text (or in quick succession, as Martin and White, 2005, originally proposed). With *quantification*, there are three categories—*number, mass, extent*—which are all argued to be scalable alongside the *intensification* categories. However, in this research, *scaling* was not coded for *extent* tokens because it is not clear (1) whether it is a necessary aspect of this particular category of meaning and (2) which meanings would be considered upscaled and which would be downscaled. For instance, with tokens such as *next door* and *the other side of town,* would the *upscaled* token be the one that conveys very close proximity or a large distance? Because of the lack of clarity, *extent* tokens are not included in the totals for the *scaling* variables.

Just as with *attitude*, the frequencies for each variable were normalized per 500 words. Table 6.18 contains the results from the between-author comparisons; the columns represent each of the four authors and the rows represent the *graduation* variables. The shaded cells indicate where that author used a significantly higher proportion of the given variable (at the level of at least $p<0.05$) than the author denoted by the superscript. As the table shows, there were a number of significant differences in proportions of *graduation* variables, with all but one of those differences being in the subcategories of *intensification* and *quantification*.

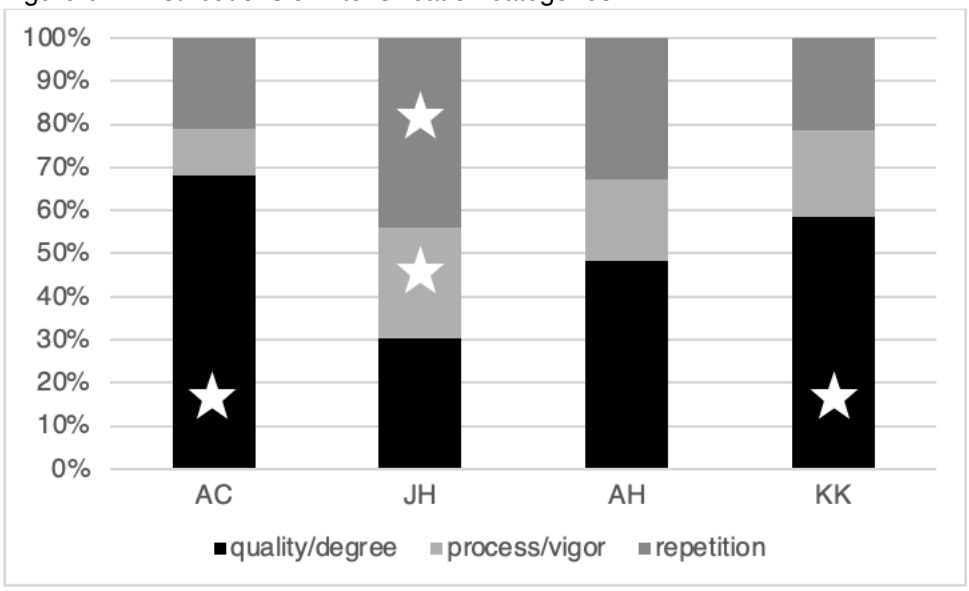
Table 6.18: Between-subject comparisons for graduation

	AC	JH	AH	KK
force	88.71	113.24	87.61	115.99
focus	4.40	14.40	15.49^{AC}	12.02
intensification	62.32	85.41	66.31	83.07
quantification	26.39	27.83	21.30	32.92
quality/degree	42.52^{JH}	25.91	31.95	48.59^{JH}
process/vigor	6.60	22.07^{AC}	12.58	16.72
repetition	13.20	37.43$^{AC, KK}$	21.78	17.76
number	8.80	6.72	15.00^{JH}	19.33^{JH}
mass	3.67	15.36$^{AC, AH, KK}$	2.90	7.31
extent	13.93$^{JH, AH, KK}$	5.76	3.39	6.27
soften	0.73	2.88	6.78	5.22
sharpen	3.67	11.52	8.71	6.79
upscale	63.05	88.29	68.25	88.30
downscale	11.73	19.19	15.97	21.42
isolating	24.93	30.71	27.11	42.32
infusing	63.78	82.53	60.50	73.67

Frequency per 500 words

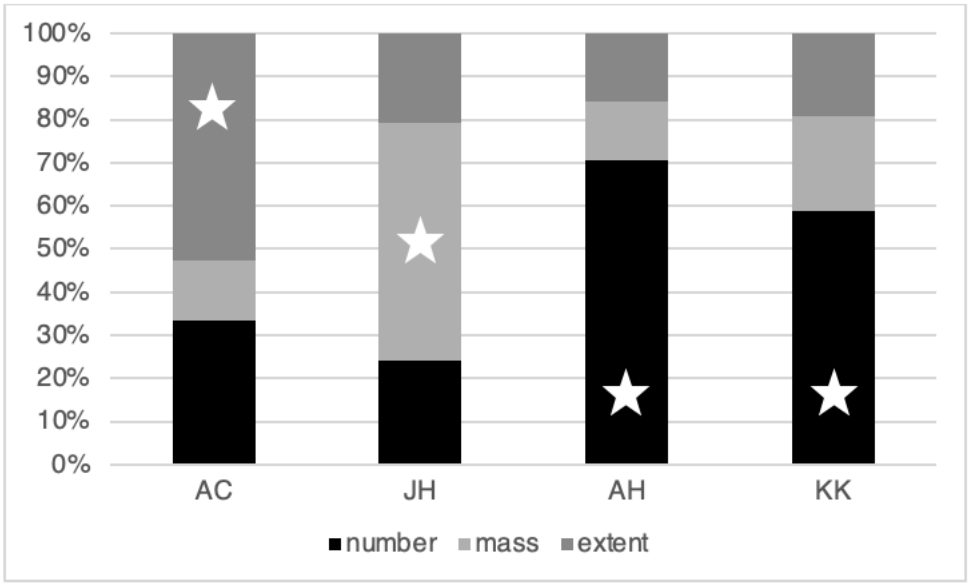
The graphs below show the distributions of the subcategories of these two *graduation* types. Stars are used to indicate the variables for which that author used a significantly higher proportion than at least one other author.

Figure 6.7: Distributions of intensification categories



Percentage of total *intensification*

Figure 6.8: Distributions of quantification categories



Percentage of total *quantification*

What is immediately evident is that JH's distributions were the most distinct. In *intensification* his proportion of *repetition* was higher than the other authors while his proportion of *quality* was lower. In fact, *repetition* accounted for nearly one-third of all of his *graduation* tokens. This included his repeated references to his perceived flaws like his *broken* mind or *fear[s],* the *battle* within himself (generally his tenacity), and his *hatred* (not always with a target). While the other authors did not necessarily use as high of a proportion of *repetition*, it still contributed similarly to the portrayals of themselves and others that have been discussed in the previous sections. For AC, the repeated themes mostly related to weapons and his

negative self- and world-view, such as talking about his *depression,* his desire to take his own life, and his belief that he did *not deserve anyone.* AH's repeated themes centered primarily around issues of *propriety* and *veracity*; him and those he admired were *gods* and *prophets* while the outside world was full of *evil, hypocrites,* and *sheep*. Finally, KK repeated mostly feelings of *hate*, a lack of *happiness,* periodic feelings of *hope*, and evaluations of himself and others as *evil*.

Within the *quantification* variables is where the other major differences occurred. JH employed a higher proportion of *mass* tokens than the other authors while AC employed a higher proportion of *extent* tokens; AH and KK, on the other hand, both employed *number* resources most often. For JH, the *mass* tokens were most commonly used to refer to the complete lack of certain qualities, such as *no more fear, no consequence,* or *no effect when needed.* Rarely (only twice) did he use it to encode a maximum amount of a quality, one when talking about a fantasy to use nuclear bombs to destroy the *entire world* and one when talking about overcoming *all fear in certain death*. AH and KK both used *number* resources most often and in similar ways. Most of the tokens evidenced an 'all or nothing' mindset, something not displayed by AC or JH. For instance, AH saying *we are all victims of something* or that his victims would realize their lives *are going to be taken by the only one among them that isn't a plebeian*; or KK talking about *everyone* being against him or *no one* being willing to help him. Finally, the usage of *extent* was really only noteworthy in AC's writings (the other authors rarely used it and were not as consistent) because he seemed to place importance on the duration or proximity of various events with respect to time. For instance, indicating that his suicide attempt and violent act were both a long time coming by saying *he is finally dead* or that he had *been thinking about this moment* [suicide] *since the 10th grade*. These tokens also encoded a level of excitement, in a way, about enacting his plan, counting down to the day saying *in one week*, *I will finally be dead* or *today is the big day*.

6.3 Discussion

Similar to chapter 4, the distributions of Appraisal resources in the writings of four authors were analyzed and compared. However, in this study, there was more overlap in the psychopathological profiles of the authors in order to address the first research question from a different perspective. All were determined to exhibit signs of psychotic symptoms—i.e., *delusions* and/or *hallucinations* (APA, 2013)—and AC, AH, and KK were found to additionally show signs of depressive symptoms while JH was diagnosed with schizotypal personality disorder (StPD). Given the overlap in their psychopathologies and their shared

classification as perpetrators of mass violence (research question 2a), some similarities in evaluative patterns were expected, and indeed some were identified. However, there were also patterns distinct to each author, perhaps due to at least in part to differences in the relative organization of symptoms and traits in terms of severity and dominance alongside the presence of unshared symptoms and traits (Beck, 2015; Millon et al., 2012). The findings as they pertain to the authors' psychopathologies are discussed in section 6.3.1, while those that pertain to their shared offender classification are discussedin 6.3.2.

6.3.1 PSYCHOPATHOLOGY

All four authors appeared to convey a similar stance that their actions were the only viable option to remedy something they had sensed was 'wrong' within themselves, the world, or both. Each author then conveyed their own distinct set of additional stances, and by examining how they interact, it is possible to determine and propose the most likely underlying schemas that influenced their interpretation of events.

At one end are AC, JH, and KK who all described aspects of themselves as being 'off' and contributing to their motivations for their actions. JH explicitly stated that he viewed himself as *divided*, experiencing a battle between two different sides: one that was dominated by *fear* and *anxiety* and one that was dominated by *hatred*. While he acknowledged various flaws—e.g., his *fear of failure* or his *broken mind*—he also depicted himself as tenacious, fighting to overcome his *biological shortcomings* (themes which recurred consistently throughout his writings). It was made clearer through his use of *contraction* resources that the side of him that had been dominated by fear was the side of which he disapproved, but that nevertheless it was more in control than the side dominated by *hatred of mankind*. With *disclaim* resources in particular, he described how the absence of his fears and anxieties had allowed his motivations to shift to his hatred. At that point, he could *entertain* possible plans and take steps toward ensuring the success of those plans. He did not tend to evaluate others in an overly negative way—even though he expressed his *hatred of mankind*, there was never a reason given for that hatred. That is, he did not offer a 'trigger' for the emotion, such as hating others for their impropriety or dishonesty; rather it was depicted more as a general mood state for him. Additionally, he seemed to have a high self-worth because even though he stated he could have a "normal" mind if he 'eviscerated his soul', he also stated he could not do that to himself, and then later said that he 'would kill others so that he could live'. This suggests that he viewed his actions as the solution to the flaws he perceived within himself.

AC and KK also portrayed something 'wrong' within themselves as being a contributing factor to their actions but did not evince the same level of self-worth that JH did. That is, unlike JH, they both expressed a desire to die and framed their deaths as necessary and as the only way to stop the negative experiences they were having. AC's focus remained primarily on himself throughout his writings; he expressed an intent to take his own life but did not necessarily explicitly state a desire to take others' lives and he viewed himself as *sick* and his actions as the only way to prevent the *bad things* that *could happen* if he and people like him were not 'sacrificed'. His use of *disclaim* tokens reinforced his stance that something was 'wrong' with him and that the only possible solution remaining that might work was to carry out the violent act and die himself. This perhaps helps explain the high proportion of *pronouncements* about his plans and of *extent* tokens counting down to the day, which suggested an eagerness and determination to enact his plans.

While KK similarly described something as being 'wrong' within himself, he also placed some responsibility on others. He described a desire to die as well as a desire to kill others to *repay* them for what they *put [him] through*. He also talked about having 'hope' at times that things would improve, which did not last, and wanting love and happiness, but not being able to achieve it. He depicted others as not only being unwilling to help him, but as having caused him emotional harm, which contributed to the *hate* he felt for others. KK's use of *disclaim* resources then framed him as wanting or acknowledging certain positives, then *countering* or *denying* the possibility of those positives occurring for him. This suggested that he had considered alternatives to his actions, but nothing had worked to make him feel better, leaving only his planned violent act. The repetition of the themes of unhappiness and the 'evilness' of himself and others further strengthened the stance that action had to be taken to remedy everything negative in his life.

At the opposite end to JH is AH, who was similar to KK in that he placed responsibility for his actions on others but was unlike KK in that he did not seem to believe he shared in that responsibility. His framed his violent actions as an obligation and himself as being in the right because others were *evil* and therefore if he killed them, he would make the world a better place. He used resources in every system to reinforce these stances toward himself and others. He talked about how people generally found happiness in *stain[ing] the world with sins* and *exploit[ing] each other*; how they committed violence against each other, making *their fellow man suffer* and killing; how they were lazy, selfish, judgmental, and immoral; and how he, like other mass shooters, was like a god or a prophet, destined to stop the evil. AH employed *justifications* the most often of the four authors, offering reasons for his beliefs and his actions, and used *attributions* to further depict others negatively by

making assertions about their feelings and beliefs. He not only repeated these evaluative themes throughout the letter, but also overgeneralized them—applying them to *all* or *everyone* and marking himself as being a unique *one*.

The sense of something being 'wrong' with themselves, the world, or both may be best explained by the presence of delusions in all four authors. The varying levels of specificity about what each author believed was wrong may indicate that the dominant delusions were at different stages of development, because during that time, individuals usually experience a vague sense of something being amiss without necessarily knowing what it is (Henriksen & Parnas, 2019). Of course, the content of these potentially delusional beliefs varied and the interaction with other symptoms likely also influenced each author's stances (Millon et al., 2012). As is discussed more in section 6.3.2, as well, this general stance may also be partially influenced by their shared status as perpetrators of mass violence, with the variation in form being due to differences in their underlying psychopathologies.

JH's view of himself as divided between two sides is consistent with the self-functioning impairments associated with StPD (APA, 2013). His negative view of arguably positive experiences like falling in love and his *aversion* to and *hatred of* people is also consistent with core beliefs of StPD around oneself as a loner and a disregard for others and social convention (Beck, 2015). Then, the belief that some action had to be taken in order to fix his perceived flaws, and that the action could be killing others, might be indicative of the odd beliefs and magical thinking associated with StPD (Renton & Mankiewicz, 2015). Finally, his difficulty pinpointing the source of many of his feelings (as evident by the lack of explicit or specific stance object in some cases) may indicate that he may have been more in the developmental stage of a delusion (Henriksen & Parnas, 2019), or at least below the threshold of a full-blown delusion, which is common in StPD (Renton & Mankiewicz, 2015).

AC and KK's negative views of themselves—e.g., as undeserving of love and as 'sick'—suggest an internalizing bias, in which blame for negative events is placed on the self, which is a common bias with depressive symptoms (Beck, 2002; Beck & Haigh, 2014; Beck et al., 2021). Moreover, the intense negative self-focus is a common linguistic pattern observed in depressed patients (e.g., Hunt & Brookes, 2020; Tackman et al., 2019) as is the view that harming oneself would provide relief (Hunt & Brookes, 2020). AC framing his actions as righteous because sacrificing' himself and people like him was necessary to prevent *bad things*, and the apparent eagerness and determination to carry out the act, may best be explained by that belief constituting the core of his delusion. KK's extension of the negative views to others observed also aligns with core beliefs of depression, as individuals may judge others equally as harshly as they judge themselves (Beck, 2002). His denial and

countering of so many proposed alternatives to his planned actions and his inability to pinpoint why he felt that way further suggests that KK may have been in the midst of developing delusions (Henriksen & Parnas, 2019). Despite AH receiving a diagnosis of major depressive disorder, the evaluative patterns he exhibited were more in line with the externalizing biases found in delusions (Beck & Rector, 2005). Unlike the other authors, the high degree of conviction and certainty around the themes of his beliefs conveyed in his writings suggests the delusions had likely become solidified (Henriksen & Parnas, 2019). It is possible that the harsh judgments of others were also in part due to underlying schemas associated with depression (Beck, 2002), which combined with the absolute certainty about one's beliefs that is the core aspect of delusions.

6.3.2 Offender Classification: Perpetrators of Mass Violence

As discussed above, all four authors in this chapter were perpetrators of mass violence, which are distinguished from serial murderers and offenders by their desire to "kill as many victims as possible, quickly, efficiently, and at once" (Miller, 2014a, p. 4). There were some significant differences between the authors, but there was more overlap between them (or various groupings of them) than was observed between the authors in chapter 4, likely in part because psychopathology was one of the controlled variables. However, because of the similarities in psychopathology, it is more difficult to determine shared evaluative patterns that might be indicative of beliefs associated with the act of mass violence (research question 2a). The research that is used to help interpret the findings mostly concerns mass murderers, which as discussed in the introduction of this chapter, is a heading under which not all authors can be classified. However, the research is arguably still relevant because the reasons for death tolls lower than the threshold for classification as mass murder for AC and AH were out of their control, but everything until the moment they were stopped was very similar to JH and KK, who did reach the threshold.

One pattern demonstrated by all four authors, as discussed above related to their view of their actions. In contrast to the serial murderers in chapter 4, the urge to kill that these authors described was not tied to fantasies of harming others but was in response to something they believed was 'wrong' within themselves, the world, or both, and their actions were the only viable remedy. For AC, KK, and AH, there was also evidence of a stance that their actions were righteous in some way—they were providing a solution to the perceived 'problem' that would benefit others, not just them. In AC's writings, this was most evident in the final entry written just after killing his father, when he states that he did *feel a little remorse* before *countering* that by saying *still, he is finally with God and Tony*, implying he

believed he had done the right thing for his father. In KK's and AH's writings, this was achieved through evaluating others explicitly as 'evil' (with a combination of *propriety* tokens and other negative evaluations of their beliefs and actions) and their attacks as being ways to rid the world of this supposed evil. With KK and AC, the evaluation of 'evil' is extended to themselves, and both express a desire to take their own lives alongside their intended victims. JH's patterns were slightly different to the other authors in that, while he expressed *hatred* for others, he did not necessarily convey a particular reason for it. That is, he did not suggest that his victims deserved what he planned to do, but rather focused on how the actions would serve or impact him.

The depiction by all four authors of their actions as something they felt obligated to do suggests an intrinsic motivation (as opposed to extrinsic which originates from outside the individual), which is common for multiple categories of mass murderer (Holmes & Holmes, 2001). It was also found by Hurt (2020) that authors of realized (i.e., carried out) pledges to harm expressed a lack of control over their actions. The variation in the resources they used might be explained by differences in the source of the intrinsic motivation that have been suggested in various mass violence typologies. AC seemed to believe that he was doing a 'good' thing by sending his victims onto a better place (i.e., *with God*) and allowing himself to find some kind of peace. This is interestingly most similar to the *family annihilator* category proposed by Dietz (1986) or the *loyalty* category proposed by Fox and Levin (1998, 2003) where the offender typically believes that they are 'saving' their victims "from misery and hardship" (Fox & Levin, 2003, p. 59). KK's framing of others as 'evil' and as intent on causing him harm (or already having caused it) and his actions as justified because of that aligns well with the documented *revenge* category (Fox & Levin, 1998, 2003, 2022) in which the individual believes others are "out to do him harm" (or have already done so) and killing them is a way to 'get back' at them (Fox & Levin, 2003, p. 56). While AH also cited the 'evilness' of others as a motivator, the patterns were different to Kinkel's in that he did not portray those others as causing or intending him harm. Rather they were depicted as *evil* and *trash* that he intended to rid the world of, which very closely resembles the *power* category described by Fox and Levin (1998, 2003, 2022). Finally, JH's claims of an *obsession to kill* and his depiction of himself as *divided* and having been dominated by *fear* and *anxiety* his whole life arguably resembles a combination of the *power* motive and the compulsion to kill schema (Schlesinger, 2000) associated with serial murderers. The view of himself as *divided* and compelled to kill resembles the descriptions of internal urges seen in Berkowitz's, Rader's, and Brady's writings from chapter 4. However, JH's use of *tenacity* to

portray himself as fighting to take control over his life and actions does also align with the *power* motive in that his actions could be construed as an attempt to gain control.

The final pattern, shared by all four authors, related to expressions of an acceptance of, a desire for, or a lack of concern over, being caught or killed after their attacks. Both AC and KK explicitly conveyed a strong desire to die (though AC expressed a desire to take his **own** life, while KK did not, at least overtly). JH did express a willingness to die or at least an acceptance of it as a possibility, saying that *to face death* would be the final *battle to fight with life* and that he would *overcome all fear in certain death*. Finally, AH used the past tense to describe his actions as though they had already happened (e.g., starting the letter with *by now, my art has obviously been revealed to the world*) and discusses what he believed the fallout would be after his attack, which suggests an acknowledgement that he would be arrested or killed, even though he did not directly express a desire to die. This is a common feature noted in mass murderers which distinguishes them from serial murderers who make every effort not to be caught (e.g., Fox & Levin, 1998, 2003, 2022; Holmes & Holmes, 2001).

As discussed in section 6.3.1 above, some of the patterns described above also align with schemas and information processing biases associated with psychotic (e.g., Beck & Rector, 2003, 2004) and depressive symptoms (e.g., Beck, 2002). However, because mental health disorders alone are considered a poor predictor of violence (Hiday, 1995; Nestor, 2002; Stuart, 2003), the potential influence of schemas associated with mass violence cannot be ignored. Instead, it seems that the psychopathology-related beliefs and mass violence-related beliefs combined to result in most of the patterns observed in these authors. This is not surprising given that while mental health symptoms and disorders may sometimes play a role in motivating acts of violence, they are by no means ever the only contributing factor (e.g., Brucato et al., 2021; Peterson & Densley, 2021; Peterson et al., 2021; Peterson et al., 2014).

6.4 SUMMARY

This chapter represented the third and final empirical study of writings of violent offenders. As with the previous chapters, different factors were controlled for here to allow a different approach to be taken to research question 1. Namely, an effort was made to ensure as much overlap as possible in the diagnostic profiles of the authors and indeed all four were found to exhibit psychotic symptoms—i.e., delusions and/or hallucinations (APA, 2013). The findings revealed a number of similarities between the authors in the stance-taking patterns that align with schemas and information processing biases associated with psychotic symptoms. A few differences were also identified that seemed to align with the core beliefs

associated with psychopathological traits not shared by those authors. To summarize these findings as they pertain to the first research question:

- All four authors exhibited a stance that something within themselves, the world, or both was 'wrong', which generally speaking aligns with information processing biases associated with delusions (Henriksen & Parnas, 2019). That it was conveyed with varying levels of specificity for each author suggests such beliefs were likely at different stages of development (e.g., Fineberg et al., 2015; Hinzen et al., 2016), and likely also influenced by other aspects of their psychopathology (e.g., Millon et al., 2012).
- Both AC and KK expressed intensely negative self-views, which included negative evaluations of themselves using *attitude* resources or undeserving of positive things using *disclaim* resources. This aligns with the internalizing bias associated with major depressive symptoms (Beck, 2002; Beck & Haigh, 2014; Beck et al., 2021) and is consistent with linguistic patterns observed in depressed patients (e.g., Hunt & Brookes, 2020; Tackman et al., 2019).
- Unlike AC, KK also expressed explicit negative stances toward others, typically with assessments of *propriety* or through *denying* the possibility of others offering or providing help to him. This pattern of equally negative judgments of the self and others aligns with core beliefs associated with major depressive symptoms (Beck, 2002).
- AH also expressed a negative stance toward others, but unlike KK and AC, did not direct such negative evaluations inward. He used resources of *judgment* to assess others as unethical, judgmental, and generally incapable (or at least lacking proper motivation to think for themselves). He also used *attributions* to make assertions about the feelings and beliefs of others to further highlight the negative traits he assigned to them. These patterns align with externalizing biases associated with delusions, in which blame is assigned to other people or external circumstances much more often than to oneself (Beck & Rector, 2005).
- JH used evaluative resources to describe an internal 'battle' between two sides of himself. One side was depicted as anxious and fearful, while the other side was trying to 'overcome' these feelings. He expressed negative views of generally positive things, such as forming close relationships, and a general *hatred* of and *aversion* to people, which aligns with core beliefs associated with StPD; namely the desire to be a loner and disregard for social conventions (Beck, 2015).

In addition to the exploration of the relationship of evaluative patterns to psychopathology, their relationship to schemas and beliefs associated with the act of mass violence was also explored (research question 2a). To summarize these findings:

- All four authors expressed the belief that their violent actions were the only viable remedy to what they perceived as wrong in themselves, the world, or both. Unlike the chapter 4 authors (but similar to Kaczynski in chapter 5), this was depicted more as an **obligation** than an internal compulsion without an identifiable source. This pattern aligns with the general beliefs common to mass murderers (e.g., Holmes & Holmes, 2001). It also is consistent with the findings from Hurt (2020) that authors of realized pledges to harm depicted their actions as something they had no choice but to do.
- There were differences between the more specific aspects of the description of their obligation. For AC, the act was depicted as something that would save himself and others; for JH, it was portrayed as something that could help him gain some semblance of control over his 'divided self'; for AH and KK, it was depicted as necessary to rid the world of the 'evil' they perceived (which for KK also included himself). Each of these aligns with a different type of mass murderer described in the literature (e.g., Dietz, 1986; Fox & Levin, 1998).

The findings of this chapter provide further evidence in support of the primary contention of this research that certain linguistic evaluative patterns have observable connections to schemas associated with both an author's psychopathology and the type of violent act they committed. However, as with the previous studies, it is sometimes difficult to tease apart whether certain patterns are more attributable to violent ideation or to psychopathology (or the combination of two). Thus, the focus of the next chapter is to explore the evaluative patterns of non-violent counterparts to some of the authors from this chapter and the previous two as an introduction to the final discussion in chapter 8 and the consideration of how the findings can help address research question 2b.

CHAPTER 7 NON-VIOLENT COUNTERPARTS

While the previous three chapters have provided evidence of relationships between psychopathology, violent ideation, and linguistic evaluative patterns, the lack of any comparison to the patterns produced when violence is removed as a factor makes it more difficult to tease apart which patterns are more likely indicative of psychological traits/symptoms and which are more likely indicative of violent ideation. In order for such a comparison to be most beneficial, there needs to be some level of overlap between the groups in terms of the two psychological factors (i.e., mental health diagnoses and violent ideation) to reduce the number of possible explanations for any differences or similarities between them. This means that the two best options for control groups are (1) violent offenders who have not received a diagnosis **or** (2) non-violent individuals with similar diagnostic profiles. The first option would not ease the difficulty of teasing apart the possible explanations for certain patterns, but the second would enable a more comprehensive answer to both of this project's research questions. That is, examining the writings of non-violent counterparts to even a few of the violent offender authors may help identify which evaluative patterns are more likely indicative of schemas associated with particular traits/symptoms (research question 1) and which are more likely indicative of violence-related schemas (research question 2b). This chapter, therefore, is intended as a lead-in to, and facilitator of, the discussion in the next chapter, by exploring the evaluative patterns of five non-violent authors, each of which with a different mental health diagnosis that overlaps with at least one author from the three previous chapters.

7.1 DATA

In order to maximize the value of this comparison study, more specific factors relating to the data selection must also be given due consideration. As discussed in chapter 3, there were two main selection criteria for the authors used in the other three chapters: (1) that there is a psychiatric report (or reference to such a report) available for the individual and (2) that they have a collection of accessible writings. Three viable sources of data were considered, two of which seemed to be able to satisfy only one of the criteria while the third could satisfy both. One option was posts from public social media or fora, as they would be remotely accessible, but it is unlikely they would contain a psychiatric report (and even if one was posted, it would be ethically dubious to use it; Williams, 2012). Another option was to collect data from psychiatric patients, which would mean more direct access to psychiatric reports, but likely limited access to collections of personal writings from which to select data.

Additionally, there are numerous ethical concerns with the use of such data, including, but not limited to, the fact that it would not be public, would constitute a high level of intrusion (Williams, 2012), and obtaining informed consent would be potentially difficult depending on the mental health status of the individual (Taylor, 1999). The third possibility, which was the one opted for in this chapter, was to use published memoirs about authors' experiences with their mental health disorders. Because they are published, the data is necessarily publicly available and accessible; because they are memoirs about their experiences with mental illness, the psychiatric reports might not be directly accessible, but the author is citing the conclusions of assessments that were conducted on themselves.

Even though published memoirs best satisfied the data selection criteria laid out for the other three studies, there are two potential confounding factors that should be addressed. The first is that with this type of data source, there is a chance that the authors' original words were edited at some point in the publication process (Sommer et al., 1998), meaning that some of the linguistic evaluative choices might be a reflection of an editor rather than the author. The second is that the memoirs were written for the purpose of sharing and reflecting on the authors' experiences and the impact of their mental illness—called an 'autopathography' by phenomenologists (Hawkins, 1999). This is in contrast to the other authors in this project whose texts included accounts of personal experiences and belief systems without necessarily considering the role of their mental health diagnoses, even if they had received treatment prior to composing the texts, like James Holmes (Metzner, 2013). Both types of narrative still constitute, broadly, first-person accounts, and an effort was made to identify excerpts in which there was little to no mention of their diagnoses. However, the awareness of one's mental health diagnoses and the ability to reflect on and acknowledge their impact on experience could have still influenced the evaluative choices made in producing the account. With that said, memoirs are still the most viable data source for this chapter and both of these potentially confounding factors constitute arguably unavoidable characteristics of the literary genre.

For the selection of the specific memoirs used in this study, two main criteria were used. First, the individual had to have been diagnosed with a mental health disorder that at least one of the violent offender authors had also received. This ensures that more direct comparisons can be made between the findings from this study and some of the findings from previous ones. Second, the authors had to be at least somewhat well-known (for instance, because of the memoir or because they had published other books) and therefore could also not be using pseudonyms. This was included to avoid introducing further potentially confounding variables. Namely, with a pseudonymous or relatively unknown

author, there is at least a small risk of the information being unreliable or an increased risk that someone other than the diagnosed individual penned the work. Using these criteria, five memoirs were identified, each author with a different diagnosis that overlapped with at least one other author from one of the three previous chapters.

As stated above, the genre of the texts selected for analysis from the memoirs was kept consistent with the other chapters; that is, they were all first-person accounts. In particular, efforts were made to identify accounts involving interpersonal relationships in some way, whether brief or longer-term. Given that the goal of this chapter is simply to enable a more comprehensive discussion of the research questions through comparison to the other chapters, it was decided that the dataset need only be around 10%-20% of the violent offender corpus which was 17,128 words in total. This meant that the excerpts for each author needed to be (roughly) between 350 and 650 words. Within each identified memoir, excerpts of (mostly) continuous blocks of the author's own writing were selected, all from the beginning of a narrative about an event (usually the start of a paragraph or section) through to the end (usually the end of a paragraph or section). The two excerpts which were not fully continuous blocks included short strings of text—a quote by another person in one and a reproduced tweet in another—that were ultimately removed because they were not the author's own words and did not seem to contribute substantively to the narrative. The final corpus was 2039 total words (about 12% the size of the violent offender corpus), which each author contributing between about 350 and 450 words; the breakdown for each author can be found in Table 7.1 alongside their diagnostic information. Each author and their texts are then discussed more in subsections 7.1.1-7.1.5.

Table 7.1: Diagnostic information and word counts for non-violent authors

Author	Memoir Title	Diagnosis	Word Count
Elizabeth Wurtzel (EL)	*Prozac Nation (1994)*	Major Depressive Disorder	352
Pamela Spiro Wagner (PW)	*Divided Minds (2005)*	Schizophrenia	443
***Merri Lisa Johnson (MJ)**	*Girl in Need of a Tourniquet (2005)*	Borderline Personality Disorder	394
***Esmé Weijun Wang (ES)**	*The Collected Schizophrenias (2019)*	Schizoaffective Disorder	404
David Adam (DA)	*The Man Who Couldn't Stop (2014)*	Obsessive-Compulsive Disorder	446
Total			2039

*The authors whose excerpts had the quote (MJ) and tweet (ES) removed

It should be noted here that while it would have been more ideal to have matched the authors in features like gender and nationality to the violent offender counterparts, attempting to control for such factors would have severely limited the number of memoirs from which to choose and it was more important to find individuals who had overlap in their diagnostic profile than in their demographic profile.

7.1.1 ELIZABETH WURTZEL

Elizabeth Wurtzel (from here on, referred to as EL) was a journalist and author, publishing two other books beyond the one used in this chapter (Cain, 2020). Her memoir, *Prozac Nation* (1994), chronicled her experience with major depressive disorder, the episodes of which began in childhood. Most of the book consists of her recollections of events told in first person, including reproduced estimations of dialogue. At sporadic intervals, there are also italicized interjections in which she seemed to be recounting her thought processes at various time points. The excerpt used here is one such interjection, in which she details her opinions of her parents and their actions during a particularly bad depressive episode in childhood.

7.1.2 PAMELA SPIRO WAGNER

Pamela Spiro Wagner (from here on, referred to as PW) is a poet and author who co-wrote the memoir from which the data was obtained, *Divided Minds: Twin Sisters and their Journey through Schizophrenia* (2005) with her twin sister. The book is divided into chapters containing narratives of events throughout the sister's lives, alternating between each one's perspective. The excerpt used in this chapter is PW's account of exacerbation of psychotic symptoms a few days before New Year's Eve, 1999 (roughly 20 years after the original onset of schizophrenia symptoms; Spiro Wagner & Spiro, 2005) which resulted in her detainment by the police. In the account, PW describes experiences of hallucinations and delusional thinking, despite having started on a new medication that had been working for months.

7.1.3 MERRI LISA JOHNSON

Merri Lisa Johnson (from here on, referred to as MJ) is a professor of women's and gender studies, who was diagnosed with borderline personality disorder in adulthood (Johnson, 2010). Her memoir, *Girl in Need of a Tourniquet* (2010) contains mostly accounts of her experiences beginning in young adulthood before her diagnosis to later adulthood, interspersed with quotes from various sources to break up parts of the narratives. In the excerpt used here, MJ recounts an intense affair she had with a co-worker and the impact it

had on her job and mental health. The excerpt contained a short quote, which was removed since they were not MJ's own words (and the quotes occurred so often that finding a long enough excerpt without one proved difficult).

7.1.4 ESMÉ WEIJUN WANG

Esmé Weijun Wang (from here on, referred to as ES) is an author and essayist who has had writings published by outlets like *The New York Times* and has published novels alongside her collection-of-essays memoir, *The Collected Schizophrenias* (2019). The memoir details her experiences from young adulthood to later adulthood and her journey to getting diagnosed with schizoaffective disorder after having been misdiagnosed with bipolar disorder previously (Wang, 2019). It should be noted that ES's diagnosis of schizoaffective is not technically one of the disorders listed in Table 2.1, but it was one of the possibilities put forth for Alvaro Castillo (chapter 6) to explain the presence of psychotic and mood symptoms (*North Carolina v Castillo*, 2010) and it was therefore decided that it was worthwhile to include here.

While much of the essay collection contains reflections about how her mental illness influenced her experiences, the excerpt chosen here is a recounting of a moment when delusional thinking led her to report to the FBI (Federal Bureau of Investigation) her suspicions that her ex-partner was an unidentified wanted child sex offender ('John Doe 28'). It contains a reproduction of the tweet that started the series of events that resulted in the report, which was removed as it was not her words and only contained the information about and link to the FBI's search for the unidentified man.

7.1.5 DAVID ADAM

David Adam (from here on, referred to as DA) is a journalist by trade, working for nearly 20 years at *Nature* and *The Guardian* before becoming a freelance journalist in 2019 (Adam, n.d.). His memoir used here, *The Man Who Couldn't Stop* (2014) tells the story of his experiences with obsessive-compulsive disorder, beginning in the early 1990s. His obsessions center around fear of contamination, which when it began was more specifically focused on a fear of catching AIDS, the new cases for which were near their peak at the time (UNAIDS, 2022). The excerpt used here is an account of an occasion in which DA attempted to relieve his anxiety by getting tested for HIV so that he could return to doing activities he had previously, but no longer, enjoyed. While not necessarily recounting an interpersonal relationship specifically, part of the excerpt contains a description of the impact the obsessive thoughts had on his ability to relate to others.

7.2 ANALYSIS

In previous chapters, chi-square tests were used to determine the *key variables*—those which were used significantly more by one author over another (Baker, 2006) with the conventional significance threshold of $p<0.05$—which then guided the qualitative analysis. However, in this chapter, the small size of the corpus resulted in low frequency counts for a number of variables which meant that chi-square tests were not powerful enough to detect the differences between proportions. Instead, likelihood ratio tests were carried out on the data in this chapter, which provide the same type of information as chi-square tests but are a better option for smaller datasets (Field, 2018). Just as with chi-square, comparisons using the likelihood ratio become too complex and difficult to interpret with multiple factors and levels (Grant et al., 2017), so only two authors were still compared at a time. Each author was compared to every other author (the between-author comparisons), for a total of 10 pairs.

Even though the range of word counts is quite small compared to previous chapters (see Table 7.1), the frequencies for all of the Appraisal variables are normalized to avoid artificially inflating the statistical results. The *attitude* and *graduation* variables are normalized per 350 words, as that is the lowest word count of the five excerpts. For *engagement*, the frequencies are normalized per 50 instances (one of the authors uses only 42 tokens, but since it is so close to 50, the more typical denominator was opted for here). The results for each Appraisal system are laid out in the coming sections (sections 7.2.1, 7.2.2, 7.2.3) and how they relate to the schemas underlying the symptoms and traits associated with each author's diagnoses is then explored using the research from cognitive psychology as a guide (section 7.3).

7.2.1 ATTITUDE

As was outlined in chapter 3, Appraisal provides the means to analyze in great detail the patterns of linguistic resources authors use to express their *stances* (Martin & White, 2005). The system of *attitude* encompasses the resources used to convey the core feelings of those stances and is divided into three types—*affect, judgment,* and *appreciation. Affect* is considered to be at the core, covering **personal** emotions while *judgment* and *appreciation* **institutionalized** feelings, i.e., ones that have been shaped by society. *Judgment* concerns feelings of praise/condemnation or admiration/criticism directed at the behaviors of oneself and others and *appreciation* concerns feelings directed at 'things' and their value (Martin & White, 2005, p. 45). Each *attitude* type can then be further divided into categories that help better distinguish between the kinds of evaluations being made. There are additional

variables that were coded for every *attitude* type: *polarity, explicitness, appraiser,* and *appraised*.

Polarity distinguishes between positive and negative evaluations (Martin & White, 2005) and was expanded for this chapter and the subsequent chapters to include negated versions of both. *Explicitness* differentiates between attitudes that are conveyed directly through the word or phrase used (*inscribed*)—such as with *happy* or *successful*—and those that are implied and thus require shared knowledge or context to interpret (*invoked*), such as metaphors. In other words, *inscribed* tokens rely on a word's **denotation**, or its dictionary definition, and *invoked* tokens rely on **connotation**, or the positive or negative value it has been assigned by society. Coding for the *appraiser* makes it possible to not only see how the authors themselves view the world, but also their perception of how others view it and coding for the *appraised* makes it possible to track the distribution of inward and outward directed evaluations. For the purposes of this analysis, both of these variables were expanded beyond the 'self-other' dichotomy to include a third option of *we* to capture instances where the author grouped themselves with others to either suggest a shared belief about something (as the *appraiser*) or a shared trait or behavior (as the *appraised*). However, only three instances of *we-appraiser* were used across the entire corpus and no tokens of *we-appraised* were found, so the variable was removed from the analysis.

As discussed in chapter 3, the category of *valuation* within *appreciation* can be usefully subdivided into the five categories of meaning traditionally found under *judgment*: *normality, capacity, tenacity, propriety*, and *veracity* (Hurt, 2020). Since it is the same categories of meaning, simply directed at different stance objects, the frequencies from *judgment* and *valuation* were combined for the likelihood ratio tests and the combined frequencies are shown in Table 7.2 below. It should be noted that the *judgment* and *valuation* frequencies were also tested separately, but because it is the same types of meanings being employed, it seemed important to examine the overall distribution of the five categories, then discuss the more specific distributions in the qualitative analysis where relevant.

Table 7.2 contains a breakdown of the between-author comparisons for all of the variables introduced above. The columns represent the five authors, the rows represent the different *attitude* variables, and the values of the cells are the normalized frequencies of the variables per 350 words. The shaded cells indicate where that author used a significantly higher proportion of the given variable (at the level of at least $p<0.05$) than the author denoted by the superscript. As this table shows, there are a number of identified key variables across the five authors. At the highest levels (i.e., overall *attitude* and the overarching variables of *polarity, explicitness, appraiser,* and *appraised*), there are

differences between at least two authors for at least one of the subcategories. In overall *attitude,* at least one significant difference was found within each type. Within the subcategories of the *attitude* types, most of the significant differences occurred with the same four variables: *un/happiness, dis/inclination, capacity,* and *veracity*.

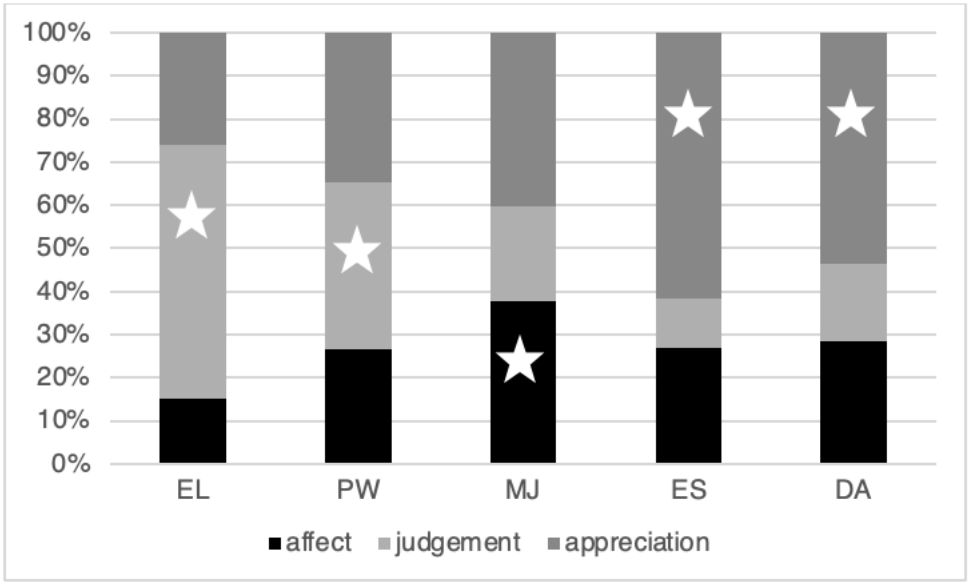
Table 7.2: Between-author comparisons for attitude

		EL	PW	MJ	ES	DA
Attitude	*affect*	9.94	15.80	25.76^{EL}	12.13	12.56
	judgement	42.76^{MJ,ES,DA}	22.91^{ES,DA}	15.10	5.20	7.85
	appreciation	19.89	20.54	27.54	27.72^{EL,PW}	23.54^{EL}
Affect	*un/happiness*	2.98^{ES}	1.58	6.22^{ES}	0.00	3.14^{ES}
	dis/satisfaction	0.99	1.58	2.66	2.60	3.14
	in/security	2.98	5.53	6.22	7.80	5.49
	dis/inclination	2.98	7.11^{DA}	10.66^{DA}	1.73	0.78
Judgment *(incl. valuation)*	*normality*	0.99	3.16	4.44^{EL}	2.60	2.35
	capacity	40.77^{PW,MJ,ES}	7.90	7.99	0.87	14.91^{PW,ES,MJ}
	tenacity	9.94	7.90	11.55	5.20	4.71
	propriety	3.98	5.53	3.55	4.33	0.78
	veracity	3.98	13.43^{EL,DA}	7.99^{EL,DA}	6.93^{EL,DA}	0.78
Appreciation	*reaction*	0.00	2.37	1.78	2.60	1.57
	composition	2.98	3.16	5.33	10.40	6.28
	*valuation**	16.90	15.01	20.43	14.73	15.70
Polarity	*positive*	27.84	19.75	38.20^{DA}	25.12	13.34
	negative	30.82	25.28	24.87	17.33	21.19
	negated-positive	10.94	13.43^{MJ,ES}	3.55	1.73	6.28
	negated-negative	2.98	0.79	1.78	0.87	3.14
Explicitness	*inscribed*	64.63	44.24	54.19	32.92	30.61
	invoked	7.95	15.01^{EL}	14.21	12.13^{EL}	13.34^{EL}
Appraiser	*writer*	63.64	53.72	53.30	38.99	41.59
	other	8.95	4.74	13.32^{DA}	6.06	2.35
Appraised	*self*	10.94	12.64^{ES}	7.99	2.60	6.28
	other	61.65	46.61	60.41	42.45	37.67

Frequency per 350 words

Beginning with overall *attitude*, Figure 7.1 shows the distributions of the three types for each of the five authors. The variables for which an author used a significantly **higher** proportion than at least one other author are marked with a star. For example, MJ was found to use a significantly higher proportion of *affect* than EL and PW a significantly higher proportion of *judgment* than PW, therefore stars have been placed on those parts of the bar graphs for those authors.

Figure 7.1: Distributions of attitude types



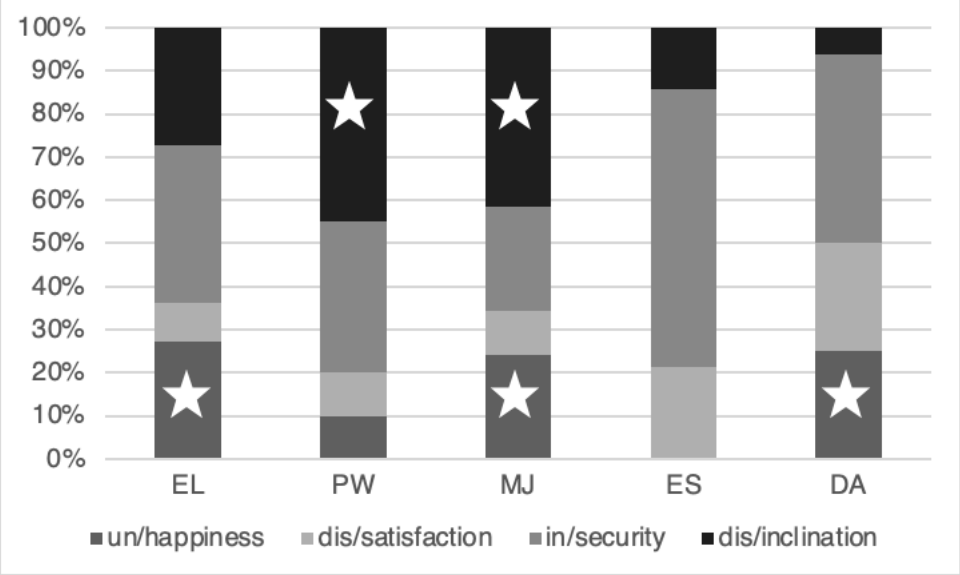
Percentage of total *attitude*

What is evident from Table 7.2 and Figure 7.1 is that for EL, *judgment* accounts for almost 60% of the total *attitude,* while the remaining authors use *affect* and *appreciation* account for the majority and *judgment* accounts for at most 38% (PW). This suggests that EL opted most often for direct assessments of individuals/groups and their behaviors and traits and rarely evaluated inanimate objects or expressed emotions elicited by people or situations. Moreover, all but three of the *judgment* tokens were *inscribed* and author-sourced and all but eight were directed outward. For the other authors, however, the distributions for the categories within these variables are not as extreme. It is also worth noting two other observations about the overarching variables. First, for MJ, all but two of the attributed evaluations occur within *affect*, and in fact, the number of attributed *affect* tokens was only one less than that of author-sourced *affect*. Second, for PW, about half of the *negated-positive* tokens were *judgments* directed inward. These are discussed in more detail in their respective sections below.

Affect

The two key variables identified within *affect* are *un/happiness* and *dis/inclination*. However, interestingly, for all except ES, all four types of *affect* are used in tandem with each other to paint a picture of either the author's emotional states in response to the events they are describing or what they think others are or should be feeling. As such, the pattern of *affect* for each author is discussed one at a time. Figure 7.2 shows the distribution of the *affect* categories for the five authors, with stars being used to denote the categories for which a significant difference was found.

Figure 7.2: Distributions of affect categories



Percentage of total *affect*

Starting with EL, there are only 10 total tokens spread throughout her text, but the combination of author-sourced and attributed ones highlights aspects of her negative mental state. Consider the following examples in Table 7.3:

Table 7.3: Examples of affect in EL's text

180	They have no idea [negated +capacity] what a bottomless pit of **misery** [-happiness] I am
181	They don't know [negated +capacity] how much I will **demand** [+inclination] of them before I even think about getting better [+capacity]
182	They will have to [-capacity] **suffer** [attributed -security] **as I have** [-security]
183	They have no idea [negated +capacity] how much energy [-valuation: capacity] and **exasperation** [attributed -satisfaction] I am **willing to** [+inclination] suck out of them [-capacity] until I feel better [+capacity]
184	…because I **hate** [-happiness] them for not knowing [negated +capacity]

The entirety of EL's text is devoted to describing just how bad her mental health had gotten at that point in time and how she believed her parents were oblivious to it. Many sentences begin with some variation of either claims of her parent's lack of awareness (as in lines 180, 181, and 183) or declarations of the actions she believes are required of them (as in line 182). Line 180 comes toward the beginning of the text, establishing the intensity of her negative emotional state using *-happiness* (she is not just 'miserable' but a *bottomless pit of misery*). In lines 181-183, EL then declares the required conditions of her recovery, which involve her parents experiencing a similar level of negative emotions. In 181 and 183, these conditions are portrayed more as wants (with *+inclination*) but in line 182 (and a few other times throughout the text), they are portrayed as a non-negotiable (using *-capacity*) with

which her parents have no choice but to comply. Finally, line 184 is the last clause in the text, citing that the reason for EL setting such extreme conditions is her *hate* [-happiness] for her parents and their lack of awareness of the amount of pain she was in. What this pattern of *affect* shows is not only that EL was struggling with intense negative emotions, but that she viewed her parents as having not tried hard enough to help, for which she wanted to punish them.

In PW's text, she recounts an experience of exacerbated symptoms a few days before New Year's Eve, 1999, in which policemen had been called to her home by a telephone hotline operator (Spiro Wagner & Spiro, 2005). PW uses *affect* to describe feelings elicited by the hallucinations and delusional thoughts she was experiencing as well as the presence of the policemen in her home. Table 7.4 contains a few examples to demonstrate this.

Table 7.4: Examples of affect in PW's text

185	I **really believe** [+security] the Y2K bug will bring an end to civilization [-composition]
186	…the voices [-valuation: normality]… have returned with a vengeance [-reaction], **bringing hell** [-security] to my nights and days. With scathing [-valuation: propriety] **criticism** [attributed -satisfaction] and a constant scornful [-valuation: propriety] commentary on everything I do
187	But I **know** [+security] too well what would happen, and I **don't want** [negated +inclination] them to take me away [-capacity]
188	One cop **shakes his head** [attributed -satisfaction]. I **don't like** [negated +happiness] him; he hasn't been on my side [negated +tenacity] from the start

Lines 185 and 186 introduce the psychotic symptoms being experienced by PW at that time: a presumably delusional belief that the world would end just a few days later (185) and the presence of auditory hallucinations (186). In line 185, the *+security* token indicates a high level of commitment to the delusional belief and the use of *-security* in line 186 right after the *-reaction* token emphasizes the intensity of the auditory hallucinations. Moreover, the attribution of feelings of dissatisfaction (*criticism*) to the voices paints them as real entities which can have opinions and make evaluations, something not uncommon with auditory hallucinations (e.g., Beck & Rector, 2003, 2005). In line 187, PW uses *+security* to indicate a high level of confidence about what she believed would be the outcome of revealing her delusional beliefs and hallucinatory experiences to the police and a disinclination for it to come to pass. Finally, in line 188, she attributes a feeling of annoyance (about her) to one of the policemen, which contributes to the belief that he is against her, not there to help or support her. This pattern suggests some level of paranoid ideation; not only is the world

fated to end, but the voices she hears and the people that claim to be trying to help are actually aligned against her.

As briefly mentioned above, MJ used the largest proportion of *affect* of the five authors, with almost the same number of tokens being used to express her own emotions as used to attribute emotions to others. Nine of the 14 author-sourced tokens were *dis/inclination,* mostly used to signal the information MJ wanted from the person with whom she was having an affair after that person's partner found out and the relationship was left in a sort of limbo. Most of the remaining tokens then convey the feelings MJ has or believes she might have in response to events not unfolding in her favor. The attributed tokens are used to describe the possible emotions that MJ believes might be felt by the person she was having the affair with and her partner.

Table 7.5: Examples of author-sourced and attributed affect in MJ's text

189	I lied [-veracity] before. I **do want** [+inclination] her to tell me everything [+veracity]. I **do want** [+inclination] her to reenact the entire conversation [+tenacity]
190	I dump the contents of my heart in her lap [-tenacity] and **gesture for** [+inclination] her to pony up [+veracity]. I **wait for** [+inclination] her to say something but her jaw is wired shut [-tenacity]
191	Vanessa might **break up with** [attributed -satisfaction] Emily and Emily might die of [-valuation: capacity] **heartache** [attributed -happiness] and/or **embarrassment** [attributed -security]
192	I **want** [+inclination] to **know** [+security] if the prospect of a breakup [-reaction] makes her **sad** [attributed -happiness] (in which case she might **hate** [attributed -happiness]) or **happy** [attributed +happiness] (in which case she might **love** [attributed +happiness] me).

In lines 189 and 190, MJ expresses a desire to obtain more information about the situation, and in line 192, the desire is more specifically to learn Emily's (the person with whom she had the affair) feelings about it. Lines 191 and 192 then contain examples of MJ exploring possible outcomes, which involves her making assumptions about the feelings that Vanessa (the partner) and Emily might have. Interestingly, in both cases, despite the use of hedging (i.e., *might*), MJ seems to only acknowledge a finite set of possible outcomes and emotions. In line 191, the only outcome of a break-up acknowledged by MJ is that Emily would be potentially hurt by it and that the hurt would be fueled by one or both of two possible emotions (*heartache* and *embarrassment*). In line 192, only two options are considered for how Emily might feel about a break-up (*happy* or *sad*), each of which is tied to a single possibility for what they would suggest about how Emily felt about MJ (*love* or *hate*, respectively). This pattern suggests a particular preoccupation with the feelings of others especially as they relate to her—something admitted to earlier in the excerpt.

Most of ES's *affect* tokens were *in/security*, five of the nine tokens of which contribute to the depiction of the back-and-forth she had with herself about whether to report her

suspicions that an abusive ex-partner of hers was an unidentified sex offender wanted by the FBI. These tokens are shown in Table 7.6 alongside their immediate context.

Table 7.6: Examples of in/security in ES's text

193	The article was written by FBI San Diego, which is the city where… I **knew** [+security] John lived
194	Was it John in the video [-propriety]? I **couldn't be sure** [negated +security]
195	I kept checking [+tenacity] the image to see if it triggered gut-level [+valuation: tenacity] **familiarity** [+security] or **fear** [-security]
196	I told her [+veracity] what I **knew** [+security], which was that an ex-boyfriend and registered [+valuation: veracity] sex offender [-propriety] resembled John Doe 28 [-valuation: veracity]

Line 193 occurs at the beginning of ES's deliberation, introducing the first piece of evidence beyond the perceived visual similarities that supports her belief about her ex-partner's culpability. She introduces some doubt about that belief in line 194, which leads to the persistent checking to try to increase her confidence based on whether it did or did not elicit a feeling of security (line 195). Finally, in line 196, she reveals that she ultimately decided to report her suspicions, citing the knowledge she possessed in support of them, which was that the ex-partner resembled the wanted man and was known for committing crimes of a similar nature. The pattern suggests a negative stance toward the ex-partner, but the fact that she became convinced of his guilt and preoccupied with finding evidence of said guilt suggests the beginnings of delusional thinking when 'something' is perceived as wrong and reasons and answers are sought with strong determination (Henriksen & Parnas, 2019).

For DA, the majority of *affect* tokens were *in/security*, but there was at least one token in the other three categories, too. All but two of them were author-sourced and depicted the progression of emotions DA experienced as a result of the obsessive thoughts he had about being exposed to HIV and his attempts to quiet them. Table 7.7 contains examples that show part of this progression.

Table 7.7: Examples of affect in DA's text

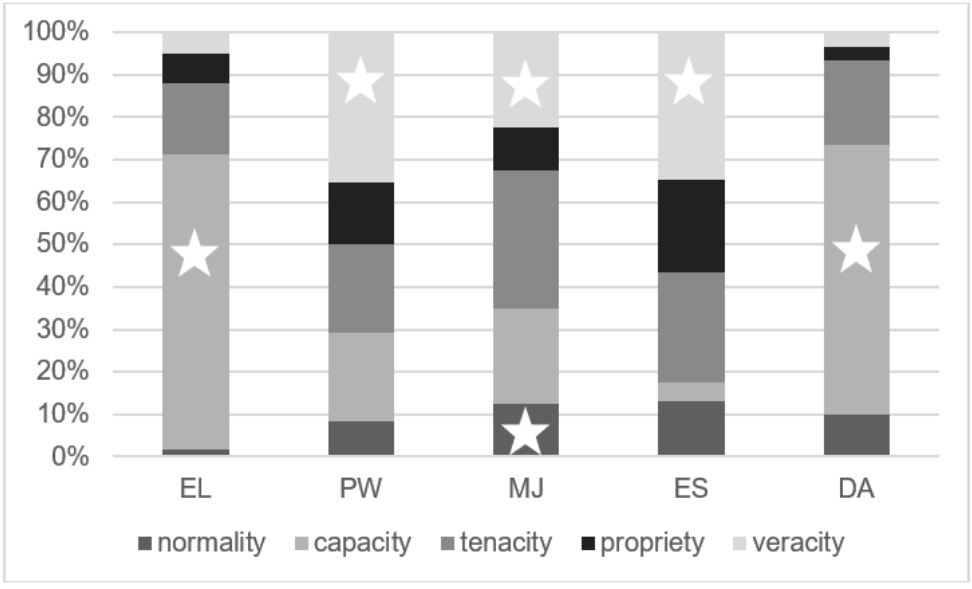
197	I **lost interest** [negated +satisfaction] in the stuff that had seemed important [+valuation: normality] just a few months previously
198	My **anxiety** [-security] spiked as they pierced [-composition] my skin with the needle but then…I felt **not fear** [negated -security] but a surge of **exhilaration** [+happiness]
199	The **relief** [+security] was so strong. And then, on the way out, I picked up the leaflet. **Why did I pick up the leaflet** [-satisfaction]?
200	As I read the words I **loathed** [-happiness] them…The thoughts and the **terror** [-security] and the **desolation** [-happiness] flooded back across my senses

At the beginning of the excerpt, DA describes how the obsessive thoughts had negatively impacted his life, causing him to 'lose interest' in things he used to enjoy (line 197). He *decided* [+security] to get tested for HIV in hopes that it would allay his fears, and despite initial anxiety described in line 198, the realization that (as he believed) the test would offer a definitive answer that could counter the thoughts provided happiness and relief (line 199). However, DA grabbed an informational leaflet on the way out (an action he regretted, as evidenced in line 199), which brought about the distress described in line 200. DA's use of *affect* not only indicates that the obsessive thoughts not only constituted a major source of impairment in his life, but it suggests that he viewed them as having their own agency in the sense that he could not seem to regain control over them, which is not uncommon in OCD (Knapton, 2018).

Judgment

As Table 7.1 showed, the highest proportions of *judgment* were used by EL and PW, and within the subcategories of *judgment* meanings (which here include the *valuation* counterparts), the significant differences occur within *normality, capacity,* and *veracity.* With *normality*, MJ was found to use a significantly higher proportion than EL; with *capacity*, both EL and DA used a significantly higher proportion than the other three authors; and with *veracity*, PW, MJ, and ES all used a significantly higher proportion than the other two authors. Figure 7.3 shows a breakdown of the *judgment/valuation* categories for the five authors with the significant variables being marked with a star for authors that used a significantly higher proportion than at least one other author.

Figure 7.3: Distributions of combined judgment and valuation categories



Percentage of total *judgment+valuation*

As Figure 7.3 shows, *capacity* and *tenacity* accounted for a large majority of tokens for EL and DA, while the proportions of all five categories were slightly more even for the other three authors. While *normality* was found to be a key variable, there are only 16 tokens total in the entire dataset, 15 of which are within *valuation*. Even though they were rare, however, they still contributed to the overall stances of the authors.

Table 7.8: Examples of normality via judgment and valuation

	Example	Author
201	…they think making the kind of cursory efforts [-tenacity] **any parents make** [+valuation: normality] when their kid is slipping away [-capacity] will be enough [attributed +valuation: capacity]	**EL**
202	…I barricade [-valuation: capacity] the door each night for fear [-inclination] of **beings from the higher dimensions** [-normality] coming to spirit me away [-veracity]	**PW**
203	The **normal** [+valuation: normality] guardrails [+composition] of **healthy** [+valuation: normality] emotional boundaries were never constructed [negated +composition] inside me. I think it's **normal** [+valuation: normality] that I feel what Emily feels. **Better than normal** [+valuation: normality]	**MJ**
204	I wondered if John would be **the kind of person** [+valuation: normality] who would wear that kind of burgundy shirt	**ES**
205	…I could no longer [negated +capacity] identify with [negated +propriety] anyone else's **trivial** [-valuation: normality] concerns [attributed -security]. **What did it matter** [-valuation: normality], really, if this man in a hospital drama had hurt his leg? [-capacity]	**DA**

Line 201 contains the only *normality* token in EL's text, but it contributes to the negative representation of her parents by suggesting what they believe is sufficient effort is only the bare minimum in EL's eyes (the *-tenacity* token) because it is what the 'average' parent would do. This also suggests that what EL expects of her parents is action above-and-beyond the average, which is further supported by the use of *capacity* and *tenacity* tokens (discussed below). Three of the four examples of *normality* in PW's texts were negative, used to describe aspects or effects of the delusions and hallucinations (e.g., *the voices* mentioned in line 186 in Table 7.4 above). In line 202 above, the 'beings' are described as being from a different dimension—thus arguably 'non-normal' within this one—and as intending to secretly (*-veracity*) abduct her. This further adds to the stance that began to take shape in the *affect* section above that PW was facing potential harm and/or persecution from multiple angles (i.e., the overly-critical *voices* and the policeman that was not on her side). Within MJ's text, she uses *normality* tokens (all via *valuation*) to acknowledge her lack of

normal and *healthy emotional boundaries* and the belief that this lack contributed to her being so determined to uncover others' emotions (as evident in her pattern of *affect*). For ES, the example in line 204 contains another example of her attempts at identifying evidence in support of her belief in her ex-partner's guilt by pondering the possibility of it being a 'normal' choice for him to wear a shirt like the one the unidentified perpetrator wore. Finally, the tokens of *normality via valuation* in DA's text helped further demonstrate the impact of the obsessive thoughts on his life by representing others' concerns or negative experiences as inconsequential compared to the distress he was feeling.

Capacity via judgment was used by all except ES—who, as evident in Figure 7.3, rarely used *capacity* resources at all to begin with. EL used the highest proportion of it and directed most of them outward; the other three (PW, MJ, and DA), conversely, directed more inward than outward.

Table 7.9: Examples of capacity via judgment

	Example	Author
206	…they will really **have to** [-capacity] do something to **make me better** [+capacity]	EL
207	They still **don't know** [negated +capacity] that they **need** [-capacity] to do more and more and more [+tenacity]	
208	I will **drain** [-capacity] them and **drown** [-capacity] them until they know [+valuation: veracity] how **little of me there is left** [-capacity]	
209	…they sometimes order me [-tenacity] to do things I shouldn't [-valuation: propriety]. So far I've **stopped myself** [-capacity], but I might **not always be able to** [negated +capacity]	PW
210	…I barricade [-valuation: capacity] the door each night…useless [-valuation: capacity] **as any physical barrier would be against them** [+capacity]	
211	I don't want [negated +inclination] them to **take me away** [-capacity]	
212	I am **Captain Empathy** [+capacity]—**able to** [+capacity] intuit feelings like Superman leaps tall buildings	MJ
213	If I **had HIV** [-capacity] and I **broke my leg** [-capacity], then I would still **have HIV** [-capacity] when they fixed it [+composition]	DA

In EL's text, *capacity via judgment* is used in four interacting ways. The first was to convey that her parents had no choice but to do what she demands using modals of requirement (Lock, 1996). The second was to depict her parents as oblivious to her pain using some variation of the *negated +capacity* seen in line 207 (which accounted for most of the *negated positive* tokens in her text). The third was to declare a desire to 'incapacitate' her parents in some way (line 208); and the fourth was to describe a possible future state of being for

herself (line 206) or her present state (line 208). Most instances, though, are one of the first two types, which are also used alongside assessments of *tenacity* to present her parents as believing they are trying hard to help, but EL perceiving it as insufficient, all of which contributes more to the negative stance she takes toward her parents. For PW, the few *capacity* tokens serve to depict the *voices* and other external forces as powerful. In line 209, this is through admitting to the possibility that the voices and their 'orders' might win out one day despite her efforts to stop herself; in line 210, it is through describing barricades as useless against the 'beings'; and in line 211, it is through expressing a lack of desire to be 'taken away' against her will. This adds to PW's negative stance toward the perceived external forces by portraying them as capable of causing the harm she believes they intend to inflict on her. For MJ, the *capacity via judgment* tokens were primarily used to support the argument that her lack of emotional boundaries was a *superpower*, giving herself a superhero-type name and comparing her 'empathic abilities' to Superman's powers (line 212). This all suggests a positive stance toward the lack of emotional boundaries, as something that made her **more**, not less, capable. Finally, for DA, *capacity* was used mostly in reference to the obsessive thought content about 'catching AIDS' or HIV as seen in line 213. It contributes to DA's portrayal of the distress caused by the obsessive thoughts by demonstrating that they cast such a large dark cloud over his experiences that other incapacitating events (e.g., breaking his leg) seemed inconsequential in comparison.

Capacity via valuation tokens served similar functions to those discussed above but evaluated 'things' instead of people. Table 7.10 contains examples from EL and DA's texts as they used the most tokens of this type, while the other authors used only between one and four tokens. For EL, they are used for describing aspects of her own situation as well as to convey just how much effort she expects from her parents. In line 214, she states it is *too late*, presumably for her parents to have not figured out how to help and in line 215, she illustrates just how high she has set the bar by saying they would need to *cure hunger* (*cure* acting as negation here because it would end something which reduces capacity). Examples from PW's text can be seen in line 210 from Table 7.9 above, being used to help illustrate the intensity of the fear about the perceived external threats (i.e., putting a *barricade* up to keep them out, but stating it would be *useless*). For MJ, the one positive token occurred when she described her 'empathic abilities' as a *superpower*; the remaining tokens were negative, conveying her belief that boundaries are *limits* and that depending on how the situation unfolded, her or Emily would likely *die of* [-valuation: capacity] *heartache*. This further demonstrates her preoccupation with others' emotions and the intensity she expects of them as well as of her own emotions. ES only used a single token of *capacity via*

valuation, referring to the *success of* her treatment for trauma from her ex-partner's abuse. Finally, for DA, many of the tokens referred to *HIV* (being a virus that would 'incapacitate' by making one sick), the aspects of his life that it would impact, and his attempts to ease the distress caused by the obsessive thoughts. For instance, in line 216, he describes how the relief he felt from the idea of his blood being tested allowed him to acknowledge the possibility that he did not have a virus that could adversely impact his abilities. However, after seeing that the test did not detect HIV but the antibodies for it, which could take 3 months to develop, the relief he felt (described as a *dam* that blocked the obsessive thoughts) was quickly replaced with the negative emotions described in line 217 in Table 7.10.

Table 7.10: Examples of capacity via valuation for EL and DA

	Example	Author
214	It's much **too late** [-valuation: capacity] and I'm so sure [+security] they are still not listening [negated +tenacity]	EL
215	They will have to [-capacity] **cure hunger** [negated -valuation: capacity] in Ethiopia	
216	**No virus** [negated -valuation: capacity] was slowly eating away at [negated -composition] my cells, **my promise** [+valuation: capacity] and my future	DA
217	The **dam** [-valuation: capacity] I had built to **hold them back** [-valuation: capacity] collapsed [-composition]	

The final key variable from this *attitude* type was with *veracity*, used more by PW, MJ, and ES than by EL and DA. For EL, only four tokens were used in total, all of which were within *valuation* and were used to indicate the truth value of what followed, such as saying that she *realize[d]* her parents believed they were *doing all they can* [attributed +tenacity] or that she wants her parents to *know* the depth of her distress. DA only used one token of *veracity via valuation* to declare that if someone told him after the HIV test that he did not have HIV, he *would believe them*. Examples for the remaining authors are shown in Table 7.11.

Throughout the beginning of PW's text, she uses variations of negated *+veracity via judgment,* like those seen in lines 218-219, to convey her lack of desire (or ability) to be honest with the policemen about the effects of the psychotic symptoms. *Veracity via valuation* is then used to indicate what pieces of information she believes to be true, such as the presence of *surveillance* by intelligence agencies and the connection of the police officer that was 'not on her side' to the hidden group of people she believed were after her. Both help further demonstrate the paranoid ideation that seems to be stemming from the delusional thinking and hallucinations. For MJ, *veracity via judgment* was used to convey her desire to share everything with Emily and for Emily to reciprocate. *Veracity via valuation* was

then used to acknowledge the possibility that they were 'destined' for a more serious commitment—it conveys a sense of certainty, which Martin and White (2005, p. 54) connect to judgments of *veracity*. These further demonstrate MJ's preoccupation knowing others' feelings about situations, perhaps to be better able to acknowledge, and maybe even prepare for, every possible outcome. Finally, for ES, half of the *veracity* tokens were via *valuation,* occurring when she mentioned *John Doe 28* (because his identity is unknown). The221emainnder concerned her desire to report her suspicions to the FBI (i.e., be honest with them), implied in line 223 when she talks about deciding whether *to act* and more explicitly stated in line 224 when she said she *told* the person on the phone the information about which she was confident. This included the information that her ex-partner was a *registered sex offender* (the argument being that being *registered* implies that whatever follows likely has truth to it), which functions as further support for ES's negative stance toward him and her belief in his guilt.

Table 7.11: Examples of veracity via judgment and valuation for PW, MJ, and ES

	Example	Author
218	I **can't tell them** [negated -veracity] I really believe [+security] the Y2K bug will bring an end to civilization [-composition]	PW
219	I **don't mention** the NSA, DIA, or Interpol surveillance [+valuation: tenacity] I've **detected** [+valuation: veracity] in my walls	
220	I **realize** [+valuation: veracity] he's connected to the Five People who monitor [+tenacity] my movements wherever I go, their **true** [+valuation: veracity] identities always **disguised** [-valuation: veracity]	
221	I **lied** [-veracity] before. I do want [+inclination] her to **tell me everything** [+veracity]	MJ
222	What if Emily and I are **meant for** [+valuation: veracity] more than an affair [+valuation: tenacity]? What if we **should** [+valuation: veracity] be together?	
223	I consulted [+inclination] with a friend about whether **to act** [+veracity]	ES
224	I **told her** [+veracity] what I knew [+security], which was that an ex-boyfriend and **registered** [+valuation: veracity] sex offender [-propriety] resembled **John Doe 28** [-valuation: veracity]	

Appreciation

No key variables were identified within *appreciation*, but it is still arguably worth qualitatively exploring the use of *composition* resources as they contribute to some of the authors' stances despite their low numbers overall. EL used it to describe her situation as *not some practice fire drill* to prepare her parents for the *real inferno* because the *real thing* was already happening, further demonstrating the intensity of the distress she was experiencing.

For PW, two of the tokens referred to the devastation she believed was imminent; namely that the *Y2K bug* would *bring an end to civilization* if a *biblical Armageddon* did not happen first demonstrating the intensity of part of the delusional content. Most of the *composition* tokens in MJ's text referred to *emotional boundaries* and *guardrails*; things arguably meant to keep relationships balanced, but which she viewed as obstacles to her using her empathic abilities. ES and DA used the most *composition* tokens, accounting for over half of the overall total between them. Examples from their texts can be found in Table 7.12.

Table 7.12: Examples of composition for ES and DA

	Example	Author
225	…the trauma [-security] had **not been eliminated** [negated -composition], but **the wound** [-composition] was now **scarred over** [-composition]	ES
226	Was it John in the video [-propriety]? I couldn't be sure [negated +security]. The image was **grainy** [-composition]; the face **wasn't quite right** [negated +composition]	
227	I had a rival [-valuation: tenacity] narrative in my head in which the **stakes just seemed so much higher** [-composition] **than** [+composition] anything that went on in life outside	DA
228	Oh, I **should have** [+composition] done this ages ago!	

In line 225, ES describes how the *trauma* she had endured, with treatment, from her ex-partner had not completely 'healed', but was no longer an open wound, either (a relationship that is better captured under *graduation*). This might be to suggest that ES did not think her past negative experiences were having as big of an impact on her life and that she was surprised by being suddenly convinced that her ex-partner was the unidentified fugitive, which is supported by her saying *fuck* [-security] in response to reading the article about the John Doe. In line 226, she cites concerns about the composition of the images, namely their clarity and certain details about the face, which introduces doubt about her belief in her ex-partner's guilt. Despite the acknowledgement of these sources of doubt, though, she does seem to disregard them as she ultimately reported her suspicions. This arguably would offer support for the contention that her suspicions were likely the result of delusional thinking, as contrary evidence was ignored and the belief was maintained (e.g., Henriksen & Parnas, 2019). Finally, for DA, the *composition* resources in line 227 helped emphasize how intense the distress from the obsessive thoughts was by seemingly implying that the possibility of 'catching' HIV/AIDS was a real danger compared to other possible things that could happen to him in the outside world. Then in line 228, he expresses the view that getting tested was a reasonable idea that he seems to wish he had sooner. Although, this was before reading the leaflet which caused the *dam* he had created to keep the obsessive thoughts out to *collapse*.

7.2.2 ENGAGEMENT

As detailed in chapter 3, the system of *engagement* comprises the resources for communicating commitment to or certainty about a proposition and for the author to align or disalign (i.e., agree or disagree) with their own propositions or with other persons or viewpoints (Martin & White, 2005). The system approaches utterances from the dialogic perspective, which emphasizes the relationship between the speaker/writer and the "background of other concrete utterances on the same theme…made up of contradictory opinions, points of view and value judgments" (Bakhtin, 1981, p. 281). It is made up of two broad types of utterances: *monoglossic* (which make no reference to other viewpoints) and *heteroglossic* (which either *expand* or *contract* the dialogic space to alternative viewpoints; Martin & White, 2005).

Monoglossic utterances, in this research, are considered to be rare, partly based on Gales' (2010) argument that when there is an expectation of disagreement with or dissent from the audience, utterances can no longer be said to contain information that is unproblematic or widely-accepted, as is an essential feature of such utterances (White, 2003, p. 263). The argument here is that the texts used in this chapter (and other chapters) were all likely produced under the assumption that the information contained within them was not "generally 'known' or 'accepted' in the… communicative context" and that the audiences did not share "the same knowledge, beliefs and values as those relied upon by the proposition" (White, 2003, p. 263). This is because all of the texts were written either to plead the case to their audience for their version of events—which is necessarily set against the backdrop of other versions of events—or to recount information otherwise unknown to the audience (i.e., information not known or accepted in that communicative context).

Instead, *heteroglossic* utterances are the most often encountered type, which as mentioned above, are divided into those that *expand* the dialogic space and those that *contract* it (Martin & White, 2005). There are two main categories of *expansions*: *entertain* and *attribute*. *Entertained* propositions present the viewpoint as one possibility of many, while *attributed* propositions present the viewpoint as belonging to someone else, either with (*distance*) or without (*acknowledge*) an indication as to the author's position on the attributed proposition. *Contractions* are divided into two broad subcategories—*disclaim* and *proclaim*—which are each divided into further categories. *Disclaimed* propositions are either *denied* (i.e., one position is invoked and then rejected) or *countered* (i.e., the authorial position supplants or replaces an expected alternative). *Proclaimed* utterances, in the original framework, can be *pronounced* (i.e., interpolation, emphasis, or intervention by the author to present the proposition as highly warrantable), *concurred* (i.e., the author presents

themselves as sharing knowledge with the audience or a proposition as being logically or sequentially connected to surrounding propositions), or *endorsed* (i.e., externally-sourced propositions that are construed as undeniable). A fourth type of *proclamation,* however, is possible, as acknowledged by O'Donnell (2019) and White (2003). *Justified* propositions present viewpoints as "justified, substantiated or otherwise argued for" (White, 2003, p. 274) through explicit markers like *because, therefore, for this reason* or other linguistic formulations that achieve the same effect implicitly.

As briefly mentioned above, frequencies for *engagement* resources are normalized per 50 instances. The *monoglossic* and *endorse* variables were removed, though, because there were only three *monoglossic* tokens in the entire dataset and zero tokens of *endorse*. Additionally, the further categories of *attribute—distance* and *acknowledge*—were not included in the analysis separately because *distance* especially was too rare (only 4 tokens across the entire dataset). Table 7.13 contains the results from the between-author comparisons; the columns represent the four authors, and the rows represent the *engagement* variables. The shaded cells indicate where that author used a significantly higher proportion of the given variable (at the level of at least $p<0.05$) than the author denoted by the superscript.

Table 7.13: Between-author comparisons for engagement

	EL	PW	MJ	ES	DA
contract	29.76	37.31	26.15	32.95	37.76
expand	20.24	10.45	23.85^{PW}	17.05	12.24
disclaim	20.24^{ES}	19.40	9.23	7.95	18.37
proclaim	9.52	17.91	16.92	25.00^{EL}	19.39
deny	11.90	12.69	3.85	4.55	10.20
counter	8.33	6.72	5.38	3.41	8.16
concur	0.00	3.73^{ES}	$5.38^{ES,EL}$	0.00	3.06^{ES}
pronounce	5.95	12.69	8.46	21.59	15.31
justify	3.57^{DA}	1.49	3.08	3.41	1.02
entertain	15.48	5.22	16.92	7.95	10.20
attribute	4.76	5.22	6.92	9.09	2.04

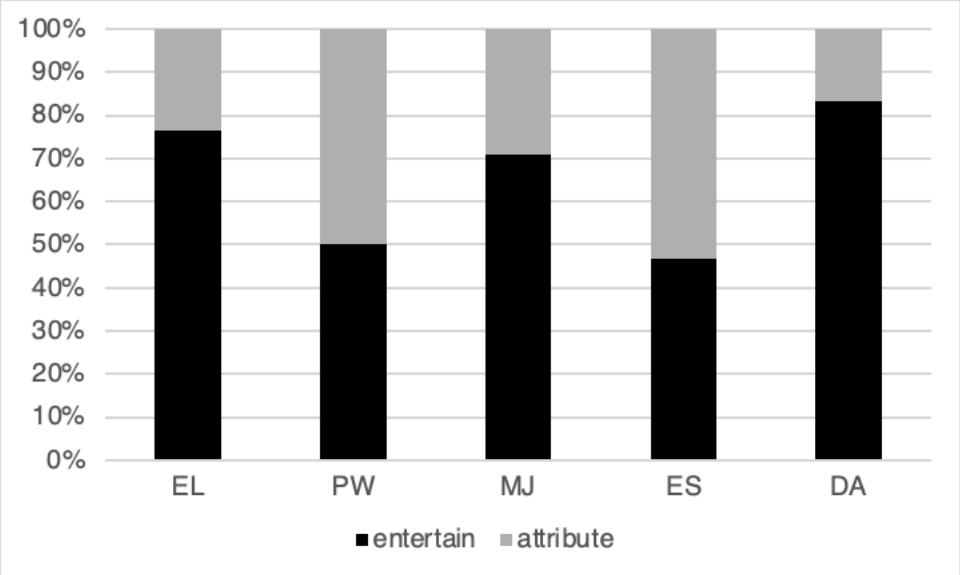
Frequency per 50 instances

As this table shows, there was only one significant difference at the highest level, with MJ using a higher proportion of *expansions* than PW. In fact, MJ used almost even amounts of *expansions* and *contractions*, while the other authors all used a higher proportion of *contractions*. Even though the difference does not hold when examining the distributions of *expansion* subcategories, it is still worth exploring qualitatively how both types of *heteroglossic* utterances were used by the authors, which is the focus of the next two subsections.

Expansions

There were no significant differences between authors for either of the two main categories of *expansions*, but in examining the distributions of them (Figure 7.4), it appears that PW and ES both used *entertainments* and *attributions* at equal rates, while the other three authors opted more often for *entertainments.*

Figure 7.4: Distributions of expansion categories



Percentage of total *expansions*

Starting with EL, the majority of her *expanding* utterances were *entertainments*, consisting of many of the statements in which she described the things she demanded of her parents, using modals of requirement like *need* and *have to* (Lock, 1996). As Martin and White (2005) point out, use of such modals can convey a high level of commitment to the proposition as they do in EL's text, but they leave open the option for the interlocutor to refuse and therefore are still considered *expansions.* The *attribution* tokens were all *acknowledgements* of her parents' thoughts/beliefs about their own actions. Interestingly, the *entertained* propositions were typically preceded by a *denial* or *counter*, while the *attributions* were typically followed by a *counter* or *denial.* Consider the examples in Table 7.14 below.

Table 7.14: Examples of expansions in EL's text

229	And then I realize [counter] **they think** they are doing all they can [acknowledge] and it's not working [denial]. They have no idea what a bottomless pit of misery I am [denial]. They **will have to** do more and more and more [entertain].
230	**They think** making the kind of cursory efforts any parents make when their kid is slipping away will be enough [acknowledge], but [counter] they don't know how enormous my need is [denial].
231	It's much too late [counter] and **I'm so sure** [entertain] that they are still not listening [denial]. They still don't know [denial] that they **need** to do more and more and more [entertain].

The *attribution/disclamation* pairs seen in lines 229 and 230 demonstrate that while EL can acknowledge that her parents have made some kind of effort, she views it as insufficient and ultimately unhelpful. The *disclamation/entertain* pairs in lines 229 and 231 then first depict her parents as unaware of her mental state and needs before declaring with modals of requirement that she would need more action from them for the effort to be deemed sufficient. The combination of these pairings intensifies the negative stance taken toward EL's parents by painting them as being unable to fully understand the depth of her distress **and** unable to provide the level of help she needs.

For PW, many of the *expansions* help illustrate the impacts of the psychotic symptoms on her reality. The *attributions* describe communicative actions by the *voices* she was hearing and the police officers in her home; most of the *entertainments* refer to delusional content.

Table 7.15: Examples of expansions in PW's text

232	I can't tell them [denial] I really believe [counter] the Y2K bug will bring an end to civilization [pronounce] **should** a biblical Armageddon fail to materialize [entertain]. Nor [denial] **if** it did [entertain] how I **would most certainly** be going to heaven [entertain]
233	…with **scathing criticism** [distance] and a constant **scornful commentary** on everything I do [distance]. **They sometimes order me** to do things I shouldn't [distance]
234	Together they collect all my medications and **ask me** if I have been taking them [acknowledge]. Of course! [concur]. This is the truth [pronounce]. **One cop shakes his head** [acknowledge]
235	I'm not sure how deep it goes [denial]. But [counter] **something tells me** to keep as far from him as I can [entertain]

Lines 232 and 235 contain examples of *entertainments* in which PW expresses what appear to be delusional beliefs; the first regarding the end of civilization and the second paranoia about the intentions of one of the police officers. That these particular beliefs are expressed with hedging suggests that they are not fully formed delusions (Hinzen et al., 2016). In line

233, PW assigns agency to *the voices* she has been hearing, stating that they offer criticisms of and issue orders to her. As such, they are not treated as something which originated within her, but something which comes from an external source over which she has no control, in line with the externalization bias seen in psychotic symptoms generally (Beck & Rector, 2003). Finally, in line 234, PW reports the actions of the police officers, citing how one of them appeared to express disbelief at her affirmation to their question. This was followed by the statement that *he hasn't been on my side from the start*, indicating mistrust/suspiciousness of him that is more explicitly expressed in line 235.

For MJ, who used almost equal proportions of *expansions* and *contractions*, *entertainments* and *attributions* served to present the possibilities she considered for how the situation she was in would unfold. The *entertainments* were primarily to introduce whatever followed as one of the possibilities; the *attributions* were used to specifically introduce what MJ viewed as the possible views/feelings of others in the situation.

Table 7.16: Examples of expansions in MJ's text

236	I **wait for** her to say something [entertain] but her jaw is wired shut [counter]. Vanessa **might** break up with Emily [entertain] and Emily **might** [entertain] die of heartache and/or embarrassment [justify].
237	I **want** to know if [expand] the prospect of a breakup **makes her** sad… or happy [acknowledge]
238	Vanessa **might** [entertain] **take** the job [acknowledge], **reclaim** her partner [acknowledge], and **send me packing** [acknowledge]
239	**What if** Emily and I are meant for more than an affair? [entertain]

Interestingly, many of the *attributions* take the form seen in lines 237 and 238 where MJ is not citing something actually said/felt/thought by another person, but rather part of a possibility considered by MJ. These could have arguably been coded as *entertainments*, but it seemed more important to capture how often MJ was attempting to attribute feelings/thoughts to other people and what kinds of options for the feelings/thoughts she was exploring for them. In all of the examples, MJ precedes the propositions with *entertainments,* which marks them as simply possibilities to be explored rather than definitive realities.

For ES, *entertainments* proved the most informative type of *expansion* used, as all but one of them conveyed some kind of doubt ES had about her suspicions of her ex-partner.

Table 7.17: Examples of expansions in ES's text

240	**Was it** John in the video? [entertain] I couldn't be sure [denial]. The image was grainy [pronounce]; the face wasn't quite right [denial]. I **consulted with** a friend about whether to act [entertain]
241	I **wondered if** John would be the kind of person who would wear that kind of burgundy shirt [entertain]
242	When someone did pick up, I told her what I knew [pronounce] which was that an ex-boyfriend and registered sex offender **resembled** John Doe 28 [entertain]

Throughout the text, while ES expresses her suspicions about her ex-partner and even suggests that she is fairly convinced she is right, she continually also expresses hesitation in reporting those suspicions. This hesitation often shows up in the form of an *entertainment* like lines 240-242 in which she considers the evidence and acknowledges that there are potentially other explanations for it. Even in the end when she decides to report her suspicions to the FBI, she mitigates by using the term *resembled* instead of a more conclusive term. All of this further suggesting that these beliefs might have been part of a delusional mood stage rather than the result of a full-blown delusion (e.g., Henriksen & Parnas, 2019).

All but two of DA's *expansions* were *entertainments*, primarily used to explore possibilities relating to having HIV and getting tested for it.

Table 7.18: Examples of expansions in DA's text

243	**If** I had HIV and I broke my leg [entertain] then I **would still** have HIV when they fixed it [entertain]
244	I decided to donate blood [pronounce]. They **would** test for HIV [entertain].
245	…I felt not fear [deny] but a surge of exhilaration [counter]. Oh, I **should have** done this ages ago! [entertain]
246	Their tests looked not for HIV [deny] but the antibodies the immune system raised against it [counter] and those antibodies could take three months to show up [counter]. Three months in which **I could** catch AIDS [entertain] and nobody could tell me that I hadn't [deny]

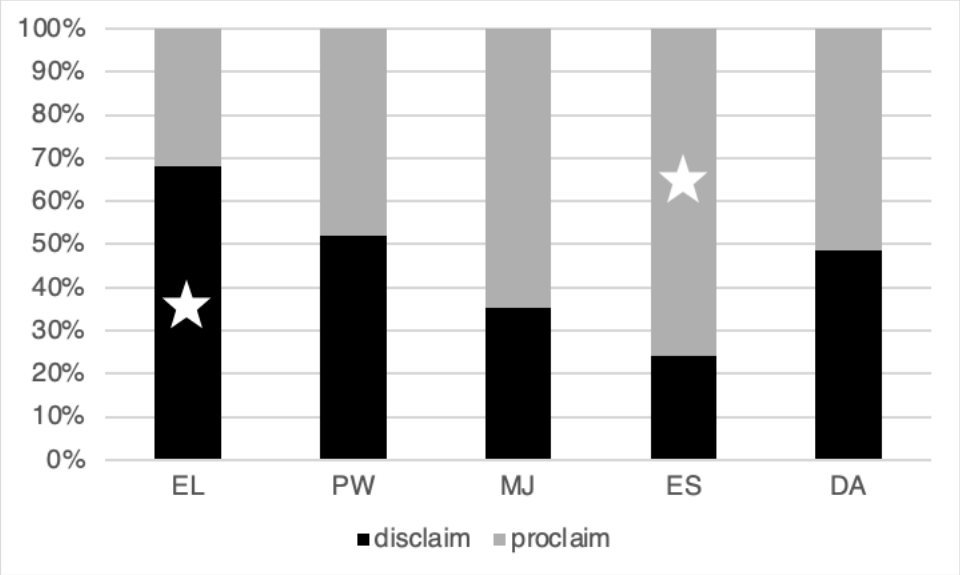
Included in the *entertained* propositions were positive and negative sentiments. In line 243, the prospect of having HIV overshadows other negative events like breaking one's leg, portraying it as almost inconsequential in comparison. In line 244, the decision to get tested is based on the idea that they would test for the virus, presumably giving DA the definitive evidence he needs to battle the obsessive thoughts. In line 245, he *denies* the presence of negative feelings of fear, stating the opposite actually occurred, which led him to *entertain* the idea that donating blood was beneficial and he should have done it sooner. However, in line 246, finding out the tests look for antibodies instead of the virus raises the seemingly

anxiety-inducing possibility that he could *catch AIDS* in the time it takes the antibodies to appear. Then, DA follows that with a *denial* of the prospect of being able to be told otherwise, and therefore being able to ease the anxiety. It further helps paint the obsessive thoughts and the anxiety they caused as uncontrollable and almost inescapable.

Contractions

The key variables within *contractions* occurred between the two main types of *contraction* and two of the three subcategories of *proclaim* analyzed here. The distributions of the two *contraction* types can be seen in Figure 7.5 below, with stars being used to indicate the variable for which the author used a significantly higher proportion than at least one other author.

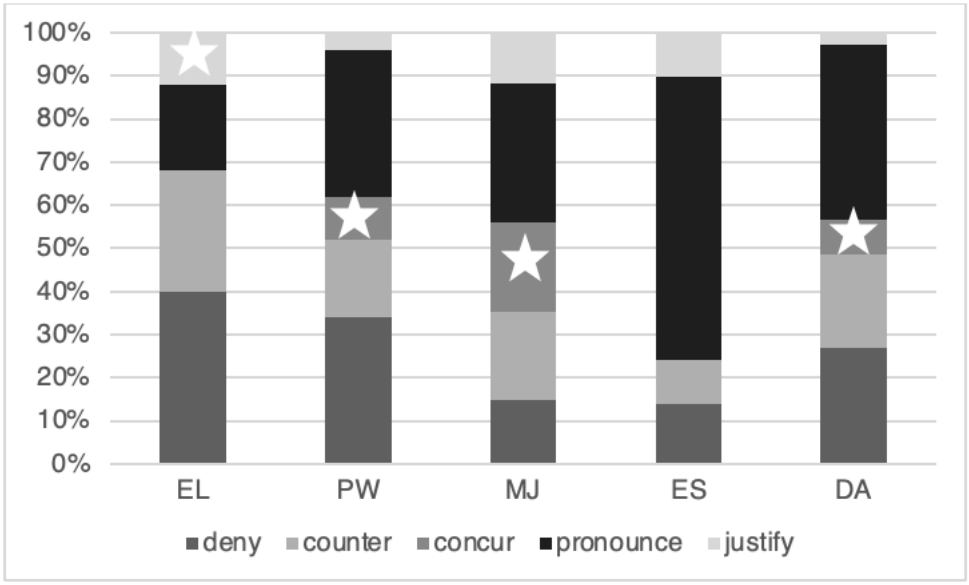
Figure 7.5: Distributions of contraction types



Percentage of total *contractions*

As is evident in this graph, EL uses the highest proportion of *disclamations* while ES uses the highest proportion of *proclamations*; the remaining authors use proportions somewhere in between the two. When broken down into the five subcategories, as is seen in Figure 7.6, additional observations can be made about the distributions before exploring the resources qualitatively. Stars are used to indicate the variables for which the given author used a significantly higher proportion than at least one other author. (It should be noted that the *disclaim* and *proclaim* categories were analyzed separately in the quantitative analysis, but they are shown together here to facilitate discussion of *contraction* resources more broadly.)

Figure 7.6: Distributions of contraction categories



Percentage of total *contractions*

As this graph shows, for all except MJ, *denials* represent a slightly larger proportion than *counters*; *concur* resources were not used at all by EL and ES; *pronouncements* accounted for a majority of ES's total *contractions*; and *justifications* were fairly rare across all five authors.

Starting with EL, *disclaim* tokens accounted for the majority of total *contractions*. *Denials* were primarily used to reject some proposition relating to her parents' beliefs and/or actions; *counters* were primarily used to declare (sometimes alongside *pronouncements*) that the demands EL had presented using *entertainment* resources were just part of what she actually expected. *Justification* resources—which EL used a higher proportion of than DA despite there only being three tokens—were then used to provide reasons for *disclamations* that immediately preceded them.

Table 7.19: Examples of contractions in EL's text

247	They **do not know** [deny] that this is **not** some practice fire drill meant to prepare them for the real thing [deny] **because** the real thing is happening right now [justify]
248	They have to suffer as I have [entertain]. And **even after** they've done that [counter] there **will** still be more [pronounce]
249	I **will** drain them and drown them until they know how little of me there is left [pronounce] **even after** I've taken everything they've got to give me [counter] **because** [justify] I **hate** them [pronounce] **for** [justify] **not** knowing [deny]

In line 247, the *justification* provides the reason for EL *denying* the proposition that her situation was anything less than the worst it could be. In lines 248 and 249, the *counters* are used to indicate that the demands implied/expressed in the previous clause still did not represent the last of what she was willing to require from her parents. The *pronouncement* in

line 248 just after the *counter* conveyed what the next demand would be, while the order was reversed in line 249 (i.e., the demand was presented first, then the *counter* to indicate that it would come after EL had already required more from them). The first *justification* in line 249 then indicates that it is *hate* for her parents that is the reason for demanding more after already 'taking everything', and the second *justification* declares that the reason for the *hate* is their unawareness of her distress. The combinations exemplified in the above excerpts further demonstrate the level of distress she was experiencing and emphasize just how ill-equipped she seemed to believe her parents were to help her.

For PW, *denials* and *pronouncements* accounted for the majority of the *contracting* utterances. Many of the *denials* were in reference to the information PW did not want to provide to the police officers and the *pronouncements* were used to describe certain aspects of her experience.

Table 7.20: Examples of contractions in PW's text

250	I **can't** tell them [deny] I **really** believe [counter] the Y2K bug **will** bring an end to civilization [pronounce]
251	I **don't** mention [deny] the NSA, DIA, or Interpol surveillance **I've detected** in my walls [pronounce] **or** [deny] how the intercepted conversations among these agencies **have intruded** into TV shows [pronounce]
252	He **hasn't** been on my side from the start [deny]. I **realize** he's connected to the Five People who monitor my movements wherever I go [pronounce], their true identities **always disguised** [pronounce].

The examples in lines 250 and 251 demonstrate PW's reluctance to reveal certain information to the police officers, with the *denials* being followed by *pronouncements* related to paranoid and delusional beliefs. The *denial* in line 252 then pairs with the two following *pronouncements* to convey PW's mistrust of one of the police officers by tying him to the paranoid belief about being surveilled by outside groups. That the majority of PW's utterances were *contractions* means that little room is given to alternative representations of the experience that is described, even the parts that relate to the psychotic symptoms, suggesting PW had a high level of confidence in and commitment to her own interpretation of events.

For MJ, the most informative *contraction* categories were *concurrences* and *counters*. The *concurrences* were used primarily to present propositions as logically following those that preceded them, while *counters* were used in the opposite way to present propositions as counter to expectations or hopes.

Table 7.21: Examples of contractions in MJ's text

253	I believe tuning into other people's emotions is my secret superpower [entertain]. I **can bend steel** with my bare hands [pronounce]. I **can** find a way in [pronounce]. I **am** Captain Empathy [pronounce]—**able to** intuit feelings like Superman leaps tall buildings [concur].
254	I **dump** the contents of my heart in her lap [pronounce] and **gesture for** her to pony up [pronounce]. I wait for her to say something [entertain] **but** her jaw is wired shut [counter]
255	I want to know if [entertain] the prospect of a breakup makes her sad [attribute] (**in which case** [concur] she might hate me [entertain]) or happy (**in which case** [concur] she might love me [entertain])
256	Vanessa **might not** break up with Emily [deny] and the death by heartache might be mine [entertain] **instead** [counter]

In line 253, the *pronouncements* are used to demonstrate the level of strength MJ associated with *tuning into other people's emotions.* The *concurrence* at the end is presented as a logical follow-up to the final *pronouncement*, providing the information to support the claim, and ultimately indicates a positive stance toward the lack of emotional boundaries that enable the empathic abilities. In line 254, MJ describes a situation in which she declared her feelings and her desire to know Emily's and how *counter* to expectations, Emily did not offer up the information MJ was wanting, suggesting the importance MJ ties to such information. In line 255, the *concurrences* serve to introduce the potential logical outcomes to the scenarios *entertained* just before them, painting these outcomes as essentially the only—or at least most warrantable or likely—possibilities. Finally, in line 256, MJ acknowledges an alternative scenario (which is hedged with the downscaling term *might*) in which the breakup does not happen and as a result, *counter* to the other scenario presented, MJ ends up being hurt. What is evident in these examples is MJ's preoccupation with knowing and understanding the feelings of others as well as a concern for thinking through not just how situations will impact others, but also how they could impact her.

ES used the highest proportion of *proclamations* of the five authors, employing *pronouncements* most often to move the narrative along, but also employed *justifications* and *disclamations* alongside them to introduce other, less straightforward pieces of the narrative.

Table 7.22: Examples of contractions in ES's text

257	The first time I saw this message, shared by a feminist blogger [attribute], I **ignored** it [pronounce]. **But** [counter] she retweeted the missive the next day [attribute] and the repetition **was enough to cause me** to click the link [justify]
258	The John Doe 28 video **was found** during a raid on a home in San Francisco [pronounce], which **is where I live** [pronounce]. The article **was written by** FBI San Diego [pronounce], which is the city where, as of less than six months before I saw the tweet in question, **I knew** John lived [pronounce]
259	Was it John in the video? [entertain] I **couldn't** be sure [deny]. The image **was** grainy [pronounce]; the face **wasn't quite** right [deny].
260	I **kept checking** the image [pronounce] **to see if** it triggered gut-level familiarity or fear [justify]

As ES declares in line 257, she had ignored the tweet that sparked her suspicions at first, but the use of the *counter* token suggests the retweet the next day surprised her (or at least went against expectations) and this countered expectation led to her deciding to open the article. Pieces of information from the article and how they related to her were presented with *pronouncement* resources as seen in line 258, which helps depict her conclusions as highly warrantable. In line 259, ES introduces doubt by questioning the likelihood of the conclusions she had reached and *denying* the certainty she felt about them and declaring problems that existed with the evidence she had found. Finally, in line 260, she *pronounces* how she continually looked at the image after having doubts, *justifying* the repeated action by stating it was to see if she could increase her confidence in her conclusions.

Finally, for DA, *pronouncements* and *disclamations* served as the primary *contraction* categories used to give his account. The *pronouncements* were used to declare aspects of his experience, while *denials* and *counters* were used to demonstrate the things that changed or went against his expectations.

Table 7.23: Examples of contractions in DA's text

261	I **lost interest** in the stuff that had seemed important just a few months previously [pronounce]. Music, books and films **no longer** held my attention [deny]
262	My anxiety **spiked** as they pierced my skin with the needle [pronounce] **but then** [counter] as I **watched the thick red fluid pour** from my arm [pronounce]…I felt **not** fear [deny] **but** a surge of exhilaration [counter]…**of course** [concur] there was **nothing** in my blood [deny]
263	Their tests **looked not** for HIV [deny] **but** the antibodies the immune system raised against it [counter]
264	The thoughts and the terror and the desolation **flooded back** across my senses [pronounce]. The dam I had just build to hold them back **collapsed** [pronounce]

In line 261, DA describes the aspects of his life that had been changed because of the obsessive thoughts, *pronouncing* the loss of interest and *denying* the ability to give attention to things he used to enjoy. Then in line 262, the *counter* introduces a moment where, against his expectations, he started to feel relief from the anxiety, even using a *concurrence* to indicate that the *denial* of the proposition that the virus was in his blood was the logical and obvious conclusion. However, in line 263, DA presents the information that *countered* his expectations again and *denied* the proposition that was giving him relief. As a result, he *pronounced* how the negative feelings returned full-force (line 264). This pattern contributes to the portrayal of the lack of control DA had over the obsessive thoughts and the impact they had on his life, with the relief being so quickly ruined by the introduction of information that changed the beliefs he had begun to form to bring about the relief.

7.2.3 GRADUATION

The final system of Appraisal, *graduation*, is considered to apply to both *engagement* and to *attitude* (Martin & White, 2005) and "depending on the degree and type of resources used," it can be used to project "the writer's social and individual identities…as more or less authoritative and confident" (Macken-Horarik & Isaac, 2014, p. 77). The two broad categories of graduation are *force* and *focus* (Martin & White, 2005). *Focus* comprises the resources used to indicate whether the stance object is more or less representative of the prototypical qualities of a semantic category. *Sharpening* indicates higher prototypicality—e.g., *true friend* or *real hero*—while *softening* indicates lower prototypicality—e.g., *sort of nice*. *Force* comprises the resources assessing intensity (*intensification*) or amount (*quantification*), which can be additionally coded for whether they intensify or weaken the evaluation (*scaling*) and *lexical infusion,* which helps describe whether the intensity is encoded in the evaluative item itself (*infused*) or is achieved using a separate lexical item (*isolated*). For this research, *intensification* was expanded slightly from its typical *quality-process* dichotomy to include a category for *repetition* to capture the same or similar meanings that are used multiple times across a text (or in quick succession, as Martin and White, 2005, originally proposed). With *quantification*, there are three categories—*number, mass, extent*—which are all argued to be scalable alongside the *intensification* categories. However, in this research, *scaling* was not coded for *extent* tokens because it is not clear (1) whether it is a necessary aspect of this particular category of meaning and (2) which meanings would be considered upscaled and which would be downscaled. For instance, with tokens such as *next door* and *the other side of town,* would the *upscaled* token be the

one that conveys very close proximity or a large distance? Because of the lack of clarity, *extent* tokens are not included in the totals for the *scaling* variables.

Just as with *attitude*, the frequencies for each variable were normalized per 350 words. Table 7.24 contains the results from the between-author comparisons; the columns represent each of the four authors and the rows represent the graduation variables. The shaded cells indicate where that author used a significantly higher proportion of the given variable (at the level of at least $p<0.05$) than the author denoted by the superscript.

Table 7.24: Between-author comparisons for graduation

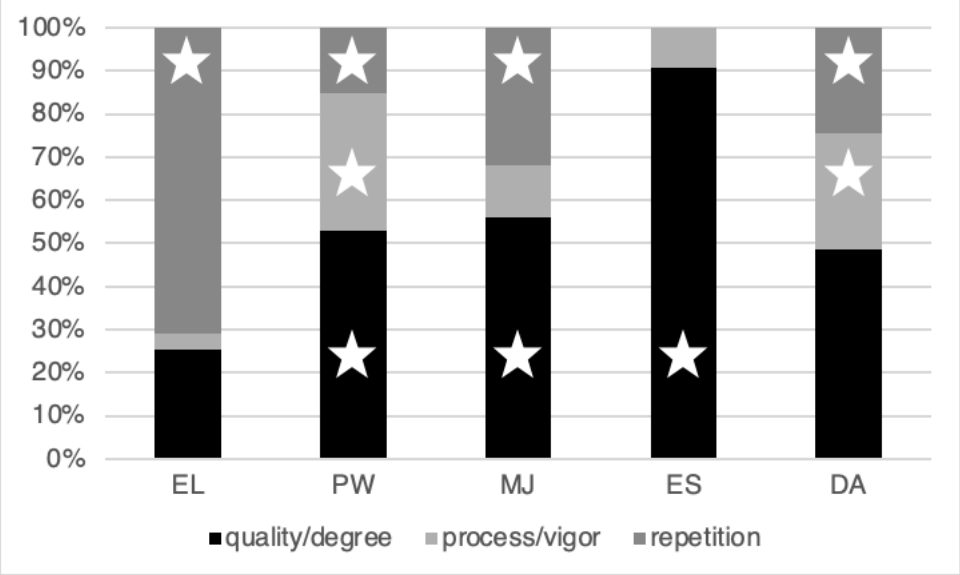
	EL	PW	MJ	ES	DA
force	71.59	60.05	78.17	38.99	48.65
focus	6.96	4.74	5.33	6.93	3.92
intensification	54.69	41.87	66.62	27.72	29.04
quantification	16.90	18.17	11.55	11.26	19.62^{MJ}
quality/degree	13.92	22.12^{EL}	37.31^{EL}	25.12^{EL}	14.13
process/vigor	1.99	$13.43^{EL,MJ\ ES}$	7.99	2.60	7.85^{EL}
repetition	$38.78^{PW,MJ,ES,DA}$	6.32^{ES}	21.32^{ES}	0.00	7.06^{ES}
number	0.99	7.11^{EL}	2.66	6.06^{EL}	8.63^{EL}
mass	$11.93^{PW,ES,DA}$	2.37	$6.22^{PW,ES}$	0.87	4.71
extent	3.98	8.69	2.66	4.33	6.28
soften	2.98	3.16	2.66	3.47	3.14
sharpen	3.98	1.58	2.66	3.47	0.78
upscale	58.66	40.29	55.08	25.12	29.82
downscale	8.95	11.06	21.32	9.53	12.56
isolating	17.90	21.33	18.65	8.66	14.91
infusing	53.69	38.71	59.52	30.32	33.74

Frequency per 350 words

As the table above shows, all but one of the key variables are lower-level categories of *intensification* and *quantification*. The only higher-level key variable is overall *quantification* which was used at a significantly higher proportion by DA than MJ, but interestingly the difference disappears when looking at the distribution of the lower-level categories.

Starting with the *intensification* categories, the distribution of the resources for all five authors is illustrated in Figure 7.7 below with stars being used to denote the variables for which an author used a significantly higher proportion than at least one other author.

Figure 7.7: Distributions of intensification categories



Percentage of total *intensification*

For both *quality* and *process* tokens, the majority were *upscaled* and *infusing*, meaning that most often all five authors were intensifying their assessments using words/phrases which encoded this intensity themselves rather than relying on an external modifier (Martin & White, 2005). Many of these tokens, therefore, overlap with the *attitude* tokens that have already been discussed in the Attitude section above. The *repetition* tokens, on the other hand, capture instances of (1) similar meanings being used in quick succession (e.g., *sad and depressed*) and (2) evaluative themes being repeated throughout a text. As with the previous chapters, this variable arguably proves the most informative out of the three *intensification* categories.

For EL, *repetition* was the most used *graduation* resource, accounting for almost half of the tokens—a proportion that was significantly higher than the other four authors. The majority of these—even instances of the first type listed above—fell into one of three broad evaluative themes: (1) those relating to EL's mental state, (2) those relating to her parents and their lack of awareness, and (3) those relating to her demands of her parents. Using these three evaluative themes, EL gradually increases the intensity of the negative stance taken toward her parents and conveys a growing level of distress. Consider the progression shown in Table 7.25 below. The *repetition* tokens are bolded and underlined with the theme represented by them in brackets to their immediate right.

Table 7.25: Progression of repetition in EL's text

265	I have finally gotten so **impossible and unpleasant** [mental state] that they will really **have to** [demands] **do something** [demands] to make me better
266	**They have no idea** [parents] what a **bottomless pit of misery** [mental state] I am. They will **have to** [demands] **do more and more and more** [demands]
267	They **need** [demands] to try to get through to me until they **haven't slept or eaten or breathed fresh air** [demands] for days
268	**They have no idea** [parents] how much **energy and exasperation** [demands] I am willing to **suck out of them** [demands] until I feel **better** [mental state]
269	I will **drain them and drown them** [demands] until they **know** [parents] how little of me there is left

At the beginning of the text, EL describes herself as *impossible and unpleasant* and suggests that her parents will have to do some vague action to help (line 265). In line 266, she declares her parents are unaware of her growing distress and that they have no choice but to do what she demands of them. In lines 267-269, the demands become more intense and specific, having cited just prior a desire for them to *suffer as I have*. There is also a shift between lines 267 and 268 from EL describing the demands in terms of what she expects her parents to do to describing them in terms of the effect she wants them to have on her parents. The demands are also typically tied in some way to EL's mental state, which is represented in consistently (and at times increasingly) negative terms throughout the text.

For PW, *repetition* was fairly rare, accounting for less than 10% of total *graduation*. This was because PW covered a range of evaluative themes throughout the text, only consistently repeating the sentiment that she was unable or unwilling to share certain information with the police officers for fear of what she believed the consequences of doing so would be. MJ repeated references to relationship boundaries, her wants, and possibilities for how the situation between her, Emily, and Emily's partner would unfold. MJ begins the text talking about her feelings toward boundaries (i.e., viewing them as obstacles), then she presents what she wants instead (i.e., to know all of Emily's and her partner's feelings), and finally MJ discusses the possibilities she devised when Emily did not share the information she requested. This last stage involved what Emily's partner might do, how Emily would feel about her partner's actions, how they might impact MJ's career, and how MJ herself would feel about the possible outcomes. It further demonstrates MJ's preoccupation with knowing others' feelings and accounting for possible futures—especially the negative ones—which could point to a heightened level of anxiety around relationships in particular that MJ might believe will be eased if more information is known.

ES was the only author who did not use any *repetition* in her text, meaning that she did not reiterate evaluative themes throughout the text. This is interesting because, as discussed above, she demonstrated a preoccupation with determining her confidence in her suspicions. However, instead of repeating certain evaluations and themes, she went through a series of pieces of information about her ex-partner and the wanted John Doe, trying to reconcile the two to determine the potential reliability of her suspicions, usually employing *focus* tokens. With these, she acknowledged how the images were not *quite right* and considered whether her ex-partner was *the kind of* person who would wear the *kind of shirt* the man in the photos wore. Finally, most of DA's *repetition* tokens referred to *HIV* or *AIDS*, but he also had three instances of *repetition* of the first type; that is, instances of repeating similar meanings in quick succession. These are bolded and underlined in Table 7.26.

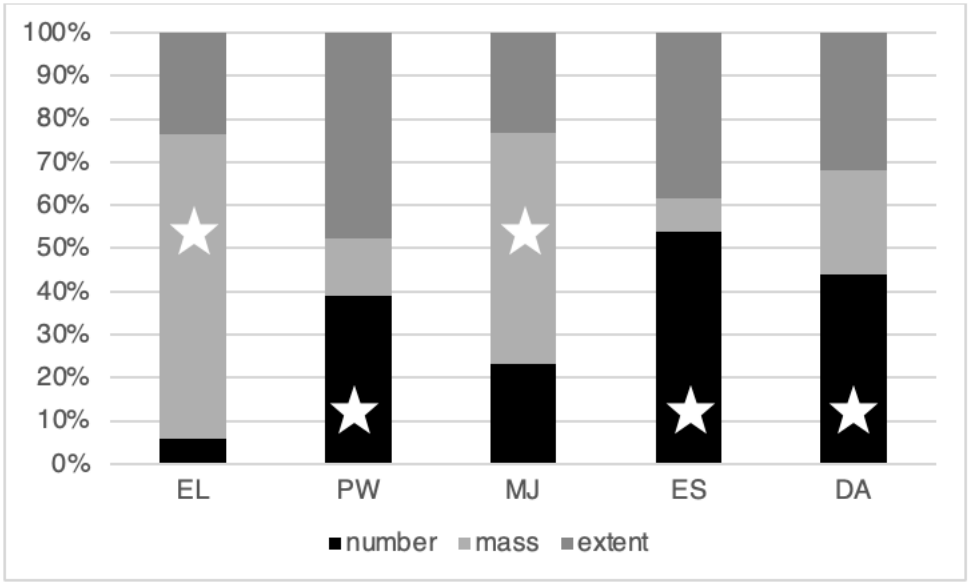
Table 7.26: Examples of repetition in DA's text

270	No virus was slowly eating away at lowly eating away at **my cells, my promise and my future.**
271	I saw the **opportunities and the hopes**, I looked beyond the horizon and smiled. The relief was so strong
272	**The thoughts and the terror and the desolation** flooded back across my senses.

In line 270, the negation suggests that the *repetition* token represents the types of positive aspects of DA's life that he had become increasingly concerned would be adversely affected by HIV. In line 271, the repetition of the positive possibilities adds to the conveyed intensity of the *relief* described shortly after. The feelings described in line 272 then followed the brief respite, which are intensified even more by their being presented in rapid succession; that is, not only did the obsessive thoughts return, but they brought *terror* and *desolation* with them.

For *quantification*, the identified key variables were *number* and *mass*, and despite the relatively low usage for most of the authors, it is worth considering how these resources may have played a role in the expression of stance. Consider the distribution of *quantification* resources shown in Figure 7.8 below (the stars being used to indicate where an author used a significantly higher proportion of a variable than at least one other author). It seems that authors either used *number* resources a fair amount or *mass* resources a fair amount, but not both.

Figure 7.8: Distributions of quantification categories



Percentage of total *quantification*

For EL, the *mass* resources captured descriptions of the level of her distress and the expectations she had of her parents. This included saying her *need* was *enormous* and would require them to *do more and more and more* even after she had taken *everything* they had to give, or saying that her parents were unaware of *how much* she was going to demand from them or *how little* there was of her left. For MJ, the *mass* resources were used when she described her desire for Emily to *tell [her] everything*, to *reenact the entire conversation* with Vanessa, and to *say something* after MJ offered up her feelings about the situation.

For PW, the *number* resources were used to describe how the voices criticized *everything* she did, how her fear of the 'beings' had led her to *barricade the door each night,* how the officers asked if she took *all* her medications, or how there were *Five People* always monitoring her. For ES, the *number* resources were used when she reported information about the search for the John Doe, such as the *three* images the FBI provided and the age of the suspect. Finally, for DA, *number* resources helped depict just how often the obsessive thoughts were occurring, saying it was the *last thing* he thought about before bed *every night* and the *first* thing he thought of *every morning*. They were also used to describe the relief from the idea that *no virus* was *eating away at* his body and the later return of the anxiety when he found out the test looked for antibodies that took three months to show up and how *nobody* could tell him he had not 'caught AIDS' in the meantime.

7.3 DISCUSSION

The focus of this section is to discuss the evaluative patterns evinced by the authors, what they suggest about the schemas that may have been active for the individuals, and how their patterns compare to the authors from previous chapters with whom they overlap psychologically, with the overarching goal of addressing the first research question more fully.

7.3.1 ELIZABETH WURTZEL

EL was diagnosed with major depressive disorder (MDD) in childhood and struggled with it her entire life, recounting her experiences from onset to adulthood in her memoir *Prozac Nation* (1994), from which the excerpt analyzed in this chapter was taken. Alex Hribal (chapter 6) is the only other author diagnosed with MDD, but both Alvaro Castillo and Kip Kinkel (also chapter 6) were found to exhibit depressive symptoms and are therefore considered here, as well.

For EL, there appeared to be two primary stances operating simultaneously in her text: (1) a negative stance toward herself, her mental state, and her situation; and (2) a negative stance toward her parents. She enlisted *affect* resources to describe the level of distress she was experiencing (both with *-happiness* and *-security*), her *hate* toward her parents, and to list what she wanted (*+inclination*) from her parents. *Capacity via judgment,* when outwardly directed, was used to depict her parents as unaware of her distress (variations of *they don't know*) and as having no choice but to concede to the demands she listed (modals of requirement like *have to* and *need*) if they wanted to help with her recovery. When inwardly-directed, it helped highlight how debilitating her mental state had become (describing *how little of [her] there is left*). *Capacity via valuation* helped to further emphasize this, being used to say *it's too late* to help her and list the types of things her parents could do to help her, which included stopping actions of incapacitation committed elsewhere in the world (e.g., *cure hunger in Ethiopia*). *Disclaim* resources were used to both *deny* the possibility that her parents were aware of her distress and to *counter* the expectation that the demands she listed would be sufficient to help, which intensified the negative stance toward her own situation and her parents. *Repetition* resources helped capture the progression of these evaluations throughout the text, especially the demands which went from vague to more specific and outlandish and eventually became a declaration of a desire to 'incapacitate' her parents in the way she had become 'incapacitated' by the depression. Finally, *mass* resources contributed to EL's depiction of her distress and of her expectations of her parents, calling her need *enormous*, saying her parents needed to do *more and more and*

more and how they were unaware of *how much* she would demand or *how little* of her there was left.

Similar to Castillo and Kinkel, EL acknowledged the depth of her distress, but unlike them, there is less of a negative self-focus and assignment of blame for negative events on herself. Instead, EL focuses on the actions of others, specifically her parents, and how she believed they had not put in a sufficient amount of effort to help her. This is somewhat similar to Hribal and Kinkel, who also described the various perceived failings of others in general, though EL did not cite the perceived failings as reason enough to cause actual harm to others as Hribal and Kinkel did. This negative stance toward others, as mentioned in chapter 6, could be indicative of schemas associated with MDD (Beck, 2002), in which views of others can be just as negative as the views of oneself. EL's focus on what her parents had **not** done for her and how much she would expect from them in order to get better could also represent a variation in the linguistic realization of the negative self-focus pattern seen in depressed patients (Hunt & Brookes, 2020; Tackman et al., 2019). That is, all of the demands she lists serve to emphasize the extent of her distress, from citing impossible tasks to expressing a desire for the parents to feel what she feels. The focus is technically on the parents for the majority of the text, but each evaluation of them seems to imply a negative view of her own mental state and an inability to see a viable escape route, a common schema in MDD (Beck, 2002).

7.3.2 PAMELA SPIRO WAGNER

PW was diagnosed with schizophrenia in early adulthood, and the excerpt was taken from the memoir she co-authored with her sister, *Divided Minds* (2005), in which each sister recounted their personal experiences of shared events throughout their lives. Both Ian Brady (chapter 4) and Ted Kaczynski (chapter 5) received a diagnosis of schizophrenia and are the primary points of comparison focused on here.

For PW, *affect* resources served to describe the impact of the psychotic symptoms on her experience and her reaction to having police officers in her home. Within *judgment* and *valuation*, she employed *capacity* to describe the powerfulness of the 'beings' she believed were after her and *veracity* to talk about her inability/unwillingness to share certain information with the officers (e.g., the presence of hallucinations or the content of delusions) as well as to mark the truth value of certain propositions. With *pronouncement* resources, she further strengthened the representation of certain propositions as true, such as the belief that intelligence agencies were surveilling her. Using *denials* alongside these *pronouncements* and with *veracity* resources, PW rejected the possibility of sharing the

information with the officers for fear of the consequences to herself. Finally, with *graduation, repetition* resources were rare as she instead covered a range of *qualities* and *processes* in describing her experience. This included, for instance, the depiction of the auditory hallucinations as cruel and aggressive, 'beings' from other dimensions as powerful and intent on 'spiriting' her away, and various groups and agencies as surveilling and monitoring her.

The description of the external voices that criticized her and ordered her to do things and the monitoring by intelligence agencies and 'beings' from other dimensions seem to demonstrate the externalization bias and self-centered focus core to psychotic symptoms (e.g., Beck & Rector, 2005). Additionally, the belief that one of the police officers who showed disagreement with her was associated with the groups she believed were after her demonstrates a personalization bias associated with paranoid ideation (e.g., Kinderman & Bentall, 1997). The use of *pronouncements* and *veracity* resources to mark certain propositions (like those relating to the surveillance by intelligence agencies) is also suggestive of the presence of delusional thinking (Hinzen et al., 2016) and that the beliefs are more specific suggests they are likely beyond the 'delusional mood' stage (Henriksen & Parnas, 2019). These patterns align loosely with those evinced by Kaczynski (chapter 5), such as his belief that big organizations and certain professional sectors were threats to society and freedom more broadly and his tendency to assume that others were negatively evaluating him. The more specific focus of PW's beliefs and lack of hedging in reporting them is similar to Kaczynski's patterns in the later time period in which the delusions likely began to solidify and therefore, for both of them, there seemed to be more certainty and stability in the beliefs (Fineberg et al., 2015).

PW's patterns do not appear to align much with Brady's (chapter 4), but that is not overly surprising given that he seemed to show more evidence of schemas associated with the two personality disorders with which he was diagnosed. What is also not evident in PW's patterns, but was in Kaczynski's, is the portrayal of a moral obligation to commit any kind of harmful act, or even the need to commit any kind of act in response to the voices, the 'beings', or the perceived surveillance groups. Instead, PW described defensive actions, such as barricading the door or not telling the police officers certain information to avoid the consequences.

7.3.3 MERRI LISA JOHNSON

MJ was diagnosed in adulthood with borderline personality disorder (BPD) and describes her experiences from teenage years to adulthood in her memoir, *Girl in Need of a*

Tourniquet (2010). Aileen Wuornos (chapter 4) is the only other author diagnosed with BPD and is therefore the focus of the comparison made here.

Throughout MJ's text, she expresses a desire to know and understand the feelings of the others involved in the exposed affair and its repercussions as well as to consider all the possible outcomes of it, especially as it might impact her. Within *attitude*, this was evident primarily through the use of *inclination* to describe what she wanted and attributed *affect* to describe what she believed others were feeling or what they might feel. She also used *normality* and *capacity* to explain her lack of *healthy emotional boundaries*, lack of desire for them, and even belief that lacking them was a *superpower*. Unlike the other authors, MJ employed almost equal amounts of *expansion* and *contraction* resources, using *entertainments* to consider possible outcomes and *attributions* to describe what she believed others would say, think, or feel. She also used *concurrences* to depict certain propositions as logically following whatever preceded them, such as when she presented options for how she thought a breakup would make Emily feel generally and about MJ more specifically. *Counter* resources helped her to portray certain situations as going against her expectations, such as when she wanted Emily to express her feelings, but *her jaw was wired shut*, or when she considered the possibility of a breakup not happening, and the result being heartache for MJ instead. Finally, within *graduation*, *mass* tokens were used to describe how she wanted to know *everything* and have Emily recount the *entire* conversation with Vanessa. When *repetition* was used, there was a focus on how the situation would unfold, beginning by describing her view of emotional boundaries as limitations, then her desire to know Emily's and her partner's feelings about everything, and finally considering the possible outcomes of the situation.

The patterns evinced by MJ align with various beliefs associated with BPD, including her belief that lacking emotional boundaries was a *superpower*, the negative feelings she experienced at the thought of the affair ending, and the focus on understanding and knowing the thoughts and feelings of others. All three resemble beliefs about fears of abandonment or rejection and feeling the need to adapt to others' needs to avoid this (Arntz et al., 1999) while the last one may also reflect an impairment in cognitive empathy associated with BPD that makes it difficult for the individual to understand the perspectives of others (e.g., Harari et al., 2010). The main point of overlap between Aileen Wuornos (chapter 4) and MJ was with the preoccupation with the intentions of others, potentially reflective of the trait of *anxiousness* seen in BPD (APA, 2013) and their responses, though different, might reflect the belief that one must act preemptively to prevent harm (Bhar et al., 2008). Wuornos was concerned with the potential harm that she believed others intended to cause her and her

response was to harm them first. For MJ, the concern was with knowing others' feelings and the preemptive response seemed to be realized through the desire to consider and prepare for all potential outcomes.

7.3.4 ESMÉ WEIJUN WANG

ES was diagnosed with schizoaffective disorder in early adulthood and describes her experiences with the psychotic and mood symptoms that come with the disorder in her collection-of-essays memoir, *The Collected Schizophrenias* (2019). While none of the other authors were technically given the diagnosis of schizoaffective disorder, it was considered for Alvaro Castillo (chapter 6) to explain the presence of psychotic and mood disorder symptoms and as such is the main point of comparison here.

For ES, resources of *in/security* and *veracity* served an important role in her account of her experience when she suddenly developed suspicions that her ex-partner was the unidentified child predator for which the FBI was looking. *In/security* was used to describe her confidence, or lack thereof, in these suspicions and *veracity* was used to evaluate herself as being honest and certain pieces of information as being true (such as her ex-partner's status as a *registered sex offender*). Within *engagement*, she used *contractions* most often, but employed *entertainment* resources to consider the possibility that her suspicions were wrong and whether the evidence in fact supported them. More often, though, she used *pronouncements, justifications*, and *disclamations* to move the narrative along, explain her actions, and introduce doubts about her beliefs, respectively. Unlike the other authors, ES employed no *repetition* in her text, but did use *focus* resources to acknowledge that the face in the image *wasn't quite right* and contemplate whether her ex-partner would be *the kind of person* to wear *the kind of shirt* the John Doe was wearing.

The sudden emergence of the suspicions without the ability to pinpoint where they came from, the preoccupation with finding more support for them, and the acknowledgement of doubts about them align with the presentation of the early stages of development for delusions (e.g., Fineberg et al., 2015; Henriksen & Parnas, 2019). That is, the stage where the individual may feel like something is wrong, but not know what the source of it is and therefore be determined to find an answer to it (Henriksen & Parnas, 2019). This is somewhat similar to Alvaro Castillo's (chapter 6) patterns in that both Castillo and ES evinced beliefs that something was amiss, without necessarily being able to determine what it was. However, there was not also evidence of mood symptoms in ES's text like there was in Castillo's (e.g., describing himself as intensely depressed and as having a desire to harm himself and others to remedy the feeling). Rather, for ES the focus was on trying to identify

where the suspicions were coming from and whether they had any basis in reality before she decided to contact the FBI about them.

7.3.5 DAVID ADAM

DA was diagnosed with obsessive-compulsive disorder (OCD) in adulthood and he recounts his experiences with it in his memoir, *The Man Who Couldn't Stop* (2014). The only other author diagnosed with OCD was Dennis Rader (chapter 4) and as such is the focus of the comparison here.

For DA, *affect* resources were used to describe the negative feelings (like loss of interest in things he used to enjoy or *terror* and *desolation*) that were brought about by the obsessive thoughts and the *relief* brought about by the thought of being able to move past them by donating his blood and it being tested. *Capacity via valuation* was then used to describe how the obsessive thoughts had led him to believe the virus was *eating away at* his *promise* and that the idea of his blood being tested allowed him to build a *dam* to *hold back* the obsessive thoughts, but how it had *collapsed* [-composition] when he found out the test could not tell him definitively if he had the virus in his system. Within *engagement,* DA used *entertainments* to consider possible scenarios, but mostly used *pronouncements* to describe his experiences and *disclamations* to describe how his life and feelings had changed from the obsessive thoughts and in the brief moment of relief from them. Finally, using the more traditional type of *repetition*, he intensified how the effect of the obsessive thoughts on his life was portrayed, citing how they had led him to think the virus was destroying positive things in his life (e.g. his *promise*), how the idea of his blood being tested let him see these positive possibilities again, but how when the thoughts came back, they brought multiple other intense negative feelings with them.

DA's description of the obsessive thoughts as having resulted in him losing interest in things he used to enjoy, being unable to consider the concerns or negative experiences of others, and being unable to shake the fear of catching HIV are all consistent with the observed impact of OCD (Rachman, 1998). That the intrusive thoughts were assigned a great deal of significance—i.e., as occurring because they are a sign something is actually wrong—is one of the core characteristics of OCD. The decision to donate blood so that it would be tested seems to represent a compulsion—a behavior designed to neutralize the anxiety (APA, 2013)—which is supported by the return of the intense negative feelings when it did not work as planned (Taylor, 2002). These patterns do somewhat align with those evinced by Dennis Rader (chapter 4). For Rader, it might be argued that the 'dark side' he describes represents intrusive thoughts and the attempts at 'normalcy' represent compulsive

behaviors intended to control the thoughts. When the 'normalcy' was threatened, Rader demonstrated a strong negative reaction and described a quick return of the intrusive thoughts as DA did.

7.4 SUMMARY

The purpose of this chapter was to address the first research question—regarding whether there are linguistic evaluative patterns that can be attributed to psychological traits—more comprehensively. In the previous chapters, the question was addressed, but the presence of violent ideation as a factor made it more difficult to determine whether certain evaluative patterns were more indicative of psychopathology or the violent ideation. The five authors analyzed in this chapter showed patterns that aligned with aspects of their respective diagnoses, some of which also aligned with patterns evinced by the authors with whom they overlapped psychologically. To summarize these findings:

- EL depicted herself as experiencing a high level of distress with the lack of an ability to find a way out of it and passed judgment on her parents for not being aware of it and not putting in the effort she wanted from them, all of which align with schemas associated with major depressive disorder (Beck, 2002). The expectations she had for her parents were also outlandish (in that they are not something they would have been able to achieve), perhaps suggesting that such demands were a different way of representing her intense distress. The negative view of others is something seen in Hribal, Castillo, and Kinkel's (chapter 6) writings, all of whom exhibited depressive symptoms. However, unlike them, EL's judgments were focused to just her parents (as opposed to a broader group) and were not used as reasons for committing violent acts against others.
- PW demonstrated patterns that aligned with core schemas associated with psychotic symptoms—namely the self-centered focus and externalizing bias (Beck & Rector, 2005). Her patterns aligned somewhat with Kaczynski's (chapter 5) in that she held beliefs that outside groups were monitoring her and that other's were judging her, all of which was expressed with a high level of commitment, suggesting the delusional beliefs were in the later stage of development (e.g., Fineberg et al., 2015; Hinzen et al., 2016). However, one major difference between PW and Kaczynski was that PW did not express a desire (moral or otherwise) to act offensively against the perceived threats, and instead acted defensively trying to counter them and protect herself.
- MJ demonstrated a strong desire to know and understand the feelings of others, which suggests the presence of certain beliefs from borderline personality disorder

associated with the trait of *anxiousness* (APA, 2013) and fear of abandonment or rejection (Arntz et al., 1999). The preoccupation with others' thoughts and feelings and the consideration/preparation for all outcomes resembles the pattern used by Wuornos (chapter 4) to describe her belief that others were intent on causing her harm and that she had to act first to prevent it. However, MJ's preemptive action was to consider scenarios and obtain information about a situation in which physical harm was not acknowledged as a possibility, while Wuornos was more concerned about potential violent acts against her and believed that violence was the only possible solution.

- ES evinced patterns suggestive of the 'delusional mood' stage of delusion development in which there is a feeling that something is wrong, but a difficulty identifying the source of the feeling (Henriksen & Parnas, 2019). This was evident in her preoccupation with identifying more evidence in support of her suspicions and consideration of sources of doubt. The inability to identify where the feelings were coming from, but preoccupation with getting to the bottom of them was similar to Alvaro Castillo (chapter 6) and other authors that displayed evidence of delusional thinking.
- DA demonstrated patterns that align with depictions of the effects of OCD including the view that the intrusive thought is evidence that something actually is wrong (Rachman, 1998) and the belief that certain behaviors might help alleviate it (Taylor, 2002). While the likely intrusive thoughts were different, the pattern was similar to that seen in Dennis Rader's (chapter 4) writings, and they both also demonstrated strong negative reactions to the failure of the likely compulsive behaviors designed to help control the thoughts.

As has been demonstrated in this chapter, there is some overlap between evaluative patterns from each of the five authors here and their violent offender counterparts that also aligns with schemas and beliefs associated with their diagnoses. It therefore adds support to the interpretations of some of the findings in previous chapters with regard to the relationship between the linguistic patterns and the authors' psychopathologies (research question 1). There are also differences from some of the stance-taking patterns posited in previous chapters to be associated more with violent act-specific schemas, which adds support to those interpretations, as well (research question 2a). Of course, the corpus here was small and there were additional confounding factors with the data in this chapter that were not necessarily present in the others (e.g., potential for the writings to have been edited), meaning that drawing broad conclusions would be unwarranted. However, it is a promising

start that these potential relationships could be observed even with such a small dataset and helps to begin trying to tease apart evaluative patterns that may be more attributable to psychopathology-related versus violence-related schemas. These findings are also considered in the next chapter for what they can contribute to the discussion about the second part of research question 2 relating to the potential impact of more general violent ideation on evaluative patterns.

CHAPTER 8 DISCUSSION AND CONCLUSIONS

The purpose of this research has been to propose and test the efficacy of a novel approach to the analysis of forensic texts designed to identify relationships between linguistic evaluative patterns and an author's psychopathology and the presence of violent ideation. It is intended to complement, and bridge the gap between, existing forensic psychological and linguistic assessment techniques. The primary assumption in this research—one supported by cognitive and phenomenological theories of psychology—is that an individual's psychopathology impacts how they interact with the world and interpret information and language offers the means for that experience to be shared with others (e.g., Beck, 2015; Bortolan, 2019; Tausczik & Pennebaker, 2010). More specifically, it is argued that the underlying schemas influencing said experience (e.g., Beck, 2015; Beck & Haigh, 2014) are observable in the evaluative resources an author uses to express their *stances*—i.e., their personal attitudes and feelings about themselves, others, and aspects of their experience (Biber et al., 1999). The proposed connection is based on parallels between the component parts of the various schemas and beliefs posited to be core to different psychological traits/symptoms (e.g., Beck, 2015; Beck & Haigh, 2014) and the fundamental elements of stances. That is, schemas are comprised of sets of beliefs and assumptions (i.e., judgments/assessments) about the self, others, and the world (e.g., Beck et al., 2015), and stances represent the linguistic manifestations of those beliefs as they convey a value judgment, from whom the judgment originated (the subject), and at whom/what the judgment is directed (the object; DuBois, 2007).

Within the cognitive psychological tradition, basic formulations of the beliefs associated with different psychological traits and conditions have been offered (e.g., Beck, 2015; Fournier, 2015), but are necessarily broad, intended to represent the core sentiment while allowing for variation in the actual linguistic realizations. In this research, the realizations were analyzed first using the Appraisal framework (Martin & White, 2005), which is comprised of three interacting systems designed to capture the various types of evaluative resources authors can use to express their stances. The patterns of resources were then examined qualitatively to identify the broad stances they conveyed, and the relationships between these identified stances and possible schemas (and therefore possible psychological traits or symptoms) were explored. Each of the empirical chapters (4, 5, and 6) and the comparison study in chapter 7 was intended to address the primary research question (reproduced below) posed in chapter 1 in a slightly different way by controlling for different combinations of linguistically- and psychologically-relevant variables.

(1) Are there patterns of linguistic evaluative resources that can be attributed to specific psychological traits?

Due to the forensic context in which this research is designed to be applied, the core of this project focused on the writings of violent offenders with documented mental health diagnoses. Violence, just as with mental health disorders (Beck & Haigh, 2014), is posited in cognitive theory to result from dysfunctional beliefs and maladaptive schemas (Walker & Bright, 2009). As such, it is treated here as another psychological trait, that fluctuates in severity (Beck, 2015) and interacts with other psychological traits and symptoms (Millon et al., 2012), with underlying schemas that may be observable in evaluative language patterns. The comparison study in chapter 7 was therefore included to explore whether any patterns identified in the empirical chapters as being associated with the authors' psychopathology were present in the absence of violent ideation. However, there are many types of violent offenders, all with different psychological profiles (e.g., Miller, 2014; Palermo & Kocsis, 2005), which necessitated an additional research question with two parts:

(2) a. Are there patterns which are consistent across violent offenders of the same type (thus possibly indicative of specific schemas associated with that type of violent act)?

b. Are there patterns that are consistent across different types of violent offenders (thus possibly indicative of broad violence-related schemas)?

The first part of this question was addressed in the discussion sections of each of the empirical chapters. It was also addressed as part of the comparison study in chapter 7 by exploring the similarities and differences between the non-violent authors and their violent offender counterparts to help determine the warrantability of the interpretations of the findings in the empirical chapters with respect to question 2a. In the sections to follow, the findings from the empirical studies and comparison chapter as they pertain to each research question are first reviewed (section 8.1). Then, the overall conclusions from the research are discussed (section 8.2) before considering the limitations of the research (section 8.3) and the implications of the findings and possible directions for future research (section 8.4).

8.1 REVIEW OF THE FINDINGS

Each of three empirical chapters focused on a different type of violent offender; chapter 4 centered around serial offenders, chapter 5 on a serial bomber who exhibited similarities to both serial and mass offenders (Fox & Levin, 1998), and chapter 6 on perpetrators of mass violence. The comparison study in chapter 7 then centered around non-violent authors who overlapped psychologically with at least one author from the empirical studies. For the

empirical chapters, alongside offender type, there were a number of linguistically- and psychologically-relevant variables which needed to be controlled. Stance-taking, as a linguistic and social act (DuBois, 2007), is susceptible to influence from a range of factors including those covered under the broad headings of *genre* and *register.* Moreover, the influence of psychopathology and underlying schemas on information processing (Beck & Haigh, 2014) introduced further factors for consideration. Given that violent offenders with accessible writings are rare already (and the pool of available data is limited more by focusing on only one offender type at a time), compromises had to be made when it came to deciding which of the remaining factors would be given priority in the data selection process. However, the benefit of this was that the research questions could be approached from multiple different angles, allowing a more comprehensive examination of the relationships. The different combinations of variables controlled for in each chapter (indicated with the 'X') can be found in Table 8.1 below.

Table 8.1: Controlled variables in each chapter

	Chapter 4	Chapter 5	Chapter 6
Genre	X	X	X
Topic/Sub-genre	X	-	X*
Audience	-	X	X*
Mode of Communication	-	X	X*
Time of Composition	-	X	-
Length	X	X	X
Psychopathology	-	N/A	X

*Not completely controlled, but there was a high degree of overlap between authors

As the table shows, both genre and length were able to be controlled for in all three chapters. The genre, *first-person accounts*, was able to be kept consistent across all three chapters as it is a necessarily broad category intended to prioritize the authors' lived experiences, which provides the most direct way to observe the impact of psychopathology (Bortolan, 2019; Stanghellini et al., 2019). However, the specific topics or sub-genres and the register variables of audience and mode of communication were more difficult as they were all more heavily impacted by the limited availability of texts.

As discussed in the final section of all four studies, the evaluative patterns for each of the nine authors in this research indicated overarching stances that aligned with some schemas associated with their mental health diagnoses. Additionally, some patterns consistent across authors in the empirical chapters aligned with beliefs and schemas associated with the type of violent offender they were. Of course, some of the relationships between stances and

schemas were clearer than others, but nonetheless observable patterns did emerge. The influence of the other variables in Table 8.1 above also should not be ignored, especially that of the register variables (i.e., topic, audience, and mode of communication; Bell, 1984; Biber et al., 1999; Halliday & Matthiessen, 2014), which can each impact the choices authors see as available to them. However, as has been discussed in the previous chapters, it appears that these factors can impact the specific combinations of resources an author used, but they do not necessarily seem to drastically impact the overarching stances that are conveyed. For instance, Wuornos in chapter 4 used combinations of *capacity, tenacity,* and *insecurity* most in one text (a transcript of a police interview) and combinations of *propriety* and *veracity* in another (a letter to a friend) to portray others as having malicious intent and posing a threat to her safety.

In the subsections below, the findings as they pertain to each research question are discussed in turn. The patterns relating to psychopathology and offender classification are presented together first (section 8.1.1), as they go hand-in-hand, followed by a discussion of those relating to schemas underlying violence and aggression more generally (section 8.1.2).

8.1.1 Psychopathology and Offender Classification

In each of the four studies, there were observable relationships between stance-taking patterns for each author and schemas and beliefs associated with their psychopathology. As these have already been discussed at length in their respective chapters, the main findings from each chapter are presented in their own summary tables below with a discussion in between about the findings that relate to research question 2a.

Table 8.2: Summary table for chapter 4 findings

	Key Findings		
	Attitude	**Engagement**	**Graduation**
Aileen Wuornos	– *-Security* – *-Capacity* – *+Tenacity* – *Veracity via valuation*	– *Attributions* – *Contractions*	– *Repetition*
	Stance		
	– **Almost all others posed a threat to her, either of physical harm or of misrepresenting events.** – **In the case of physical harm, preemptive action was needed to prevent it.** o Aligns with core beliefs of borderline personality disorder (BPD) that the world is dangerous and others are malevolent (e.g., Arntz et al., 1999) and that one must act first to avoid harm (Bhar et al., 2008).		

<table>
<tr><th></th><th colspan="3">Key Findings</th></tr>
<tr><th></th><th>Attitude</th><th>Engagement</th><th>Graduation</th></tr>
<tr><td rowspan="2">David Berkowitz</td><td>– Negative affect
– Propriety
– Capacity
– Veracity</td><td>– Attributions
– Disclamations</td><td>– Repetition</td></tr>
<tr><td colspan="3">Stance
– Depiction of himself as lacking numerous positive qualities, but vague others as untrustworthy and malevolent.
o Aligns with beliefs associated with traits of attention seeking and anxiousness (Beck, 2015), which can lead to increased need for external validation and more intense emotional reactions when it is not received.
– Illegal and violent actions depicted as the result of an internal compulsion over which he had no control.
o Aligns with externalizing evaluative biases associated with delusional thinking (e.g., Beck & Rector, 2003, 2005) that increase tendency to view external forces as responsible for events, even one's own actions.</td></tr>
<tr><td rowspan="2">Dennis Rader</td><td>– -Happiness
– -Capacity
– Normality & propriety via valuation</td><td>– Pronouncement + counter</td><td>– Repetition</td></tr>
<tr><td colspan="3">Stance
– Preoccupation with maintaining a sense of 'normalcy' to keep 'dark side' at bay; intense negative reactions in response to any threats to said 'normalcy'.
– Consistent association between positive events and negative ones regardless of temporal relationship
o Align with core beliefs of covert presentation of narcissistic personality disorder (NPD) in which individuals may be hypersensitive to perceived interpersonal stressors and failures, and tend to minimize or avoid self-blame (Behary & Davis, 2015)
o Also aligns with core beliefs of obsessive-compulsive disorder (OCD) in which intrusive thoughts (i.e., the 'dark side') are assigned high importance and disruptions to the behaviors done to counter them (i.e., maintaining normalcy) can cause significant increase in distress (Rachman, 1998; Taylor, 2002).</td></tr>
<tr><td rowspan="2">Ian Brady</td><td>– Judgment & valuation > affect
– Positive > negative
– Outward > inward</td><td>– Entertainments
– Attributions
– Denials/Counters
– Proclamations</td><td>– Repetition</td></tr>
<tr><td colspan="3">Stance
– View of others as incapable, judgmental, immoral, and weak-willed and therefore undeserving of casting aspersions about him.
– Contrasts this with the view of himself, which is as strong-willed and highly capable and as above the rules laid out by society.
o Aligns with aspects of core beliefs associated with both overt NPD and antisocial personality disorder (ASPD) in which attempts are made to minimize self-blame, rules are seen as not applicable to them, and negative evaluations of others are common (e.g., Beck. 2015; Given-Wilson et al., 2011).</td></tr>
</table>

Consistent across Berkowitz', Rader's, and Brady's texts was the depiction of violent actions as being the result of an internal compulsion alongside an element of fantasy, and along with Wuornos, a view of the world as hostile, all of which are consistent with core beliefs associated with serial murderers (Palermo & Kocsis, 2005; Schlesinger, 2000). The exact resources used to convey these views varied by author, but in ways that appeared consistent with aspects of their individual psychopathologies.

Table 8.3: Summary table for chapter 5 findings

Key Findings		
Attitude	**Engagement**	**Graduation**
– *Attributed affect* – *Capacity* – *Veracity*	– *Attributions* – *Entertainments* – *Contractions*	– *Repetition*
Stance		
– **Blame for negative events is attributed to other people or situational factors, which are viewed as intended to disadvantage Kaczynski.** o Aligns with core schemas associated with persecutory delusions (e.g., Beck & Rector, 2005) in which external events are perceived as pertaining to the individual and causes of events are attributed to external sources. – **Fixation on personal freedoms/rights and being in the right.** o Along with above stance, this aligns with core schemas associated with paranoid personality disorder (PPD; Renton & Mankiewicz, 2015) in which the individual believes themselves to be righteous and clever, but others as being likely to mistreat them.		

Kaczynski has been argued to exhibit characteristics consistent with both serial and mass violent offenders (e.g., Fox & Levin, 1998). His evaluative patterns showed alignment with some beliefs associated with serial violence, including the view of the world as hostile (Palermo & Kocsis, 2005). However, this is also a core belief of both persecutory delusions (e.g., Beck & Rector, 2005) or more general paranoid beliefs (Renton & Mankiewicz, 2015). He did also exhibit a shift over time from engaging (begrudgingly) with social rules and conventions to having a disregard for them, something also argued to be part of the 'cognitive map' of serial murderers (Palermo & Kocsis, 2005). More similar to the perpetrators of mass violence, Kaczynski depicted harmful (though non-violent) actions as a moral obligation, something he had no choice but to do (e.g., Holmes & Holmes, 2001; Hurt, 2020).

Table 8.4: Summary table of chapter 6 findings

	Key Findings		
	Attitude	**Engagement**	**Graduation**
Alvaro Castillo	– *+Inclination* – *Capacity* – *Propriety*	– *Pronouncements* – *Disclamations*	– *Extent*
	Stance		
	– **Viewed himself as having something inherently wrong within him with consistent declarations of a desire, intent, and apparent determination to die to remedy it.** o Aligns with internalizing evaluative bias and negative self-view associated with major depressive symptoms (e.g., Beck, 2002; Beck et al., 2021) as well as the belief that harming oneself is a viable solution (Hunt & Brookes, 2020).		
James Holmes	– *In/security* – *Tenacity* – *Capacity*	– *Disclamations* – *Entertainments*	– *Repetition* – *Mass*
	Stance		
	– **Viewed himself as 'divided' between a self that was weak and fearful and a self that was strong and determined, with the violent actions seen as the only solution.** – **Expressed a strong negative view toward others and social conventions, with a lack of desire to engage with either.** o Both align with beliefs and evaluative biases associated with schizotypal personality disorder (StPD) in which there is a disregard for others and social conventions, a desire to be a loner, a view of oneself as unique, and magical thinking (i.e., belief that his violent acts would remedy the internal rift; Beck, 2015; Renton & Mankiewicz, 2015).		
Alex Hribal	– *Attributed +happiness* – *Propriety* – *Capacity*	– *Attributions* – *Entertainments* – *Justifications*	– *Repetition* – *Number*
	Stance		
	– **Viewed most others as immoral, judgmental, and cruel.** – **Those who he admires are viewed as highly capable, moral, and unafraid to do whatever necessary to rid the world of 'evil'; depicted his actions in this way, as well-reasoned and justified.** o Aligns with the externalizing biases associated with delusions (e.g., Beck & Rector, 2005) in which blame for negative events especially can be assigned to external sources; the level of commitment conveyed to these beliefs also suggests they had likely solidified (Henriksen & Parnas, 2019).		
Kip Kinkel	– *-Happiness* – *Dis/inclination* – *Propriety*	– *Denials* – *Entertainments*	– *Repetition* – *Number*
	Stance		
	– **Viewed something as inherently wrong within himself and the world more generally; both himself and others are depicted as 'evil' and his actions are the only way to rid the world of it.** – **Depicted himself as undeserving of, and unable to have, positive experiences and others as being unwilling to provide help.** o Aligns with core beliefs associated with major depressive symptoms in which an individual can take an equally harsh view of themselves **and** others and have an inability to see alternative solutions to perceived problems (Beck, 2002).		

Similar to Kaczynski, the authors in this chapter all depicted their actions as a moral obligation, something which that had no choice but to do, which is consistent with beliefs associated with mass violence (e.g., Holmes & Holmes, 2001; Hurt, 2020). There was variation in the resources used to express this view, as well as to describe what they perceived as needing to be remedied. These variations appeared to be consistent with beliefs underlying their psychopathologies as well as the different motivations that have been proposed for mass murderers (e.g., Dietz, 1986; Fox & Levin, 1998).

Table 8.5: Summary table for chapter 7 comparison study findings

	Key Findings		
	Attitude	**Engagement**	**Graduation**
Elizabeth Wurtzel	– *-Happiness* – *-Security* – *Capacity*	– *Disclamations*	– *Repetition* – *Mass*
	Stance		
	– **Expressed a negative view of herself and her mental state, depicting it as inescapable and causing a great deal of distress.** – **Viewed her parents as unaware of her distress and not putting in enough effort; expressed demands of them, with which they had no choice but to comply.** o Aligns with schemas associated with major depressive symptoms in which there is an equally negative view of others as there is of the self and an inability to identify solutions (Beck, 2002).		
Pamela Spiro Wagner	– *Affect* – *Capacity* – *Veracity*	– *Pronouncements* – *Denials*	– *Intensification*
	Stance		
	– **Depicted auditory hallucinations as aggressive and cruel, and external entities as intent on causing harm and surveilling her every move.** – **Also expressed suspiciousness of others' motives and an unwillingness to be forthcoming for fear of consequences.** o Aligns with schemas and evaluative biases associated with psychotic symptoms (e.g., Beck & Rector, 2005) in which external events are viewed as relating to the self as well as a mistrust of others' intentions.		
Merri Lisa Johnson	– *Inclination* – *Attributed affect* – *Normality* – *Capacity*	– *Entertainments* – *Attributions* – *Concurrences* – *Counters*	– *Mass*
	Stance		
	– **Expressed a strong desire to know and understand the feelings of others and a preoccupation with considering the possible outcomes of situations.** o Aligns with core beliefs of borderline personality disorder (BPD) relating to anxiousness about interpersonal relationships and a fear of abandonment or rejection alongside feeling the need to adapt to others' needs to avoid it (e.g., Arntz et al., 1999).		

	Key Findings		
	Attitude	**Engagement**	**Graduation**
Esmé Weijun Wang	– *In/security* – *Veracity*	– *Pronouncements* – *Justifications* – *Disclamations* – *Entertainments*	– *Focus*
	Stance		
	– **Expressed suspicions about an ex-partner being an unidentified man wanted by the FBI, which appeared suddenly.** o Aligns with beliefs associated with the earlier stage of development of delusions in which the individual begins feeling strongly that something is wrong, but is unable to pinpoint what it is, which can lead them to become preoccupied with identifying the reason (Henriksen & Parnas, 2019).		
David Adam	– *Affect* – *Capacity via valuation* – *Composition*	– *Entertainments* – *Pronouncements* – *Disclamations*	– *Repetition*
	Stance		
	– **Depicted the obsessive thoughts as having taken over his life, with him having no ability to control them or ease them and having an intense negative reaction when an attempt to ease the distress failed.** o Aligns with core beliefs associated with obsessive-compulsive disorder in which intrusive thoughts are assigned a high level of importance (it being assumed that the thoughts are a sign of something; Rachman, 1998), and when behaviors (mental or physical) done to ease the distress do not work, it can lead to a sudden return of distress (Taylor, 2002).		

There were interesting points of overlap between the non-violent authors in the comparison study and their violent offender counterparts. For instance, there were similarities in the stances expressed by Johnson and Wuornos (chapter 4). Namely, Johnson's description of her need to consider all possible outcomes and know and understand the feelings of others arguably resembles Wuornos' description of her actions as being preemptive to help her avoid harm, which is a belief associated with borderline personality disorder (Bhar et al., 2008). The overlap between the two groups adds support to the contention that there are observable relationships between evaluative patterns and psychopathology. The observed differences between the groups also adds support to the contention that violence-related schemas also likely influence evaluative choices, especially when the patterns that do not overlap between groups can be connected with beliefs underlying act-specific violent ideation.

8.1.2 SCHEMAS OF VIOLENCE

The previous sections included discussion about patterns that might be indicative of beliefs associated with particular types of violent acts and author's psychopathology. In this section, the aim is to describe patterns that are common across all nine violent offender authors

which could potentially be due to shared violence-related schemas. Of course, the variation in psychopathology and the other linguistic variables makes comparison of specific resources a difficult task because, as the last few chapters and above sections have demonstrated, different resources can be used to convey similar stances (a point which is discussed in more detail in the final section). Thus, the focus here is on similarities and differences in overarching stances.

The main pattern warranting discussion concerns how the authors ordered their needs and wants in relation to the effect they would have on others (in other words, their level of empathy). All nine authors at some point put their own interests and urges first with little regard for the potential consequences for others. At the same time, they described additional factors that served to detract from their own culpability by providing another target for blame and negative evaluation. To what or whom some of the blame was shifted and the resources used to do so differed by author, but the overall message remained consistent. Importantly, this was also not a pattern observed in the non-violent authors in chapter 7, which further supports the contention of its relationship to general violence-related schemas.

For Wuornos, Berkowitz, Kaczynski, Hribal, and Kinkel, the additional factors 'justifying' their selfish actions were others' behaviors. Wuornos used resources of *capacity, tenacity, propriety,* and *in/security* to depict others as posing a threat to her safety and intending to cause, or actually causing, her harm; evaluations which were intensified by the large amount of *repetition* of them throughout her texts. Then using *attribution* and *disclaim* resources, she provided support for this position, depicting others as saying or believing negative things about her and their actions as being unexpected and unwelcome. As a result, when she recounted her own violent actions, they were framed as a necessary response to her environment to ensure her own well-being and safety despite it resulting in harm to another. Berkowitz and Kinkel both used negative *affect* resources to convey negative feelings about themselves and their lives and to describe the ways others had wronged them. Both also used *disclaim* resources to describe positive things they lacked in their lives and express a lack of awareness for exactly why they felt the way they did. Thus, their actions were necessary to both relieve their pain and 'get back' at those who had contributed to it. Hribal used a high proportion of negative *propriety* alongside *attributions* to depict others as 'evil' but not necessarily for anything they had done to him directly; it was more generalized than that. His decision to commit the violent act he planned then is framed as necessary to rid the world of the perceived evil.

With Kaczynski, having the texts from different time periods provided an opportunity to observe changes in his consideration of the consequences of his actions. He did, across all

three time periods, tend to express his opinions openly even if they were critical of his audience. However, in the earlier texts, there seemed to be more concern for others and at least some acknowledgement of the possible impact of his statements. For instance, in the *1963* text, the negative evaluations of others (mostly the capability of teachers to teach certain topics) were framed as being expressed in order to help ensure the best path for success for his brother. In the later texts, on the other hand, Kaczynski expresses negative and harsh opinions about others, but frames them as being warranted because those others had done something to deserve it. It is most evident in the final two texts, when he frames himself as having kept in the opinions for a long time to spare his brother's feelings, but that he could no longer continue to do so. Thus, despite the harm it may cause to another person, he put his own desire to express these negative opinions above the impact it might have had on others.

The remaining authors demonstrated a similar lack of empathy, but in slightly less direct ways. For Rader, the description of his 'normal' life, which was accompanied by his ever-present 'dark side' that took more and more control after any life stressor reduced the amount of responsibility assigned to him for his actions. The *pronounce-counter* pairings also common in his texts depicted many positive things in his life as being accompanied by a negative. Thus, when he committed his acts of violence, he had already portrayed himself as having tried to keep the 'darkness' at bay, but all of the negative events and stressors had led to the 'dark side' being a more palatable option despite it meaning others would be harmed. Brady devoted a fair amount of his writings to depicting others as 'bad' and societal rules as backward in some way. While he did not necessarily refer directly to his own violent actions, framing others in such a negative light seemed to imply that since he was not the only one who caused harm to another, he cannot be judged so harshly. Thus, his self-serving actions were justified because others acted in similarly negative ways. Holmes focused primarily on his *divided* self and the domination of *fear* and *anxiety* throughout his life and his desire to regain control without that fear. While he expressed *hatred* for others, he did not provide examples of anything those others had done to warrant the hatred, only that he was determined to act on it because it would serve his need to *overcome* his fears. Finally, Castillo unlike many of the other authors, did not express a desire to harm others directly until the last entry, but throughout expressed a desire to take his own life. In saying he *finally* killed his father, he implied that he had been considering the action for some time and in saying that his father had gone to be with *God and Tony*, he implied that he viewed his actions as 'good', even righteous. This in combination with the numerous descriptions of

his negative emotional state, he frames his actions as necessary to relieve his own pain and to evidently send others to a better place.

With respect to the relevance of these patterns to violence, as discussed in chapter 2, identifying specific factors predictive of violence has proven elusive, especially when mental health disorders are put into the mix (e.g., Hiday, 1995; Nestor, 2002; Stuart, 2003). It is worth reiterating here again that mental health disorders alone are **not** considered a reliable predictor of violence, but rather it is a combination of, among others, situational, social, economic, and personality/psychopathology traits (Hiday, 1995; Nestor, 2002; Stuart, 2003). The more popular theory, introduced in chapter 2, posits that the risk of violent or aggressive behavior is increased by low or unstable self-esteem alongside narcissistic, antisocial, and/or psychopathic traits (e.g., Baumeister et al., 2000; Lambe et al., 2018; Walker & Bright, 2009). Walker and Bright (2009) expanded on this and incorporated aspects of cognitive theory to propose a model that explains violent behavior as a result of dysfunctional and maladaptive schemas (stemming from the low/unstable self-esteem and negative core beliefs) that influence interpretations of situations and the responses individuals see as available to them, just as with mental health disorders (e.g., Beck & Haigh, 2014). The schemas in Walker and Bright's (2009) model relate to things like anger, self-esteem, lack of empathy, lack of alternative available strategies, and evaluative biases, which work in conjunction with each other—and the schemas associated with their psychopathology. For many of these factors, it can be difficult to separate the possible influence from the psychopathology-related cognitions and from violence-related cognitions. For example, one of the factors involves negative self-evaluations (e.g., worthlessness or vulnerability), which is evident in Berkowitz's, Castillo's, and Kinkel's writings, but for Castillo and Kinkel, such negative evaluations are also likely to be a result of depressive symptoms (Beck, 2002). Another example is the information processing deficits, which include a number of issues associated with a variety of traits and symptoms, such as persecutory delusions (e.g., Kinderman & Bentall, 1997; Langdon, Corner et al., 2006). The lack of empathy (Walker & Bright, 2009), however, was evident in some form in all nine of the authors' writings, as detailed above. Of course, as was discussed in the various chapters, certain schemas underlying the authors' psychopathologies could very well contribute to the lack of empathy, but not every author had received a diagnosis that would explain it. The argument here instead is that the patterns above reflect both violence- and psychopathology-related schemas, and more specifically that information processing biases associated with psychopathological traits help to explain the variation in the resources used.

8.2 CONCLUSIONS

The primary goal of this research was to propose and test the efficacy of a novel approach to the analysis of forensic texts designed to identify possible psychological traits of authors through the examination of linguistic evaluative patterns, which is intended to complement, and bridge the gap between, existing forensic psychological and linguistic investigative techniques. The empirical studies in chapters 4, 5, and 6, and the comparison study in chapter 7 each offered a piece of an answer to the primary research question and research question 2a, while the discussion above addressed research question 2b. These analyses have provided evidence of a link between evaluative language and the schemas underlying psychopathology and violent ideation. However, because the research is in its nascent stage, there are a few limitations that should be acknowledged first (the next section) before delving into a discussion of the implications of the findings and suggestions for future research to remedy the limitations (section 8.2.2).

8.2.1 LIMITATIONS

The first limitation warranting discussion is the sample size. Because Appraisal coding is so context-dependent (Martin & White, 2005) and many forms can be used to achieve similar functions (e.g., Bednarek, 2009b), annotations made by hand instead of by automated software tend to be more consistent and more consistently accurate. Additionally, the requirements that the authors be violent offenders and the writings be publicly available placed further limits on the amount of data that *could* be collected. Larger datasets could theoretically have been used, but given time constraints, a larger dataset would have likely necessitated a less detailed analysis with an arguably insufficient number of Appraisal variables to address the questions posed in this project. Thus, it was decided that examining a smaller set of data in more detail would be more valuable. Somewhat counterintuitively, it should be acknowledged that there are also limitations to using the entire Appraisal system. Namely, even though this approach does offer a useful amount of detail, it leaves too little room for other linguistic features to be explored, such as modality, that have been analyzed in other forensic Appraisal research (Gales, 2010; Hurt, 2020).

The remaining limitations concern issues with the dataset and controlled variables. The reason for dividing the three offender types, as noted in chapter 2 and chapter 3, was because different types of offenders are known to have different psychological profiles (e.g., Dietz, 1986; Miller, 2014a; Palermo & Kocsis, 2005). Given that there were already numerous psychopathological variables under consideration in this research, allowing all three types and their varying psychological profiles to be combined would have introduced

too many additional variables into the analysis. Separating them decreased the possibility of different act-specific schemas being the source of a significant difference between authors. Another limitation was placed on the findings about violence-related schemas by not having a different control dataset of violent offenders without mental health diagnoses. While the interpretations of the results are reasonable given past research and the available evidence, having the other control group would have offered an additional level of credibility and a greater ability to tease apart patterns more likely attributable to psychopathology and those more likely attributable to violent ideation. Finally, as discussed in chapter 3, no formal interrater reliability studies were carried out during this project due to time constraints and lack of availability of people qualified to do so, which reduces reliability and replicability (Fuoli, 2018; Fuoli & Hommerberg, 2015). However, steps were taken to ensure good intra-coder and inter-study consistency through discussions between myself and the supervisor of this project that occurred throughout the coding process in addition to detailed records of these decisions being kept in tables, examples of which can be found in Appendix B.

While these limitations do represent certain weaknesses with this research that restricts the generalizability of the findings, it is argued that they do not restrict their importance or their credibility as a proof of concept. Moreover, as this research was, to my knowledge, the first of its kind, limitations such as these are to be expected and future research can build from the basis established in this project and account for them. Over the next two sections, the findings are first reviewed to illustrate how they demonstrate Appraisal's utility as an investigative linguistic tool followed by suggestions for building on this research in the future.

8.2.2 Appraisal as an Investigative Tool: Implications and Future Research

The ways Appraisal has been used within forensic linguistics were reviewed briefly in chapter 3. Its utility as an investigative tool has primarily been demonstrated with respect to the assessment of types of threatening communications (e.g., Gales, 2010; Hurt, 2020). What this research aimed to do was expand on this and demonstrate its usefulness in assessing texts that are not necessarily threatening in nature to discern psychopathological information about the authors. Each study approached the main research question from a different angle by accounting for different combinations of variables (see Table 8.1). The findings from the empirical and comparison studies (as discussed in section 8.1) and this chapter have offered evidence in support of links between stance-taking resources and schemas underlying both the authors' psychopathologies as well as act-specific and more general violent ideation. Of course, these relationships are complicated, but this research has demonstrated how Appraisal could be useful as an investigative linguistic tool to

supplement linguistic and psychological profiles, though more research will be needed to help deepen the understanding of the relationships between stance and psychopathology and what other contributing factors there might be to consider.

To illustrate what this approach in its current state could contribute to an investigation and what would be needed from future research to make it more robust, let us consider how it might have been applied during the Unabom investigation and filled in information that was lacking from the psychological and linguistic profiles. During the nearly two-decade long investigation, numerous psychological profiles were generated by the FBI, sometimes changing drastically from one version to the next, and the linguistic profile was not requested until about a year before Kaczynski was arrested (Shuy, 2014). The linguistic profile produced by Shuy was based on letters he had written and his infamous manifesto. The profile contended the Unabomber was well-educated, around fifty-years-old, had likely grown up Catholic, might have at one time been in academia (likely in the hard sciences), and had lived in Northern California though likely grew up in or around Chicago—all of which turned out to be accurate (Shuy, 2014). An early version of the psychological profile from just after the bombings began speculated that the Unabomber was young, uneducated, with low self-worth, and a desire to harm animals. In later versions, the age was increased slightly, they vacillated between hypothesizing that he had low and high self-esteem, and speculated that he was likely intelligent and might have had some education, though not a lot. One thing that remained consistent, though, was that investigators believed the increasing lethality of his bombs indicated escalating anger and frustration directed at his victims and that only his arrest or death would stop the bombings (Fitzgerald, 2004).

With this information in mind, what might the approach proposed in this research have been able to offer? For the sake of this demonstration, the findings of chapter 5 are used to generate a broad profile. Of course, the texts analyzed in chapter 5 did not include the letters or manifesto Kaczynski sent in the early- and mid-1990s, though, there are two key similarities between them that arguably allow the findings to be (tentatively) extended. First, they had the same audience and mode of communication (letters to his family members) as the texts provided by Kaczynski's family members to investigators for comparison to the Unabom documents (Fitzgerald, 2004). Second, they contained similar ideologies to the manifesto and Unabomber letters (this being the reason that Kaczynski's brother suspected him). Given these similarities and that his evaluative patterns were fairly consistent over time, it is arguably likely that the most salient patterns, at the very least, would have been present in the Unabom texts, as well.

Thus, based on the findings of chapter 5, a profile generated using this approach might have noted the numerous evaluative patterns suggestive of different aspects of paranoid ideation and possibly delusional beliefs. Namely, his strong mistrust and suspiciousness of others and institutions, the externalization of blame, and his overall argumentative and slightly condescending tone (e.g., Beck & Rector, 2005; Langdon et al., 2010; Renton & Mankiewicz, 2015). Using the literature on such traits, it might be possible to extrapolate other information, as well. For instance, the psychological profile stated that Kaczynski was likely a loner with a heightened sense of superiority (Shuy, 2014), both of which are evident in the evaluative patterns, but those are possible outcomes of multiple different schemas. A desire for social isolation might be indicative of, for example, paranoid, schizotypal (Renton & Mankiewicz), or antisocial personality traits (Mitchell et al., 2015), and a heightened sense of superiority might be evidence of narcissistic (Behary & Davis, 2015), antisocial (Mitchell et al., 2015), or paranoid personality traits (Renton & Mankiewicz, 2015).

However, it is important to consider all of the patterns that occur together to narrow down the most likely active schemas (Beck et al., 2015). In Kaczynski's case, it appears that the desire for social isolation stemmed from the mistrust and suspiciousness of others and their motives, as evident in his externalization of blame and consistent negative evaluations of them. This is more in line with paranoid PD (Beck, 2015) and delusional thinking (Beck & Rector, 2005) than with the strong discomfort with or disdain for social relationships seen in schizotypal PD (evident in Holmes' views of such things being tied to *hatred* and *anxiety*; Renton & Mankiewicz, 2015) or the avoidance of intimacy seen in antisocial PD (Mitchell et al., 2015). Kaczynski's preoccupation with freedom and personal rights appeared to be more connected to a belief that more powerful individuals and institutions had malicious intent against him *and* others. This is more in line with the typical paranoid PD beliefs (Renton & Mankiewicz, 2015) than with the grandiosity seen in narcissistic PD (Behary & Davis, 2015) or antisocial PD (Mitchell et al., 2015) that is tied to self-interest. Finally, the argumentative, and at times condescending, tone evident in the patterns of *engagement* resources (e.g., *denials* and *counters* of *attributed* or *entertained* alternatives) could be argued to be indicative of the righteousness mentality associated with paranoid PD (Renton & Mankiewicz, 2015) as well as delusional thinking patterns. This latter point is based on the argument by Hinzen and colleagues (2016) that delusions necessarily manifest in contractive utterances that leave no real space for alternatives as leaving space would mean that the beliefs are not held to be incontrovertibly true by the individual, which is a necessary aspect for their diagnosis (APA, 2013).

In order for this approach to provide more specific and confident conclusions, more research will be needed to gain a deeper understanding of the relationship between stance, psychopathology, and violent ideation. To do so, a number of variables must be considered. First, as mentioned in the limitations above, determining whether certain evaluative patterns can more confidently be attributed to psychopathology or violent ideation requires control groups for comparison. That is, in addition to the group of non-violent counterparts (i.e., individuals with similar psychopathologies to the authors, but who have not committed a violent act) used in the comparison in chapter 7, it would be ideal to also include a group of violent offenders that were not diagnosed with any mental health disorders. Second, conducting the analysis on larger datasets (both more offenders and a wider range of texts) to determine whether similar results can be obtained in other contexts—after all, if psychopathology impacts various aspects of experience (Bortolan, 2019), then evidence of this impact should be present to some extent in a range of circumstances. Moreover, if this approach is to be used as an investigative tool, it must be established that it can provide useful insights on a variety of linguistic data types because it is not possible to control for the variables listed in Table 8.1 in non-experimental situations. In other words, it must be able to be applied to whatever forensic text needs to be analyzed in a given case. For this reason, it would also be beneficial to carry out formal reliability studies to increase the consistency and replicability of the coding approach.

Finally, conducting the analysis using other methods, such as a form-to-function approach (e.g., Biber et al., 1999), in addition to Appraisal would be a potentially fruitful expansion of this research. As Gales (2010) said, combining the function-to-form and form-to-function approaches produces a more comprehensive account of the data, allowing one to observe broader patterns of interpersonal meaning across genres and registers as well as the more specific functional patterns (p. 53). Not only would this facilitate the examination of a larger dataset, but it would offer a chance to analyze features not captured under the Appraisal framework, such as modality. Moreover, for certain symptoms like delusions and their underlying schemas, which can vary more widely in their content (Beck & Rector, 2005), form features may prove equally as useful as functional ones. This may be especially true for discerning with more confidence the difference between fully-developed and subclinical delusions. Such information could help to explain some of the variation in evaluative patterns between authors that have been determined to experience delusional thinking.

While this research had its limitations, it still achieves what it was intended to achieve: it provides evidence in support of a link between stance and both psychopathology and violent

ideation and demonstrates the utility of an assessment approach that combines linguistic and psychological theories. The relationship is, of course, complicated and more research, like that suggested above, will be needed to better understand the relationship and the various other factors that contribute to it. However, with that better understanding would come expansions of and improvements to the approach to increase its consistency and reliability as an investigative tool.

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APPENDIX A: ETHICS APPROVAL LETTER

Aston University
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04th March 2022

Our Ref: AIFL-REC-22-011

Dear Madison

Evaluation over time: A case study of Ted Kaczynski

I am pleased to confirm that the AIFL Research Ethics Committee can now give unconditional ethical approval for your project following your emailed responses to the conditions.

You may now proceed to examine the data for your research project, and we wish you every success with your research.

If you have any questions, please do not hesitate to contact me or the Committee.

Yours sincerely

Professor Lauren Devine
Chair, Aston Institute for Forensic Linguistics Research Ethics Committee (PERB)

APPENDIX B: EXAMPLE APPRAISAL TABLES

Table B.1: Attitude coding table example

	Appraiser	Attitude Token	Affect	Judgment	Appreciation	Appraised
1	TK	(not) motivated by antagonism		(neg) -prop		TK
2	TK	Tired of	-sat			Having to conceal my opinions
3	David	Threatening his ego		-prop		TK
4	Mallory	Holding…down		-cap		AW
5	TK	Too deep to get all the way around			-val (capacity)	water

1 Both the actual token and coding decision for negated tokens had the negation in parentheses because, as Martin and White (2005) note, there is a distinction between employing meanings that are inherently positive/negative and using negation to achieve the positivity or negativity.

2 *Affect* tokens were coded with the 'Emoter' as the *appraiser* and typically the 'Trigger' of the emotion as the *appraised*. An exception to this was instances where the author portrayed the feeling more as an ongoing mood than an emotional response, in which case the *appraiser* and *appraised* were both the 'Emoter'.

3 Attributed *attitude* was coded with the person to whom the feeling was attributed as the *appraiser* and whatever was being evaluated as the *appraised* and the cells were shaded a different color to make them easier to see.

4 Instances of violent acts in which one person is depicted as directly incapacitating another were coded with the attacker as *appraiser* and the person being attacked as the *appraised*. If it was someone other than the author, it was coded in the same way as attributed *attitude*.

5 Similarly, tokens where a non-human entity is depicted as incapacitating or hindering a person, the entity is coded as *appraised* to capture its portrayal as something that has the characteristic of being a hindrance.

Table B.2: Engagement coding table example

	Engagement Marker	Contract Expand	Disclaim// Proclaim Entertain// Attribute	Deny/Counter// Concur/Pronounce/ Endorse/Justify Acknowledge/Distance
6	It **was** a ruse	Contract	Proclaim	Pronounce
7	People **kill**	Contract	Proclaim	Pronounce
8	**People say** what I did was evil	Expand	Attribute	Acknowledge
9	I **am convinced** that exams cheat me of my due	Expand	Entertain	

6 Many *pronouncement* tokens were declaratives with the main verb (bolded) acting as the *engagement* marker—i.e., the word or string of words that indicated the category in which the proposition belonged.

7 Instances where other people's actions are described—but the proposition is not attributed to them as one of their beliefs or statements—were coded under the appropriate category based usually on the main verb phrase.

8 Instances where another person's beliefs are described explicitly or implicitly were coded as *attribution.*

9 Instances with high certainty, but not indicating a reporting of 'facts' were coded as *entertain,* in line with Martin and White (2005).

Table B.3: Graduation coding table example

	Graduation token	Force			Focus	
		Quantification Intensification	Number/Mass/ Extent Repetition/ Quality/ Process	Downscale?	Sharpen	Soften
10	Just the other day	Quantification	Extent	N/A		
11	Practically					Soften
12	Want	Intensification	Quality	Yes		
13	Going to	Intensification	Quality			
14	Sadness and depression	Intensification	Repetition			

10 As mentioned in chapter 3, instances of *extent* were not coded for *scaling,* so an 'N/A' was placed in the 'downscale' column to indicate it is irrelevant.

11 Instances of *focus* were marked as either *sharpen* or *soften* in the relevant column.

12 Within a text, if *want* and a higher intensity token of inclination/determination like *going to* was used, then *want* was coded as *downscaled* because, within that

discourse, it is a lower intensity token. (*Want* was not always coded as *downscaled,* though; it depended on the text and what other items of a similar semantic nature were present.)

13 See above.

14 As mentioned in chapter 3, themes or items repeated throughout a text were coded as *repetition*, as were tokens in which similar meanings were repeated next to each other.