

What Predicts the Militant Extremist Mindset? An Investigation into The Relationship Between Violent Extremism, and Personality, Moral Disengagement, and Linguistic Markers

Revisions Made August 2020

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Thesis submitted to the University of Nottingham for the degree of Doctor of Forensic Psychology

December 2019

Abstract

This thesis investigates the psychological underpinnings of the Militant Extremist Mindset (MEM). The MEM includes three core components: Pro-violence, Vile World, and Divine Power. The thesis includes six chapters: a general introduction, a systematic review, two quantitative research studies, a psychometric critique, and a general discussion. The systematic review explored the relationship between violent extremism and the Dark Triad. Findings suggested that, currently, narcissism may be the most influential of the dark traits in the process of radicalisation and extremism. However, there were limited studies included in the systematic review, indicating a need for further research. The first quantitative research study investigated personality traits, and moral disengagement as predictors of the MEM and its three subscales. Hierarchical regression analyses found that Honesty-Humility, and moral disengagement predicted total MEM and the Pro-violence subscale. Openness and age predicted the Divine Power subscale. The second quantitative research study investigated linguistic categories as predictors of the MEM. The results found that the negative emotions, and anger categories correlated with both total MEM and the Divine Power subscale; third person plural pronouns correlated with the Pro-violence subscale, and first-person plural pronouns correlated with the Vile World subscale. Linear regressions found that third person plural pronouns predicted the Pro-violence subscale. Limitations and implications are discussed in both research studies. The psychometric critique discusses and critiques The Violent Extremist Risk Assessment 2 Revised in terms of its psychometric properties and its applicability to forensic practice. Whilst studies relating to this demonstrate promising findings, limitations indicate a need for further independent studies on the tool to test its reliability and validity. The final chapter summarises the key findings across the thesis, the limitations of the methods used, and implications of the findings for the field of violent extremism.

Acknowledgements

First of all, I would like to thank my parents, who I believe have played the biggest role in my academic achievements. Thank you for supporting me financially, and providing me with opportunities you never had yourselves. A special shout out to my mum for all the emotional support, no matter what time of the day it was. Thank you to all of my family for always taking an interest in my research, and your words of encouragement. To my best friends, I am grateful for your continuous reassurance and support over the last three years, alongside those days and nights out! To Ikky, I apologise for my attitude, bad moods, and cancelled plans, particularly towards the end of my write up. Thank you for believing in me, and telling me every single day that I WILL finish this doctorate, despite me struggling to see the end. Finally, my most heartfelt thanks to my wonderful academic supervisor, Prof. Vince Egan, who always offered me incredibly meaningful assistance and guidance. Thank you for always pushing me in the right direction and providing me with thorough feedback. I could not have wished for a better supervisor to go on this journey with, although I will not miss your red pen...!

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Chapter 1 - Introduction to The Thesis

1.1. Introduction

Violent extremism and radicalisation is a daily occurrence in the world today. Acts of extremism have been responsible for over 20,000 deaths worldwide in the last decade (Ritchie, Hasell, Appel & Roser, 2019). Far more persons have suffered consequences such as physical injury, mental health problems, and economic destruction, demonstrating the devastating impact it can have on society. Extremist acts have risen significantly over the years and are of global concern. Acts of extremism this year (2019) include the Sri Lanka Easter bombings, the Christchurch mosque shooting, and the London Bridge attack, demonstrate the severity and range of the ongoing problem. Countering extremism is an enduring priority for the government and policy makers, and understanding the drivers of extremism has been in the interest of psychologists for several decades. Previous research has not discerned distinct characteristics of an individual more inclined to engage in violent extremism. This thesis aims to extend on the current psychological literature relating to violent extremism, by exploring its psychological underpinnings using new methods. Specifically, personality traits, the process of moral disengagement, and linguistic markers will be investigated as predictors of violent extremism.

This thesis comprises six chapters. The present chapter discusses the existing literature relating extremism and the various psychological constructs of interest. An overview of the thesis and its components will also be presented, alongside its key aims and research questions. In Chapter Two, a systematic review is presented. In Chapters Three and Four, two quantitative research projects are presented. In Chapter Five, a psychometric tool of interest is discussed and critiqued. Finally, in Chapter Six, a summary and findings from each chapter are discussed.

1.2. Extremism and radicalisation

There is no one definition for extremism and radicalisation. Terms relating to extremism are varied within the literature and are often used interchangeably. Most typically, (violent) extremism and radicalisation overlap. Radicalisation refers to the process of adopting extremist beliefs, attitudes, and behaviours that support violence as a means to achieve a social or political change (Bott, Castan, Lark & Thompson, 2009). Violent extremism refers to the actions of individuals who advocate or engage in acts of violence to achieve an ideological, social, political, or religious goal (Homeland Security, 2019).

Radicalisation can be viewed on a spectrum, from high to low, whereby the attitudinal support for violence represents a 'low' degree of radicalisation, and a 'high' degree of radicalisation is more likely to lead to actual engagement in radicalised behaviours i.e. violent extremist acts (Kruglanski et al., 2014). To distinguish between radicalisation and extremism more clearly, radicalisation can be viewed as a *process* whereby extremist beliefs and attitudes progress and develop, whereas extremism refers to the actual approaches/methods an individual takes to fulfil an ideological aim (Borum, 2011). This suggests that radicalisation would always precedes extremism, however, does not necessarily mean that radicalisation necessarily leads to extremism. It is important to note that not all extremists go onto commit extremist acts; Extinction Rebellion are, so far, non-violent. Individual and group factors drive a person to advocate for, and resort to, extremism (Schmid, 2013).

Borum (2015) proposed that various factors influence an individual's propensity to radicalisation. He grouped risk factors into eight clusters. The first cluster was affect/emotion. Hate and humiliation are the most common emotions observed in violent extremists (Smith, 2015). Feelings of perceived injustice precede grievance thinking, and thus anger, driving an individual to extremism (Mackie, Devos, & Smith, 2000; Yzerbyt, Dumont, Wigboldus & Gordijn, 2003). The second cluster was behaviour. This includes factors such as previous criminal activity. By considering the antecedents, the behaviours themselves, and the consequences, it can provide more insight into potential

future risky behaviours (Daffern, Jones, & Shine, 2010). The third cluster was cognitive style. An extremist's cognitive style tends to be rigid (Zmigrod, Rentfrow & Robbins, 2019). The fourth cluster was beliefs/ideology. An ideology serves as a justification for engagement in violent extremism. Beliefs about perceived injustices and personal grievances feature as drivers for engagement in violent extremism (Borum, 2014; Boylan 2016). The fifth cluster was attitudes. Pro-violence attitudes are considered significant in extremist risk assessment. Research into general violence has found Pro-violence attitudes are associated with violent acts (Farrel et al., 2012; Werner & Nixon, 2005). The sixth cluster was social factors. Social factors include social alienation and social rejection, with an "us vs. them" mindset. The seventh cluster was identities. This cluster refers to how a person defines themselves, deriving from their core beliefs. The eighth and final cluster is capacities. This cluster references that an extremist must have the capabilities (e.g. physically, and intellectually) to carry out an extremist act. Whilst the process and pathways to radicalisation are recognised, the *types* of people who may be more vulnerable to this process is more unclear (Monahan, 2012). It has been highlighted that research in this area has been hitherto dominated by social science specialists, and there is a lack of research conducted by psychologists (Horgan, 2016).

General demographic characteristics of extremists are well known. A typical extremist is male (Monahan, 2012). However, there has been a rapid increase in females involved in extremism in the past decade (Khosrokhavar, 2014). A typical extremist's age is likely to fall between late teens and mid-twenties (Silke, 2008). Monahan (2012) suggested this age extends to late twenties. He also described that most extremists tend to be single. However, Sageman (2008) found a significant proportion of his extremist sample were married, most of who were married to somebody who was also involved within the extremist group. With regards to employment, income and educational accomplishments, extremists do not differ from the general population (Victoroff, 2005). With regards to mental illness, there has been no formal link established between any major mental illness and vulnerability to violent extremism (Borum, 2014; Monahan, 2012; Silke, 2008). Interestingly, however, there have been studies that have suggested mental illness or

disorder is present in lone-acting extremists (Corner & Gill, 2015; Corner, Gill & Mason, 2016; Meloy & Gill, 2016; Spaaij, 2010).

1.3. Tools measuring extremism

As discussed earlier, researchers use varying terms that relate to extremism. Consequently, they adopt different tools and methods to measure extremism. There are many tools that have been developed, or are in development. The most widely known tool in the field is The Violent Extremism Risk Assessment, Version 2-Revised (VERA-2R) (Pressman, Rinne, Duits, & Flockton, 2016), a risk assessment tool developed to assess risk related to violent extremism. This tool includes a checklist of indicators most relevant in the process of radicalisation and extremism, based on empirical evidence. It is intended to be used operationally by professionals in forensic settings, who are trained in administering the tool, and who are knowledgeable in, and well-informed of, the process of radicalisation and violent extremism. A problem here is like some other risk assessment tools, it can only be administered to individuals with a history of violent extremist offences (Pressman, 2009). Another comparable and widely used tool in England and Wales is the Extremist Risk Guidance (ERG22+; Lloyd & Dean 2011; Lloyd & Dean 2015). This tool is also used for the assessment and management of risk and needs of convicted extremist offenders. This limits the use of both tools in empirical studies, as accessing an extremist population is extremely difficult.

Studies on violent extremism are now commonly conducted on general population samples, from which inferences are drawn. There is an array of tools which are used to measure extremism in the general population, including the Right-Wing Authoritarianism Scale (Altemeyer & Hunsberger, 1992), the Social Dominance Orientation scale (Sidanius & Pratto, 1993; Sidanius & Pratto, 1999), the Activism and Radicalisation Intention Scale (Moskalenko & McCauley, 2009), the Islamic Fundamentalism Scale (Putra & Sukabdi, 2014), the Intra-Textual Fundamentalism Scale (Williamson & Ahmad, 2007), the Multi-Dimensional Fundamentalism Inventory (Liht, Conway & O'Neill, 2011), the Innsbrucker Religious Fundamentalism Scale (Schnell, 2010), and The Questionnaire of Acceptability of Radicalised

Religious Behaviours (Amjad & Wood, 2009). Measures such as the Right-Wing Authoritarianism Scale and the Social Dominance Orientation Scale should be used with scepticism in the field of violent extremism, as they are not necessarily and entirely specific to extremism. Other tools mentioned measure a specific concept known as fundamentalism. This can be viewed as one of the sub-categories of extremism, and results from these studies may limit findings to specific extremist groups, rather than extremism overall. Further, many of these tools were normed on specific populations, for example Islamic extremist samples, limiting their use and generalisability in wider populations. Considering these limitations, the Militant Extremist Mind-Set Scale (Stankov, Saucier & Knežević, 2010a) was used as a measure of extremism in the quantitative studies presented in Chapters Three and Four of this thesis. The rationale for using this scale will be discussed in the section below.

1.4. The Militant Extremist Mindset Scale

Stankov et al (2010a) developed a model of militant extremist mindset (MEM), based on assessing texts of militant extremist groups. Militant extremism comprises a balance of two key features: the support of measures outside of what is considered *normal*, and a readiness to resort to violence (Saucier, Akers, Shen-Miller, Knežević & Stankov, 2009). The model proposes three distinct components: Pro-violence, Vile World, and Divine Power. Pro-violence refers to the acceptance or use of violent acts. Vile World refers to the belief that the world is miserable, hopeless and unfair. Divine Power refers to beliefs in a higher power or divine authority. This authority is perceived as a justification for the engagement in extremist acts (e.g. an individual may express that they committed an act of terror for God). It is suggested that the extremist mindset constitutes a set of these beliefs, attitudes and motivations which can result in extremist acts. The stronger the set of beliefs within the three components, the stronger the MEM. Higher scores in all three of these components would reflect stronger attitudinal support of extremism, suggesting that Pro Violence, Vile World, and Divine Power would all be needed to reflect a more militant extremist mindset. It is

suggested that all persons are capable of adopting an extremist mindset, and this mindset can be driven by social and political events at a given time. Individuals with strong endorsement in all three components have a stronger likelihood in becoming a violent extremist.

The MEM scale was developed incorporating the three components mentioned above. The scale comprises twenty-four items. The Pro-violence component includes ten items relating to the support and advocacy of violence. The Vile World component includes six items relating to the world being a vile and miserable place. The Divine Power component includes eight items relating to the justification of violence by a higher authority. In the scale's development, it was found that males scored higher than females on the Pro-violence component and scored lower on the Divine Power component. With regards to age, younger individuals scored higher on the Vile World component. It was also found that the three components correlated with other psychological constructs. For example, Pro-violence correlated with psychoticism, and 'Betaism' which refers to the pursuit of self-interest; Vile World correlated with social cynicism, which refers to a belief that the world and those living in it should not be trusted; and Divine Power is related to religiosity, which refers to strong religious beliefs.

Stankov, Higgins, Saucier & Knežević (2010b) developed another MEM scale which incorporated similar components to that of the initial scale. These components were labelled War, God, and West. This scale is considered more appropriate to measure extremism of individuals who live in Eastern nations, as it includes items referencing the negative actions of The West. The author's primary scale described above, is more relevant to extremist views worldwide, as it was normed on nations across the East and West.

1.5. Violent extremism and personality

Research examining the link between personality and violent extremism reliably has produced inconclusive results (Davis & Cragin, 2009; Hoffman, 2006; Sageman, 2008). Personality measures used have been unable to capture any differences between extremists and non-extremists (Monahan, 2012). Findings in this area does not mean that extremists do not have a unique personality makeup, but rather the abandonment of research in this area means we are simply unaware if they do (Merari, 2010). This provided a rationale to investigate the link between personality traits and violent extremism in the present thesis. The HEXACO model of personality (Ashton et al., 2004) proposes six major dimensions of personality: Emotionality, Extraversion; Agreeableness Conscientiousness, Openness to Experience, and Honesty-Humility. Emotionality refers to anxiety as a reaction to day-to-day stressors. Extraversion refers to self-esteem and sociability. Agreeableness refers to forgiveness and leniency. Conscientiousness refers to discipline and organisation. Openness to Experience refers to factors such as creativity and imagination. Honesty-Humility refers to sincerity and greed-avoidance. These traits will be assessed in the present thesis using the 100-item HEXACO Personality Inventory-Revised (HEXACO-100; Lee & Ashton, 2018). The HEXACO model of personality is similar to the well-known personality model known as "the big five" (Costa & McCrae, 1992), however incorporates a sixth dimension of honesty-humility. The HEXACO model has many advantages over the five-factor model, in terms of theory and practice (Ashton & Lee, 2007). The rationale for using this measure of personality was that it is a more extensive measure of personality than previous studies have used.

The Honesty-Humility has been used in studies investigating ethical behaviours (Ashton & Lee, 2008). Honesty-Humility negatively correlates with the Dark Triad of personality (Ashton & Lee 2009; Lee & Ashton, 2005). The Dark Triad (DT) of personality is made up of three personality traits; Machiavellianism, narcissism, and psychopathy (Paulhus & Williams, 2002). Machiavellianism is a trait relating to selfishness and manipulation; narcissism relates to entitled self-importance, and psychopathy relates to antisociality and callousness. In recent years, there has been a rapid increase of interest

in relationship of DT traits and anti-social behaviours (Baughman, Dearing, Gimmarco & Dearing, 2012; Blinkhorn, Lyons & Almond 2015; Pailing, Boon, & Egan, 2016; Jones & Neria, 2015). This provided a rationale to investigate the link between darker personality traits and violent extremism in the present thesis.

1.6. Violent extremism and moral disengagement

Moral standards develop as we learn what is, and is not, acceptable in society. They refer to rules we live by about actions which we believe to be morally right and wrong. The theory of moral disengagement suggests individuals engage in behaviour that is morally wrong (e.g. violence) in violation of their own moral ideals (Bandura, 1986). Bandura's theory describes that an individual convinces oneself that such behaviours are justified in specific contexts, whereby self-sanctions are disregarded. These are disregarded via eight potential mechanisms: moral justification, euphemistic labelling, advantageous comparison, displacement of responsibility, diffusion of responsibility, disregarding or distorting the consequences, misrepresenting the harm, dehumanisation, and attribution of blame (Bandura, 1986). These mechanisms permit an individual to cognitively restructure moral standards of socially undesirable behaviour by dismissing internal moral control. Individuals who endorse high moral disengagement are more likely to be violent (Paciello et al., 2008).

The link between moral disengagement and violent extremism has produced some promising findings. The mechanisms of moral justification and dehumanisation were significant in individuals who supported violence (Hafez, 2006). Blame attribution is also a significant mechanism in this population (Aly, 2009). Studies conducted in relation to moral disengagement and violent extremism have mostly assessed texts produced by extremists. These texts often displace responsibility on other groups, for example Islamist narratives blaming Western nations, which have led to extremist attacks in Western countries (Aly, Taylor & Karnovasky, 2014). There is a lack of studies that directly measure moral disengagement in extremist populations using alternative methods. This provides a rationale for investigation the

process of moral disengagement as a predictor of extremism in the present thesis.

1.7. Violent extremism and linguistic markers

Communicating beliefs is a vital aspect of an extremist's activity. They endeavour to share their ideas with others in attempts to convince others that their beliefs are accurate. Assessing the language of what an extremist communicates can provide clues about their psychological states, and whether these differ from a non-extremist. Studies conducted on linguistic patterns of extremists found that particular linguistic categories were salient in extremists. These include certainty (Kaati, Shrestha & Cohen, 2016); anger (Cohen, Johansson, Kaati, & Mork, 2014; Pennebaker et al, 2008), anxiety (Duckitt, 2001; Roccatto & Rosso, 2017); third person plural pronouns (Cohen et al, 2014; Pennebaker et al, 2008; Torregrosa, Thorburn, Lara-Cabera, Camacho & Trujilli, 2019); first person plural pronouns (Glazzard, 2017; Kaati, Shrestha & Cohen, 2016); power (Kaati, Shrestha & Cohen, 2016; Tripp, Bora, Marian, Halmajan, & Drugas, 2019), and higher word count (as they explain their position more) (Kaati, Shrestha, & Cohen, 2016; Torregrosa et al., 2019). Most studies in this area have focussed on specific types of extremists, for example lone offenders, and Jihadis. There are limited studies that explore a general extremist mindset. Recent studies have explored language use of extremists on social media (Frimer, Brandt, Melton, & Motyl, 2018; Torregrosa et al., 2019). Analysing language on social media platforms reliably can be a complex task and does not come without limitations. This provided a rationale to explore the relationship between linguistic categories and extremism in the current thesis, using a novel methodology.

1.8. Overview of the thesis

The present thesis aims to investigate the psychological underpinnings of violent extremism. Firstly, a systematic review is conducted to explore existing literature and provide a summary of its findings. Secondly, a psychological measure of extremism is discussed and critiqued. Finally,

psychological constructs, discussed earlier, are investigated predictors of the MEM in two quantitative studies; that is, personality traits, moral disengagement, and linguistic markers. Aims and research questions of each chapter are discussed below.

In Chapter Two, a systematic review is presented. The aim of the systematic review was to explore the relationship between the dark triad and extremism. Studies exploring this relationship were reviewed to provide a consensus of the relationship between dark triad traits and extremism within the current literature. A protocol was developed to guide the review, where an inclusion and exclusion criteria were set, alongside planned methods. Methods and results followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Moher et al., 2015). Findings from this review also provided a rationale for investigating DT traits as predictors of extremism in Chapter Four.

In Chapter Three, a quantitative research study is presented. The aim of the primary research study was to investigate the relationship between psychological constructs and the MEM. Personality traits (the big six, and the dark triad) and moral disengagement were assessed as predictors of the MEM. Investigating these relationships will give insight into whether a particular type of individual is more inclined to accept, excuse, or resort to violence to achieve a socio-political goal. This study uses more comprehensive measures of personality than previous studies. In this chapter, the following research questions were proposed:

- (1) Which constructs best predict an individual's propensity to each of the three components of militant extremist mindset?
- (2) Which constructs best predict an individual's propensity to a militant extremist mindset overall?

Chapter Four presents a secondary quantitative research study. This chapter sought to assess the relationship between extremist mindset and linguistic variables, adopting a different methodology to previous studies, to answer the following:

- (1) Which linguistic markers are best associated with each of the three components of militant extremist mindset?
- (2) Which linguistic markers are best associated with a militant extremist mindset overall?
- (3) Which linguistic markers best predict an individual's propensity to each of the three components of militant extremist mindset?
- (4) Which linguistic markers best predict an individual's propensity to a militant extremist mindset overall?
- (5) If any significant linguistic markers are found to predict MEM or its components, can this be explained by the Dark Triad personality traits?

In Chapter Five, The Violent Extremism Risk Assessment, Version 2-Revised (VERA-2R) (Pressman et al., 2016) is discussed and critiqued. As discussed earlier, this is the most widely used tool in forensic practice to assess known violent extremists and helps identify intervention strategies, thus providing a rationale to critique this tool. Tools measuring extremism in the general population vary, and only inferences can be drawn from them. Analysing the literature on a tool that assesses known violent extremists will give an insight into 'the real world' of extremism and consider whether professionals are doing enough to assess and reduce risk. Possible alternative and supplementary methods or assessments are discussed within this chapter.

Chapter Six, the final chapter, summarises the key findings overall, alongside the interpretation, limitations and implications of these findings. Investigating which psychological constructs may influence an individual's propensity to extremism may offer guidance to organisations and authorities who aim to counter violent extremism, benefitting prevention and intervention, as psychological factors could be incorporated into preventative campaigns.

Chapter 2 - The Relationship Between the Dark Triad and Extremism, Terrorism, Radicalisation, Fundamentalism, and Authoritarianism: A Systematic Review

2.1. Abstract

Research relating to the unique characteristics of individuals who may be more vulnerable to violent extremism is inconclusive. The Dark Triad traits (Machiavellianism, narcissism, and psychopathy) are associated with antisocial behaviours such as aggression, self-reported violence, and sexual harassment. However, the relationship between these traits and violent extremism is unclear. The aim of this systematic review was to explore the relationship between the Dark Triad (DT) traits and extremism, terrorism, radicalisation, fundamentalism, and authoritarianism. A comprehensive search of multiple databases identified 6 independent studies which met the inclusion criteria. The AXIS tool (Downes, Brennan, Williams, & Dean, 2016) was used to assess the quality of studies. Of the six studies included in the review, two investigated the militant extremist mindset, two investigated radicalised cognitions and behaviours, one investigated political extremism, and one investigated religious fundamentalism. Three studies included in the review measured Machiavellianism; four studies measured narcissism, and all six studies measured psychopathy. Seven different tools were used to measure DT traits. Data were synthesised using meta-analysis to standardise effect sizes. The review found that Machiavellianism may play a small role in the process of radicalisation, however its influence is stronger alongside other dark traits. Four of the six studies found that psychopathy was associated with an extremist domain. However, findings of the current systematic review suggest that narcissism may be the most significant trait in the propensity to extremism. Overall few studies explored the relationship of interest, demonstrating a need for further research in this area to generate a stronger consensus.

2.2. Introduction

Violent extremism has attracted increasing attention over the years. Psychological research into this field has also grown as researchers have attempted to explore the psychological processes contributing to extremism. A violent extremist supports the use of, or engages in, acts of violence to achieve an ideological goal (Striegler, 2015). Many explanations and models have been proposed to explain an individual's propensity to extremism. In particular, the relationship between personality and violent extremism has been well debated topic within the literature. Studies have attempted to establish whether there is a significant link between personality traits and violent extremism; a topic with a variety of findings.

2.2.1. *Violent Extremism and personality*

Psychological research so far has been unable to establish a unique personality makeup predicting violent extremism (Horgan, 2017; Monahan, 2015). Monahan (2012) suggested that broad-spectrum tests used could not capture any differences between an extremist and non-extremist personality. This led to abandonment of this research area (Smelser, 2007). However, more recently, this research area has become of re-interest.

There have been attempts to explore the relationship between the big five personality traits and violent extremism in general population samples. Given the difficulty of accessing an extremist sample, levels of 'extremism' are more commonly tested in general population samples and inferences are then drawn from this. Stankov, Higgins, Saucier and Knežević (2010b) found that individuals who advocate for violence are less conscientious, less agreeable, and less extraverted than those who do not. Additionally, it was found in a sample of university students that individuals who agreed with extreme statements, were less neurotic, less open, and less agreeable (Fauset, 2014). This suggests that extremists may be less likely to experience feelings such as anxiety and guilt, and more likely to be closed-minded. However, other studies have found contradicting results. Tripp et al (2019) measured

extremism in adolescents, using the same scale, and found more extreme individuals to endorse higher scores on agreeableness. Differences in findings could be explained by age, or a social desirability effect. In a study, investigating language use on social media, more extreme individuals endorsed higher scores on openness (Alizadeh, 2017).

Low openness, however, has been found to be associated with fundamentalism, alongside high agreeableness (Saroglou, 2002; Saroglou, 2010). This was supported by more recent findings (Bartoszuk & Deal, 2016). Neuroticism was lower in fundamentalists supporting the notion that religious people are less open about their emotions (Bartoszuk & Deal, 2016). This suggests that these traits incline individuals towards a stricter adherence to particular set of beliefs. Other traits have also been found to correlate with extremism. Histrionic, anti-social, and obsessive personality traits appear to be prominent in radicalised persons (Campelo, Oppetita, Neauc, Cohen & Bronsarde, 2018). Depressive traits are related to political aggression (Alderdice, 2009).

The findings discussed above demonstrate the varied findings on personality and violent extremism. Aside from attempting to find a distinct personality of extremist, psychologists have also attempted to determine what other psychological processes play a role in the propensity to extremism. Explanations include marginalisation and perceived injustice (Borum 2014; Pauwels & Heylen, 2017; Sageman, 2004), need for belonging, and need for identity (Borum 2004; Borum, 2014). Borum (2014) also described attributional propensities, such as grievances, that can precede the engagement in an extremist act. Often, an individual will blame negative events on to others, and grievance thinking can drive an individual to extremism (Mackie, Devos, & Smith, 2000; Yzerbyt, Dumont, Wigboldus & Gordijn, 2003).

2.2.2. *The Dark Triad*

The Dark Triad (DT) refers to a group of three socially aversive personality traits: Machiavellianism, narcissism, and psychopathy (Paulhus & Williams,

2002). In recent years, there has been a rapid increase of interest into dark personality traits, and their predictive ability of certain anti-social behaviours. Three traits have been identified that constitute the Dark Triad (DT), which are commonly known to be socially undesirable.

Machiavellianism relates a person using manipulation and deception for personal gain (Christie & Geis, 1970). Narcissism can be expressed in two ways; as grandiose or vulnerable (Wink, 1991). The former is characterised by arrogance and superiority, which can develop into domineering and intimidating behaviours, whereas the latter refers to a conflict between grandiosity and inferiority, characterised by low self-esteem. This manifests into a more defensive presentation. Psychopathy involves a lack of empathy, callousness, and manipulation (Hare, 2003). The American Psychological Association (2013) describe psychopathy as a trait relating to deceit and manipulation, whereby an individual possessing this trait has a clear disregard for others. Like narcissism, this trait can be expressed in two ways; as primary psychopathy or secondary psychopathy. Primary psychopathy reflects affective deficit, which is inherited, whereas secondary psychopathy refers to affective disturbance, shaped by the environment (Skeem, Johansson, Andershed, Kerr & Loudon, 2007). Psychopathy is recognised as a predictor of offending behaviour (Dhingra & Boduszek, 2013).

Machiavellianism and psychopathy are two more symptomatically similar traits, whereas narcissism is known to manifest differently, so is often regarded as the 'least dark' of the three traits (Volmer, Kotch & Goritz, 2016).

The DT traits sit on a spectrum (Vernon, Villani, Vickers, & Harris, 2008), so there are diagnostic differences between the general population and clinical populations (Furnham, Richards, & Paulhus, 2013). The DT traits are associated with positive outcomes, such as career success (Spurk, Keller & Hirschi, 2015), and masculinity (Lyons, Marcinkowska, Helle & McGrath, 2015), but they are more commonly associated with more anti-social outcomes. The DT traits have been found to predict various anti-social behaviours such as aggression (Jones & Neria, 2015); self-reported violence (Pailing, Boon, & Egan, 2016); bullying (Baughman, Dearing, Giammarco & Vernon, 2012), and sexual coercion (Blinkhorn, Lyon & Almond 2015). Borum

(2015) suggest that those with past risky behaviours (e.g. criminal activity) may be more likely to engage in extremist acts.

The DT traits correlate with other well-known personality traits, such as traits within the HEXACO model of personality (Ashton et al., 2004). Low Honesty-humility is a significant correlate of the DT traits (Ashton & Lee, 2014; Lee & Ashton, 2005; Lee et al., 2013). Machiavellianism is associated with low agreeableness and low extraversion; narcissism is associated with high extraversion, and psychopathy is associated with low conscientiousness (Ashton et al., 2014). Low agreeableness is crucial to DT traits and violent behaviour (Pailing et al., 2016). Additionally, research highlights links between narcissism, social rejection, and aggression (Twenge, 2005). Social exclusion can also influence an individual's propensity to engage in extremism (Pressman et al., 2016). Studies also show a correlation between narcissism and need to belong (Casale & Fioravanti, 2018; Greenwood, Long & Sin, 2013). The need for belonging and acceptance is a psychological vulnerability associated with propensity to extremism (Baumeister et al., 2007). A link has also been found between Machiavellianism and intelligence (Kowalski, Kwaitkowska, Kwaitkowska, Ponikiewska, Rogoza & Schermer, 2018). Borum (2015) indicated that an individual must have the intellectual capacity to carry out an extremist act. These findings may be indicative that DT traits may also play a role in engagement in extremism.

In light of the recent surge of interest in dark personality traits, and the varied findings relating to personality and extremism, the present systematic review aims to investigate the relationship between DT traits and violent extremism. Given that terminology describing or relating to extremism is varied within the literature, this search extended to terrorism, radicalisation, fundamentalism, and authoritarianism. Terrorism can be defined as an unlawful act of violence to achieve a political goal (HM Government, 2011). Radicalisation refers to the adoption of a progressively more extreme socio-political or religious ideology that oppose contemporary values (Wilner & Dubuloz, 2010). Fundamentalism reflects a strict attachment to one set of (usually) religious beliefs (Nagata, 2001). It is marked by a non-acceptance of other ideals and

values. Authoritarianism is characterised by an absence or lack of any political freedom (Cerutti, 2017).

Systematic reviews relating to violent extremism within the literature currently, address pathways of radicalisation and extremism (McGilloway, Ghosh & Bhui, 2014) and prevention of radicalisation (Christmann, 2012). More recently a systematic review has been conducted on the relationship between mental health, radicalisation and mass violence (Misiak et al., 2019). There are currently no systematic reviews that explore the relationship between personality and violent extremism, and more specifically dark personality traits and violent extremism.

2.2.3. *The Present Review*

The aim of this systematic review is to explore the relationship between dark personality traits and extremism, terrorism, radicalisation, fundamentalism, and authoritarianism. These terms were identified through research in the topic area. A systematic review relating to the psychometric properties of violent extremism tools (Scarcella, Page & Furtado, 2016) indicated these words are likely to be most significant in this research area, and are likely used interchangeably, as the authors met with information specialists. A closer review of existing literature relating to this will clarify any relationships, and shed light on the consensus within the literature. Before the review was conducted, a protocol was developed as a guidance. Methods and results followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Moher et al., 2015).

2.3. Inclusion and Exclusion Criteria

The inclusion criteria for the present systematic review required studies to: (1) be an original research article; (2) use a psychometric tool to report the relationship between any of the DT personality traits (Machiavellianism, narcissism, and psychopathy) and extremism, terrorism, radicalisation, fundamentalism, or authoritarianism; (3) use a distinct measure of

extremism, terrorism, radicalisation, fundamentalism, or authoritarianism, and any one of (or all of) the DT traits; (4) quantitatively report an outcome for the relationship between extremism, terrorism, radicalisation, fundamentalism, or authoritarianism and any one of (or all of) the DT traits.

Studies that investigated and explored other components relating to extremism, terrorism, radicalisation, fundamentalism, or authoritarianism were eligible, as long as the study explicitly investigated and reported the relationship between them and any of the three dark personality traits as well. There were no restrictions on population types. Any studies relating to 'general' violence were excluded.

2.4. Methods

2.4.1. *Sources of Literature*

PubMed, PsycINFO, PsycARTICLES, Web of Science, Applied Social Sciences Index Abstracts (ASSIA), Social Science Premium Collection, International Bibliography of the Social Sciences (IBSS), Science Database, Politics Collection, Political Science Database, Criminology Collection, Criminal Justice Database, and Worldwide Political Science Abstract databases were searched for empirical studies which reported the relationship between dark triad personality traits and extremism, terrorism, radicalisation, fundamentalism, and authoritarianism. An ancestry search was conducted where reference lists of articles were also searched for any relevant studies.

2.4.2. *Search Strategy*

Searches were conducted using the following keywords: *terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism AND dark triad OR dark personality OR narcissism OR psychopathy OR Machiavellianism*. See Appendix A for the syntax for each database.

2.4.3. *Study Selection*

Database searches identified 1935 potentially relevant papers; 107 in PubMed, 215 in PsycINFO, 585 in PsycARTICLES, 720 in Scopus, 85 in Web of Science, 107 in Social Science Premium Collection, 96 in IBSS, 11 in Science Database, 5 in Political Science Database, 5 in Criminology Collection, 5 in Criminal Justice Database, 1 in Worldwide Political Science Abstracts, and 0 in ASSIA. A further 3 articles were found manually in reference lists. 96 duplicates were removed, leaving a total of 1840 articles to be screened based on titles and abstracts. Following this screening, full-text assessment was conducted on 25 papers. From these, 20 studies were excluded which did not meet the inclusion criteria. These studies did not use a distinct tool to measure use a distinct measure of extremism, terrorism, radicalisation, fundamentalism, or authoritarianism, and any of the DT traits, or did not quantitatively report the relationship between the two domains. This left a final selection of 5 papers (6 independent experiments). See Figure 2.1.

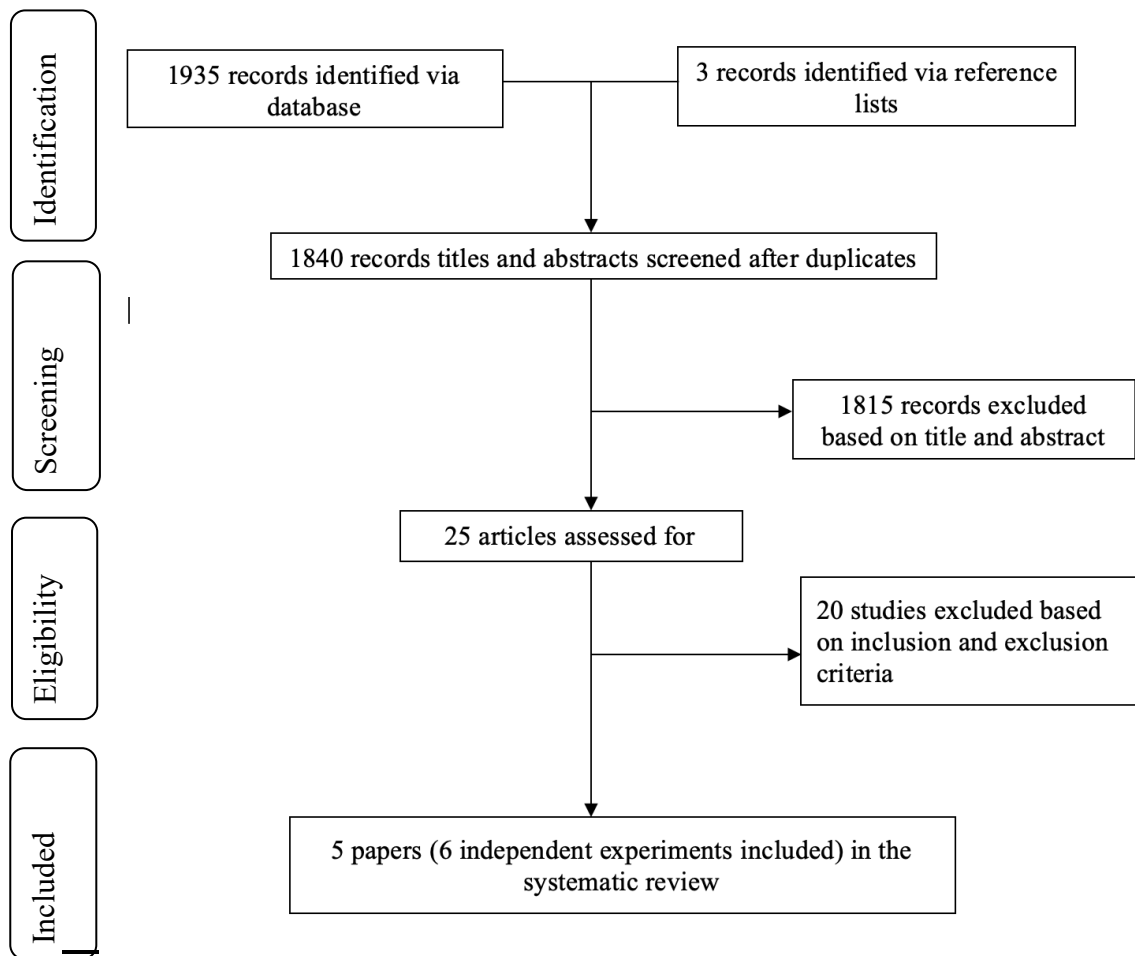


Figure 2.1: *PRISMA flow diagram*

2.4.4. *Quality assessment (or Assessment of the risk of bias)*

The AXIS tool (Downes, Brennan, Williams, & Dean, 2016) was used to quality assess eligible studies (see Appendix B). This tool was developed for cross-sectional studies, and includes a twenty-item check list, requiring a 'yes', 'no', or 'don't know'. If 'yes' is ticked, a score of 1 is given. For 'no' and 'don't know' a score of 0 is given. Ultimately, a quality score is subjective, therefore the following score-system was used to indicate the quality of a study: scores between 1 and 7 indicated low quality, scores between 8 and 14 indicated moderate quality, and scores above 15 indicated high quality. Tables 2.1 and 2.2 show quality assessment of the studies included within this review. All

studies received a score reflective of a moderate-quality or high-quality study, ranging from scores of 12 to 16.

2.4.5. *Data extraction process*

Data were extracted from each article and the key findings are reported in Table 2.3. Both descriptive data and analytical data were extracted. Descriptive data extraction included the number of participants in each study, the sample type, and sample characteristics (mean age, and gender distribution). The tools that measured extremism, terrorism, radicalisation, fundamentalism, or authoritarianism, and tools that measured dark personality traits were also extracted. Analytical extraction included extracting data analyses relating to associations between the two domains (dark personality and extremism) i.e. correlations and predictive capabilities. A meta-analysis produced standardised effect scores and confidence limits for each finding, so that they could be compared effectively.

2.5. Results

2.5.1. *Descriptive data synthesis (characteristics of studies)*

The search identified a total of 5 papers (6 independent studies) of sufficient quality to be included in the systematic review. Table 2.3 shows all the papers included in the review. All papers were published between 2016 and 2018, suggesting a very recent surge of interest in this topic area. The overall number of participants included in the review was 2098. Two of the studies used the same participants, which were an all-female sample; three studies used a mixed gender sample, and one study used an all-male sample. The mean age of participants in the review was 26.29 years. Four studies used undergraduate/college samples, one used a general community sample, and one used a forensic sample. Two studies were conducted in France, two were conducted in Serbia, and two were conducted in Austria.

Two of the studies assessed radicalised cognitions and behaviours. Radicalised cognitions were assessed using The Questionnaire of Acceptability

of Radicalised Religious Behaviours (Amjad & Wood, 2009), and radicalised behaviours were assessed using an adapted version of this measure. One study assessed political extremism, using a scale from 1-11 (1 reflecting left-wing attitudes, 6 reflecting moderate attitudes, and 11 representing right-wing attitudes), from which a political extremism score was computed. One study explored religious fundamentalism, using The Innsbrucker Religious Fundamentalism Scale (Schnell, 2010). Two studies explored militant extremist thinking, using The Militant Extremist Mindset Scale (Stankov, Saucier & Knežević, 2010a).

Seven different tools were used to measure dark traits. Only one tool was used to measure the dark triad in one single administration – The Short Dark Triad (Jones & Paulhus, 2014). The other six tools measured a distinct trait of the triad. One tool measured Machiavellianism – the self-report Machiavellianism Inventory (Christie & Geis, 1970); two tools measured narcissism – The self-report Narcissistic Personality Inventory (Ames et al, 2006), and The Pathological Narcissism Inventory (Pincus et al, 2009), and three tools measured psychopathy – The Youth Psychopathic Traits Inventory (Andershed, Hodgins & Tengstrom, 2007), The Levenson’s Self-Report Psychopathy Scale (Levenson, Kiehl & Fitzpatrick, 1995), and The Self-Report Psychopathy Scale (Paulhus, Neumann & Hare, 2016).

Table 2.1*Quality Assessment of the Studies (Questions 1 – 10)*

Author (Year)	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Total Quality Rating / 20
1.Morgades-Bamba, Raynal & Chabrol (2018)	1	1	0	1	1	0	0	1	1	1	16
2. Chabrol, Bonchain, Morgdes-Bamaba & Raynal (2019).	1	1	0	1	1	0	0	1	1	0	12
3.Duspara & Greitmeyer (2017)	1	1	1	1	1	1	0	1	0	1	14
4. Unterrainer, Ruttinger, Lewis, Anglim, Fink & Kapfhammer (2016)	1	1	0	1	1	0	0	1	1	1	14
5. Međedović & Knežević (2018) (Study 1)	1	1	0	1	1	1	0	1	1	1	15
5. Međedović & Knežević (2018) (Study 2)	1	1	0	1	1	0	0	1	1	1	13

Table 2.2*Quality Assessment of the Studies (Questions 11 – 20)*

Author (Year)	Q11	Q12	Q13*	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Total Quality Rating / 20
1. Morgades-Bamba, Raynal & Chabrol (2018)	1	1	1	0	1	1	1	1	1	1	16
2. Chabrol, Bonchain, Morgdes-Bamaba & Raynal (2019).	0	1	1	0	1	1	0	1	0	1	13
3. Duspara & Greitmeyer (2017)	0	1	1	0	0	1	1	1	0	1	14
4. Unterrainer, Ruttinger, Lewis, Anglim, Fink & Kapfhammer (2016)	1	1	1	0	0	1	1	1	0	1	14
5. Međedović & Knežević (2018) (Study 1)	1	1	1	0	1	1	1	0	1	0	15
5. Međedović & Knežević (2018) (Study 2)	1	1	1	0	0	1	1	1	0	0	14

Table 2.3*Data Extraction Table*

Study	DT Tool(s)	Extremism Tool(s)	N	Participant Profile	Age: M (SD)	Gender Distribution	Main Findings	Standardised Effect Size	95% CI [Lower,Upper]
1.Morgades-Bamba, Raynal & Chabrol (2018)	YPTI Self-report NPI (French version) Self-report MI (French Version)	ARRB Questionnaire ARRB Questionnaire adapted	643	College students	20.38 (1.96)	All female	Machiavellianism influenced radicalised cognitions Narcissism influenced radicalised cognitions Narcissism influenced radicalised behaviours	.30 .22 .24	[.22,.38] [.17,.22] [.15,.3]
2. Chabrol, Bonchain, Morgdes-Bamaba & Raynal (2019)	YPTI Self-report NPI (French version) Self-report MI (French Version)	ARRB Questionnaire ARRB Questionnaire adapted	643	College students	20.38 (1.96)	All female	SPM cluster had highest levels of radicalised cognitions SPM cluster had high levels of radicalised behaviours Narcissistic cluster had high levels of radicalised behaviours	.9 .7 .5	[.63,1.13] [.46,.94] [.32,.77]
3.Duspara & Greitmeyer (2017)	SD3	POS	675	Community	35.9 (14.7)	264 females, 411 males	Narcissism was associated with political extremism	.15	[-.08,.23]

							Psychopathy was associated with political extremism	.13	[-.6,.21]
4. Unterrainer, Ruttinger, Lewis, Anglim, Fink & Kapfhammer (2016)	PNI (German Adaptation) LSRP (German Adpatation)	IRFS	327	College students	25.1 (5.8)	70.9% female, 29.1% male	Subscale of vulnerable narcissism ('hiding the self') was associated with religious fundamentalism	.10	[-.9-.2]
5. Međedović & Knežević (2018) (Study 1)	SRP4	MEM Scale	306	Undergraduate students	21 (3.43)	62% female, 38% male	Psychopathy was associated with MEM subscale Pro-violence Psychopathy was associated with MEM subscale Vile World Psychopathy was associated with subscale Divine Power	.38 .39 -.30	[.26,.49] [.28,.5] [-.42-.2]
5. Međedović & Knežević (2018) (Study 2)	SRP4	MEM Scale	147	Forensic	35 (9.53)	All male	Psychopathy was associated with MEM subscale Pro-violence	.42	[.28,.61]
Summary	-	-	-	-	-	-	-	.32	[.16,.44]

Notes. SPM cluster=group high in sadism, psychopathy and Machiavellianism; YPTI=Youth Psychopathic Traits Inventory (Andershed, Hodgins & Tengstrom, 2007; D'Acromont et al, 2002); MI=Machiavellianism Inventory (Christie & Gels, 1970); NPI=Narcissistic Personality Inventory (Ames et al, 2006); ARRB Questionnaire=Questionnaire of Acceptability of Radicalised Religious Behaviours (Amjad & Wood, 2009); SD3=Short Dark Triad (Jones & Paulhus, 2014); POS=Political Orientation Scale (Duspara & Greitmeyer (2017); PNI=The Pathological Narcissism Inventory (Pincus et al, 2009); LSRP=Levenson's Self-Report Psychopathy Scale (Levenson, Kiehl & Fitzpatrick, 1995); IRFS=The Innsbrucker Religious Fundamentalism Scale (Schnell, 2010); SRP4=The Self-Report Psychopathy Scale (Paulhus, Neumann & Hare, 2016); MEM Scale=The Militant Extremist Mindset Scale (Stankov et al, 2010); SPM cluster=individuals high in Sadism, Psychopathy, and Machiavellianism (with moderate narcissism).

2.5.2. *Analytical data synthesis and meta-analysis*

Analytical data were extracted using the data extraction form. This included all statistical analyses and findings reported relating to the relationship between DT traits and extremist domains. This data were then synthesised meta-analytically, whereby the effects for the main results in each study were standardised. See Table 2.3. Figure 2.2 shows a forest plot of the main effects of DT traits on the extremist domains.

2.5.3. *Machiavellianism*

Three studies included within the review measured Machiavellianism (Morgades-Bamba, Raynal & Chabrol, 2018; Chabrol, Bonchain, Morgdes-Bamaba & Raynal, 2019; Duspara & Greitmeyer, 2017). However only two found Machiavellianism associated with an extremist domain (Morgades-Bamba et al., 2018; Chabrol et al., 2019). This trait was measured using the Short Dark Triad (Jones & Paulhus, 2014) and a French version of the Narcissistic Personality Inventory (Ames, Rose & Anderson, 2006). In one study, a path analysis found that Machiavellianism significantly influenced radicalised cognitions, of which the standardised effect size was .3. Machiavellianism only influenced radicalised behaviours when mediated by dogmatism. The second study conducted on the same participants, who were grouped into dark personality clusters. It was found that individuals high in Machiavellianism (alongside sadism, psychopathy) but moderate narcissism, had the highest levels of radicalised cognitions and behaviours, as determined by cluster comparisons using ANOVA and Turkey's post-hoc tests. The association with radicalised cognitions produced a standardised effect size of .9, and the association with radicalised behaviours produced a standardised effect size of .7. However, these should be interpreted with caution, as these clusters included other dark traits, and not Machiavellianism alone.

2.5.4. *Narcissism*

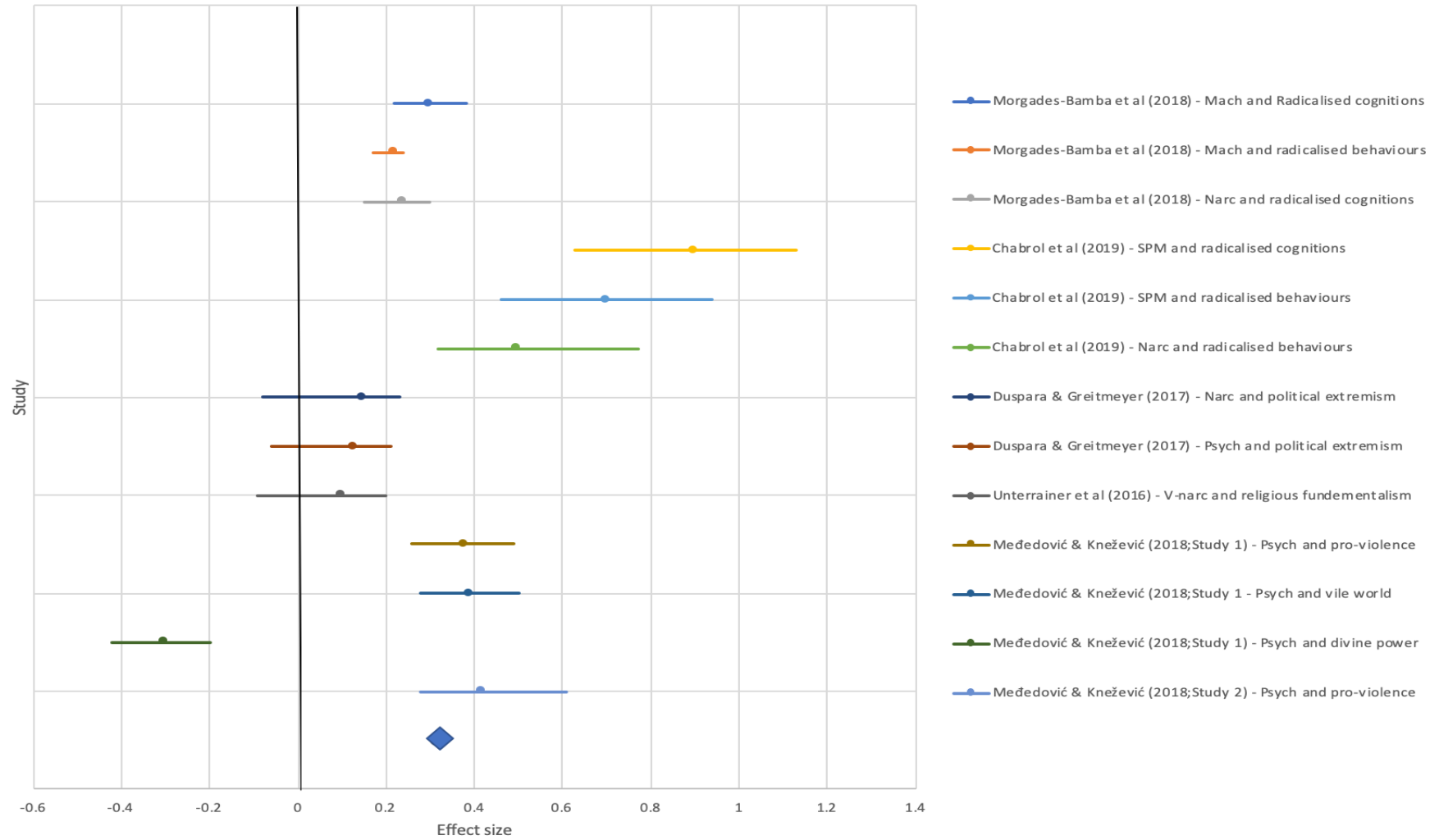
Four studies included within the review measured narcissism in relation to an extremist domain (i.e. radicalised cognitions, radicalised behaviours, political

extremism, and religious fundamentalism (Chabrol et al., 2019; Duspara & Greitmeyer, 2017; Morgades-Bamba et al., 2018; Unterrainer, et al., 2016). All studies found a positive association between narcissism and extremist domains (radicalised cognitions, radicalised behaviours, political extremism, and religious fundamentalism). Standardised effect sizes were small, and ranged between .15 and .5. The strongest effect size was found in Chabrol et al's study, whereby a narcissistic cluster group had higher levels of radicalised behaviours compared to a low traits group. Interestingly, the same study found that individuals who endorsed moderate scores of narcissism, and had high scores of the other dark traits (sadism, psychopathy, and Machiavellianism) had the highest radicalised behaviours. Unterrainer et al (2016) found that a subscale of vulnerable-type narcissism ('hiding the self') was significantly associated with an extremist domain (religious fundamentalism), rather than the total narcissism score. The meta-analysed effect sizes in Unterrainer, et al's and Duspara and Greitmeyer's studies were not statistically significant.²

2.5.5. *Psychopathy*

All five articles (six studies) assessed within the review measured psychopathy (Chabrol et al., 2019; Duspara & Greitmeyer, 2017; Međedović & Knežević, 2018; Morgades-Bamba et al., 2018; Unterrainer, et al., 2016). Four of the six studies found psychopathy to have an association with an extremist domain or its subscales. Standardised effect sizes ranged between .13 and .9. The smallest effect size was found between psychopathy and political extremism (Duspara & Greitmeyer, 2017). This meta-analysed effect size was not statistically significant. The strongest effect sizes were found in Chabrol et al's study, whereby grouped individuals that were high in psychopathy, sadism and Machiavellianism (SPM cluster), had the highest level of radicalised cognitions and behaviours, as determined by cluster comparisons using ANOVA and Turkey's post-hoc tests. Again, as this was a group comprising three dark traits, these results should be interpreted with caution. Both studies conducted by Međedović and Knežević (2018), found significant associations between psychopathy and MEM subscale Pro-violence. These effect sizes were similar (.38 and .42). In the first study, significant associations were also found

between psychopathy and MEM subscales Vile World, and Divine Power. The former association was positive, and the latter was negative.



Notes. Mach=Machiavellianism, Narc=narcissism; Psych=psychopathy; V-narc=vulnerable narcissism.

Figure 2.2: Forest plot showing effect sizes of DT traits on extremist domains

2.6. Discussion

2.6.1. *Main findings*

Machiavellianism was found to influence radicalised cognitions. However, this effect size was small. Machiavellianism only influenced radicalised behaviours when mediated by dogmatism (Morgades-Bamba et al., 2018). Cognitive radicalisation can be regarded as the preparation process for radicalised behaviours (Amjad & Wood, 2009). This study suggests people high in Machiavellianism may be more susceptible to radical cognitions, however, are not likely to act upon these, unless they are mediated by dogmatic thinking. Dogmatism is known to be influential in extremism (Borum, 2014). This suggests that high Machiavellianism alone is not sufficient for an individual to resort to violence. This is supported in Chabrol et al's study within this review, as they found individuals high in Machiavellianism, sadism and psychopathy had the highest radicalised cognitions and behaviours, compared to other cluster groups. Again, this suggests that whilst Machiavellianism does play a role in radicalisation, it is most influential alongside other traits. The effect size of this association was large, however this is likely to be because other dark traits were clustered within this group. Furthermore, the wide confidence interval reduces the reliability of the data. A larger sample size within each cluster group would provide more reliable data and power. A standardised effect size for Machiavellianism alone could not be calculated as this trait was not clustered independently. Limitations in these findings include an all-female, student sample. A replication in a male study would clarify whether these findings would also apply to males in the general population. The third study within this systematic review which investigated Machiavellianism did not find the trait associated with political extremism (Duspara & Greitmeyer (2017), suggesting that other dark traits may play more important role in extremism. Overall, the findings in this review demonstrate that Machiavellianism may play a small role in the process of radicalisation, but this heightens when accompanied by other dark traits. There were limited studies exploring the role of Machiavellianism in

extremism, therefore future research could focus on exploring this relationship further, particularly in male samples.

Four studies explored the relationship between narcissism and an extremist domain (Chabrol et al., 2019; Duspara & Greitmeyer, 2017, Morgades-Bamba et al., 2018; Unterrainer, et al, 2016), and this trait appeared to be associated to an extremist domain in all of these studies. Narcissism was found to influence radicalised cognitions and radicalised behaviours. It was also associated with political extremism, and religious fundamentalism, although these meta-analysed effect sizes were not statistically significant in this review. The most interesting outcome was in Chabrol et al's study where it was found that a group high in narcissism had the highest level of radicalised behaviours, and a group with moderate narcissism levels with high scores in other dark traits also had high radicalised behaviours. This indicates that an individual who endorses a high narcissism score and has moderate scores in other dark traits, would likely have similar potential of radicalised behaviours as an individual who endorses a moderate narcissism score with high scores on other dark traits. This suggests that narcissism may play an important role in the process of radicalisation, and may be the most influential of the DT traits within this review. The endorsement of high narcissism alone, has a similar influence on radicalised behaviours, as the endorsement of a combination of psychopathy, sadism and Machiavellianism. This is an interesting finding considering narcissism is recognised to be the 'brightest' DT trait (Rauthan & Kolar, 2012). However, the reliability of these findings would be improved with a larger sample within each cluster group. As stated previously, limitations include an all-female sample, therefore these results cannot be generalised outside of a female student sample. However, these results demonstrate that radicalisation in females may be more pertinent than initially thought. Khosrokhavar (2014) reported an increase of females involved in extremism. Furthermore, many Western-based females, known as "Jihadi brides" have travelled to Syria to join ISIS (The Atlantic, 2015). The role of narcissism and the radicalisation process in males is yet to be explored.

Duspara and Greitmeyer (2017) found narcissism as a correlate of political extremism. However, this study related to political elections in Austria. Additionally, the scale used to measure political extremism within the study was

not a validated tool, but rather a simple Likert-type scale used to measure political orientation in Austrian citizens. This limits generalisability outside of Austria, and the cut-off point for political extremism remains open to interpretation. A more valid and reliable tool measuring political extremism which can be used cross-culturally would produce more valid and reliable findings.

In Unterrainer et al's (2016) study, 'hiding the self' (a subscale of vulnerable narcissism) predicted religious fundamentalism, producing a small standardised effect size. This particular subscale refers to low self-esteem, such as concerns that others notice one's own flaws or insecurities (Pincus et al., 2009). Gaining acceptance from others is associated with engagement in extremism (Baumeister et al, 2007). Rejection and exclusion can lead to self-questioning of one's meaning and role in the world (Williams, 2002), thus a stronger vulnerability to extremism. If a person is accepted or 'belongs', feelings of insecurity are likely to reduce, which may explain the findings in Unterrainer et al's study. It remains unclear which type of narcissism played the most significant role in other studies. Future studies could explore the two expressions of narcissism independently to establish whether there are differences between vulnerable narcissism and grandiose narcissism in more extremist individuals.

Psychopathy was investigated in all six studies within this systematic review. Four of these studies found psychopathy to be a relevant factor in relation to radicalised cognitions and behaviours (Chabrol et al., 2019), political extremism (Duspara & Greitmeyer, 2017), and the militant extremist mindset (Međedović & Knežević, 2018). With regards to radicalised cognitions and behaviours, unlike the other DT traits, psychopathy did not independently influence these outcomes (Morgades-Bamba et al., 2018). However, it was found that the SPM cluster had the highest radicalised cognitions and behaviours (Chabrol et al., 2019). As discussed earlier, the effect size for this association was large, however this is likely to be because other dark traits were clustered within this group. Furthermore, wide confidence limits reduce the reliability of the data. A standardised effect size for psychopathy alone could not be calculated as this trait was not clustered independently. As such, psychopathy did not appear a

'strong' enough trait to influence the radicalisation process independently in this study. Psychopathy was recognised to play a role only alongside other DT traits. As psychopathy was not clustered individually, it is difficult to determine whether psychopathy alone would have had this effect. Moreover, as this was an all-female sample, this may be explained by gender differences in psychopathic features (Wennberg, 2012). If this was conducted on a male sample, psychopathic tendencies may have been higher and may have influenced the radicalisation process more prominently. In Duspara & Greitmeyer's study, psychopathy was associated with political extremism. Limitations within this study (discussed above), warrants further investigation into the link between DT traits and political extremism, using a more valid tool, cross-culturally.

In Study 1 of Međedović & Knežević's (2018) paper, psychopathy was the only DT predictor. Psychopathy positively predicted the Pro-violence subscale of the MEM. This suggests that those higher in psychopathy are likely to advocate for the use of violence, than a 'less psychopathic' person. This is supported by previous findings suggesting that individuals with psychopathic tendencies are more violent (Walsh, Swogger, Walsh & Kosson, 2007), and have diminished guilt (Gong, Brazil, Chang & Sanfey, 2019). Psychopathy also positively predicted the Vile World subscale of the MEM, suggesting 'more psychopathic' people believed that the world was a vile place to live in. Negative emotionality is linked to psychopathic tendencies (Hicks & Patrick, 2006). Psychopathy negatively predicted the Divine Power subscale of the MEM. This subscale refers to the belief that violent extremism can be justified by the existence of a 'higher power' (Stankov et al., 2010a). This subscale is associated with religiosity (Stankov et al., 2010a). It is suggested that a more empathic person is likely to be more religious (Jack, Friedman, Boyatzis & Taylor, 2016). As psychopathy is characterised by low empathic concerns, these results are not surprising.

In Study 2 of Međedović and Knežević's paper, psychopathy significantly positively correlated with MEM subscale Pro-violence, replicating findings from their first study. Effect sizes were similar, despite one study being conducted on a forensic sample, suggesting this particular finding may be more generalisable than others within this systematic review. Psychopathy did not predict Vile

World or Divine Power, contradicting their previous findings in Study 1. Study 2 included an all-male forensic sample, whereas Study 1 was a mixed gender sample. Stankov et al (2010a) found that females scored higher on the Divine Power subscale. Findings from Study 1 suggest that MEM scales are not strongly related, as a DT trait may increase or positively predict one MEM scale, whilst being unrelated or negatively related to another MEM scale. This highlights that there are multiple pathways to MEM overall (Međedović & Knežević, 2018). However, it can be suggested that psychopathy may have a stronger association with attitudes supportive of violence, within the militant extremist mindset. It may be more insightful if future research focussed on exploring an overall MEM score. This total score combines scores from each subscale and gives the best indication of the overall militant extremist mindset in an individual (Stankov et al, 2010a). Other DT traits should also be investigated to establish any associations with the militant extremist mindset, as currently this remains untested.

2.6.2. *Limitations*

The quality of the studies were found to be of moderate-quality, with one being of high-quality. All studies within this systematic review were cross-sectional. This limits the ability to make longitudinal and causal conclusions. All studies within this systematic review used self-report measures, increasing the likelihood of self-report bias. Given the sensitive nature of dark traits and extremism, this increases the potential of social desirability issues. Research has shown a correlation between social desirability and narcissism (Kowalski, Rogoza, Vernon & Schermer, 2018). Future studies could consider employing social desirability measures to account for such issues. Participant recruitment in most of the studies increased self-selection bias. Furthermore, testing for extremism in the general population is likely to be a problem in itself as only few people, if any, are likely to be characterised as extremist. However, given the difficulties in accessing real extremist samples is very difficult, and extremists may be suspicious and so not participate. Study 2 in Međedović and Knežević's (2018) included male convicts. Although reasons for incarceration were briefly mentioned, it was unclear whether any of these offences were related to

extremism. Four of the six studies used student samples, therefore the overall sample within the systematic review was relatively young, and findings would be limited mostly to students. Furthermore, studies were conducted in France, Austria, and Serbia, limiting the ability to generalise across cultures. Future research should focus on recruiting participants more representative of the general population.

2.6.3. *Conclusions and final comments*

Overall, the standardised effect sizes were small, suggesting the relationship between the variables were not very strong. This is with the exception of the relationship between a narcissism cluster group and radicalised behaviours, which produced a stronger effect size than other studies. Although the relationship between the SPM cluster and radicalised cognitions and behaviours produced the strongest effect sizes in this systematic review, this was a mix of the dark traits. Machiavellianism alone, only influenced radicalised behaviours when mediated by dogmatism. Findings suggest Machiavellianism plays a more important role alongside other traits, whereas narcissism influenced radicalised cognitions and behaviours in the absence of other traits. This finding also suggests that a mixture of dark traits have a stronger association with extremism, than a single dark trait alone. However, the sample sizes within the cluster groups reduced the reliability of this data. Future studies would benefit from larger sample sizes to produce more reliable effects. However, every study within this systematic review found that at least one DT trait had a significant relationship with an extremism domain. Machiavellianism was the least investigated trait, and psychopathy was the most. The current systematic review has found that Machiavellianism influenced extremist domains, however this trait became more salient alongside other dark traits. A significant relationship between psychopathy and extremist domains were found within this systematic review. Specifically, psychopathy had a consistent association with pro-violent attitudes across two studies. Findings of the current systematic review suggest that narcissism may be the most significant trait in the process of radicalisation.

Overall, few studies investigated the relationship between the dark traits and extremism, suggesting a gap within the literature. No studies investigated

authoritarianism. Whilst all DT traits within this review demonstrated some relevance to extremism, more studies investigating this relationship are warranted. This topic seems to be of recent interest given the studies included in this systematic review were between 2016 and 2018, and future studies are highly likely. Specifically, future studies could focus on samples more representative of the general population, in terms of both age and culture. Furthermore, it may be more valuable to explore male samples, given that they are well-recognised to be more extreme than females.

It is important to recognise that different tools were used across the studies, exploring different types of extremism. Different DT traits may influence each tool differently, as the similarities between them are unclear at this stage. It would be premature to make firm conclusions in this systematic review due to the limited amount of studies; however, it provides some indication of the current consensus within the literature.

Chapter 3 - The Militant Extremist Mindset, Personality, and Moral Disengagement

3.1. Abstract

There is limited knowledge on the risk factors associated with violent extremism and radicalisation. Specifically, research investigating the link between personality and violent extremism and radicalisation has produced inconclusive results. The present study examined the relationship between the militant extremist mindset (MEM), and two psychological constructs: personality and moral disengagement, on a sample of 197 participants. The model of MEM comprises three components: Pro-violence (advocating for violence), Vile World (belief that the world is an unfair place), and Divine Power (reliance on divine authority as an excuse for extremism), and was measured using the MEM questionnaire. Six major dimensions of personality were measured using the HEXACO-100, and dark personality traits were measured using the Short Dark Triad. Moral disengagement was measured using The Mechanisms of Moral Disengagement questionnaire. The present study tested which psychological constructs best predicted an individual's propensity to each of the three components of the MEM. Hierarchical regression analyses found HEXACO trait Honesty-Humility, and moral disengagement were significant predictors of MEM overall, and its subscale Pro-violence. Openness and age predicted the Divine Power. The present study offers insight into the psychological mechanisms which may influence the MEM. Importantly, findings suggest that unique characteristics may in fact predict an individual's propensity to extremism.

3.2. Introduction

In recent years, the focus of world news has increasingly revolved around radicalisation acts of extremism. Extremist threats and acts are more spoken about in the world today than ever before. The effects of such acts are incredibly harmful on the economy that have life-changing impacts, including the destruction of economic resources and countless fatalities (Global Terrorism Index, 2017). Psychologically, it has proven difficult to determine what may lead an individual to commit such acts. Firstly, the most obvious reason for this is the lack of access to subjects who commit extremist acts outside specialist and closed settings. Secondly, an extremist population are less than likely to be willing to contribute in experimental research for assessment of behaviours, beliefs, or attitudes. This means most research in the field has had to draw inferences from non-clinical populations, and applied tentatively.

Previous psychological research has not been able to reliably establish any distinct characteristics of an individual more inclined to engage in violent extremism. Understanding factors which may make an individual more inclined to engage to extremism may benefit counter-extremism interventions and prevention. This study aimed to explore psychological underpinnings of extremism, specifically personality constructs, and the process of moral disengagement. This was done by measuring militant extremist attitudes in participants, and testing whether moral disengagement and personality constructs could predict these attitudes.

3.2.1. *Violent Extremism and Radicalisation*

Definitions of violent extremism and radicalisation vary within the literature, and are often used interchangeably. Violent extremism refers to the advocacy of, or engagement in violence in the pursuit of ideologically motivated aims (U.S. AID, 2011). Radicalisation refers to a process in which an individual gradually adopts extremist ideologies, beliefs, and attitudes (Borum, 2011). Extremism and radicalisation can vary from attitudinal support for violence, to the actual engagement in radicalised and extremist behaviours (Kruglanski et al., 2014). Processes and mechanisms of radicalisation are recognised in the literature.

Pyramids and stage theories of radicalisation and extremism have been proposed (e.g. Moghaddam, 2005; McCauley & Moskaleiko, 2008; Wictorowicz, 2005). Borum (2015) identified key themes within the literature, relating to cognitions, affect, and behaviours of an extremist. With regards to cognitions, extremists are cognitively rigid (Zmigrod, Rentfrow & Robbins, 2019). Emotionally, feelings such as anger (Frimer, Brandt, Motyl & Melton, 2019) and hate (Smith, 2015) tend to drive individuals to extremism. Feelings of humiliation are also significant, triggered by perceived injustices (Lieven, Pauwels & Heylen, 2017). Behaviourally, past offending behaviours, especially past involvement with violent extremism, are important to consider in the assessment of potential extremists (Borum, 2015).

Other themes identified in relation to extremism and radicalisation relate to beliefs, capacity, identity, and attitudes of the extremist (Borum, 2015). With regards to beliefs, an extremist usually holds beliefs and ideas that excuse violence. Beliefs of personal grievance feature may make an individual more vulnerable to extremism (Borum, 2014; Boylan 2016). Capacity refers to the capability of an individual to carry out an extremist act. Identity refers to an individual's beliefs about themselves, others, and the world, which is a risk indicator in the assessments of extremists (Pressman, Rinne, Duits, & Flockton, 2016). Uncertainty about one's own identity may make a person more vulnerable to extremism (Hogg, 2014). The attitudes held by an individual may provide clues about their future behaviour. Risk assessment of general violence incorporates violent attitudes as an indicator of future violence (Douglas, Hart, Webster, & Belfrage, 2013). Beliefs and attitudes also feature in the risk assessment of extremists (Pressman et al., 2016). Social factors such as social exclusion can also influence an individual's propensity to engage in extremism. Neuroimaging has demonstrated a link between social exclusion and vulnerability to radicalisation (Pretus et al., 2018). Pathways and processes to radicalisation and extremism are better recognised than the unique characteristics of extremists i.e. the *type* of person who may be more inclined to engage in radicalised behaviours (Monahan, 2012).

3.2.2. *The Militant Extremist Mindset*

As discussed earlier, an array of terms is used within the field of violent extremism, and often these terms are used interchangeably. Terms include, radicalisation, terrorism, and fundamentalism to name a few. As such, several different methods and tools are used to measure extremism. The focus of the present study is militant extremism, and more specifically the Militant Extremist Mindset. Saucier, Akers, Shen-Miller and Knežević (2009) suggested that it is necessary to consider the whole mind-set of an individual in the context of extremism. Militant extremism is the support of “advocacy of measures beyond the norm (i.e. extremism) and intention and willingness to resort to violence (i.e. militancy)” (Saucier et al., 2009, p.256).

The Militant Extremist Mindset (MEM) describes an individual with certain beliefs or attitudes that support, or advocate for violence to attain a social or political goal. An individual feels wronged or mistreated by something or someone, whereby they retaliate in order to seek a type of justice, which may result in violent behaviour (Stankov et al 2010a; Stankov et al, 2010b; Stankov, Knežević, Saucier, Radović & Milovanović , 2018). MEM can be viewed on a spectrum, ranging from the bottom end, where a person does not support or advocate (or minimally supports or advocates) for the use of violence, to the top end, where a person very strongly supports or advocates for the use of violence. At the top end of the spectrum, it is proposed that an individual may be more likely to resort to actual use of violence to accomplish that goal.

Based on the analysis of texts produced by militant extremist groups internationally, the MEM model suggests that there are key components which may make a person more susceptible to extremism: Pro-violence, Vile World, and Divine Power. Pro-violence refers to the advocacy for violence; Vile World refers to the perception that world is an unfair place, and Divine Power is belief that a higher power offers a justification for engaging in extremism. A MEM scale (Stankov et al, 2010a) was developed incorporating these three components. A high score on one or two factors does not necessarily equate to a person likely to resort to violence. It is vital for high endorsement on all three dimensions to indicate that a person may be pushed toward engagement in a violent act. Additionally, high scores on all three factors does not mean that an

individual will commit an extremist act; it is merely an indication that an individual may be more vulnerable to this than somebody who does not score as highly. The authors suggest that past research may have been unsuccessful in including the core components of an extremist mindset, and is likely their assessments are outdated. The MEM model proposes a more modern belief system, consistent with contemporary extremism.

3.2.3. *Extremism and Personality*

There are a variety of theories in relation to why or how an individual becomes radicalised or more prone to extremism. The relationship between personality and extremism has been a debated topic within the literature with mixed findings. Researchers refer to the concept of individual differences in three different ways: 1) as mental illness and personality disorder 2) as demographic characteristics, and 3) as persistent discernible characteristics, which is personality in its most 'typical' sense, psychologically.

3.2.4. *Mental illness*

Mental illness is generally not considered a predictor of extremism (Borum, 2014; Silke, 2008; Victoroff, 2005). However, a minority of studies have suggested a link between mental illness and violent extremism (Corner & Gill, 2016; Weenik, 2015). More specifically, studies have found mental illness to be more prominent in lone acting, rather than group acting extremists (Corner et al., 2016; Corner & Gill, 2015; Spaaij, 2010). The extent to which mental illness influenced extremism in these studies is not known, as many other risk factors contributed alongside. It is even suggested that if extremists were mentally disturbed, it would make them less equipped to engage with the processes of extremism, for example planning the applicable strategies (Sageman, 2004). Lankford found that suicide bombers might in fact just be suicidal (an indication of clinical depression), rather than driven by ideology (Lankford, 2011). In fact, these extremists may have many more mental health difficulties (Lankford, 2018). Clearly the research into mental illness and extremism lacks clarity, but it can be suggested that whilst mental illness may play a role in the process of extremism, it does not predict vulnerability to it (Ellis et al., 2015).

3.2.5. *Demographics*

The link between extremism and demographic data is more well known. Extremists are usually male, in their late teens and twenties, who are well educated (Atran, 2003; Monahan, 2012; Sageman, 2004; Silke, 2008). However, the rise of females involved in extremism has been observed in more recent years (Khosrokhavar, 2014). Most extremists tend to be single (Monahan, 2012). However, extremists who are married, are more likely to be married with a partner also involved in extremist activity (Sageman, 2008). Generally, employment levels, salary, and educational levels of extremists do not differ from the norm (Victoroff, 2005). However, it is suggested that persons from higher populated regions are more vulnerable to extremism (Coccia, 2017; Lutz & Lutz, 2017), which in fact may be explained by income inequality and deprivation. These are causal influences into the pathway to crime (Stolzenberg, Eitle & D'Alessio, 2006).

3.2.6. *Personality traits*

A unique personality makeup of an extremist has not yet been established (Davis & Cragin, 2009; Hoffman, 2006; Sageman, 2008). Studies have been unable to reliably measure personality to capture differences between extremists and non-extremists (Monahan, 2012). However, the lack of research means we are unaware if personality differences actually exist in extremists (Merari, 2010). Whilst the relationship between extremism and personality remains undetermined, some studies have produced modest associations.

Gottschalk & Gottschalk (2004) proposed that extremists may possess distinct personality traits, for example psychopathic and schizophrenic tendencies, however determined that such tendencies may be more likely to be related to mental illness. Extremists also demonstrate impulsivity and emotional instability (Merari, Diamant, Bibi, Broshi & Zakin, 2009). A recent study exploring language use in extremists found that Twitter users who follow extremist accounts were less agreeable, conscientious, neurotic and more open, compared to Twitter users who do not follow such groups (Alizadeh, Weber, Cioffi-Revilla, Fortunato & Macy, 2017). Another study exploring dark personality traits, found narcissism and psychopathy were associated with political extremism (Duspara &

Greitemeyer, 2017). They also found all scales of the Dark Tetrad (psychopathy, Machiavellianism, narcissism and sadism) had a positive association with politically right-wing attitudes. However, other studies have not found a significant correlation between any personality factors and political attitudes (e.g. Bell et al, 2012).

In investigating the MEM, Stankov et al (2010a) found negative correlations between extraversion, agreeableness, and conscientiousness and Pro-violence attitudes. Positive correlations were found between conscientiousness and both Vile World attitudes and Divine Power attitudes. Vile World attitudes were also associated with psychoticism and social cynicism, and Divine Power attitudes with religiosity. Some gender differences were also observed across the three elements; males endorsed more proviolent attitudes, and less Divine Power attitudes. Brief measures of personality were used in this study, which may restrict findings. Furthermore, the study was limited to a very young sample.

Recent research has attempted to build on research on MEM and personality. Međedović and Knežević (2018) found that darker personality traits are linked to components of the MEM. Psychopathy, and sadism were predictive of Pro-violence attitudes, and disintegration was predictive of Vile Word and Divine Power attitudes. This suggests that individual differences may make one more susceptible to extremism. Trip et al (2019) advised that individuals high in extraversion and low on agreeableness endorsed a higher MEM. As MEM is a fairly recent model, factors which may be associated with its core constructs are not exactly well established.

3.2.7. Extremism and Moral Disengagement

Bandura's (1986) theory of moral disengagement has been applied to help researchers understand why an individual may resort to extremism. Moral disengagement describes the process of an individual believing that they are immune from ethical standards in certain contexts. Bandura (1990) proposed eight mechanisms which help a person to relieve guilt arising from committing immoral acts: 1) Moral justification, 2) Euphemistic labelling, 3) Advantageous comparison, 4) Displacement of responsibility, 4) Diffusion of responsibility, 5) Disregarding or distorting the consequences, 6) Misrepresenting the Harm, 7)

Dehumanisation, and 8) Attribution of blame. Generally, individuals who endorse high levels of moral disengagement are more likely to support for, or commit acts of, violence (McAlister, Bandura & Owen, 2006; Paciello, Fida, Tramontano, Lupinette & Caprara, 2008). Moral disengagement is also associated with darker personality traits (Egan, Hughes & Palmer, 2015).

Most of the research on moral disengagement and violent extremism has explored narratives produced by extremists alongside the eight mechanisms of moral disengagement. Extremist narratives allow individuals to eliminate personal responsibility from extremist acts, whilst assigning justification for their acts to religion, for example. Hafez (2006) found that individuals used moral justification and dehumanisation to excuse acts of extremism. Extremists are also known to attribute blame on victims to excuse their behaviour (Aly, 2009). This may be more prominent in younger individuals as they are found to endorse higher levels of moral disengagement to support violent acts (Leiber, Efreom-Lieber, & Rate, 2010; Paciello et al., 2008). Generally, a minority of studies have directly measured moral disengagement endorsement in populations extremist populations, but no studies have yet investigated MEM constructs in relation to moral disengagement. The literature lacks studies which explore whether the processes of moral disengagement may relate with the core elements of the MEM.

3.2.8. The Present Study

The present study aims to contribute and add to the literature in violent extremism. This will be done by exploring the relationships between the MEM and psychological constructs; specifically, personality traits, and moral disengagement. This will offer insight into whether particular types of individuals are more attitudinally inclined to accept, excuse or resort to violence to achieve a socio-political goal. Investigating which constructs may influence an individual's propensity to extremism may offer guidance to organisations and authorities who aim to counter extremism, and to understand the psychological mechanisms behind such thinking.

Previous studies have explored "the big five" dimensions of personality (Costa & McCrae, 1992), however the present study employed the HEXACO model of

personality (Ashton et al., 2004). This is a six-factor model which measures the big five traits, with an added dimension of Honesty-Humility. The rationale for using this measure of personality was that it is a more extensive measure of personality than previous studies have used. Additionally, the Dark Triad personality traits will be measured. Findings from the systematic review in Chapter Two provided a rationale to explore the link between dark traits and extremism further, as currently, there is limited research in this area.

The relationship between MEM and these variables were assessed to answer the following:

- (1) Which constructs best predict an individual's propensity to each of the three components of MEM?
- (2) Which constructs best predict an individual's propensity to MEM overall?

3.3. Method

3.3.1. *Design*

The present study used a cross-sectional design, whereby personality traits and moral disengagement were assessed in relation to MEM.

3.3.2. *Participants*

Participants were recruited through word of mouth, social media (e.g. Facebook, twitter, and Instagram), research websites, the internet email of some businesses, and a poster advertising the study at a University in Pakistan. The study advertisement at this University may help explain why a large proportion of the sample was of Pakistani origin. It was considered advantageous by the researcher to advertise the study cross-culturally, and the opportunity arose to advertise the study at this particular University. Any person aged 18 above was welcome to partake in the study. All participants gave informed consent. The

final sample was 197 (Female: Male = 113:84). The age ranged from 18 to 68 ($M = 36$, $SD = 12.9$) years. Participants reported their ethnicity (38.6 White, 43.1% Asian/Asian British (Pakistani), 8.6% Asian/Asian British (Indian), 1.5% Asian/Asian British (Bangladeshi), 1% Mixed Race (White and Black Caribbean), 0.5% Mixed Race (White and Black African, 6.6% other), religion (47.37% Muslim, 0.5% Jewish, 2.5% Sikh, 4.6% Hindu, 22.3% Christian, 22.3% other), level of education (1% no qualifications, 8.1% secondary education, 15.7% post-secondary education, 9.6% vocational qualification, 37.6 undergraduate degree, 24.4% post-graduate degree, 3.6% doctoral degree), occupation (67% employed, 12.7% self-employed, 4.6% unemployed, 1.5% homemaker, 11.2% student, 2% retired, 1% unable to work), and sexuality (92.9% heterosexual, 2.5% homosexual, 2.5% bisexual, 2% other). At the time of partaking, 75.6% of participants lived in Europe, 10.2% lived in Asia, and 14.2% lived in North America.

3.3.3. *Procedures*

The study was internet-mediated whereby participants completed psychometric measures online. The study was administered online via Online Surveys, and a direct online link to the study was provided in an advertisement.

Participants were firstly presented with an information page, explaining why the research is being conducted and what it involves for the participants. The form highlighted that the readers did not have to participate and could withdraw at any time before or during the study by pressing the exit button on their laptop, tablet, or mobile phone. The section included information regarding anonymity, describing that participants would not be asked to disclose any information that may identify them directly or indirectly. Finally, the contact details of the researchers and ethics committee for any further queries, or complaints was provided. A copy of the participants information page can be found in Appendix C.

Participants gave informed consent to take part in the study. This ensured participants understood the participant information page before committing to the study. A copy of the participant consent page can be found in Appendix D.

Participants were then asked to provide additional information including age, sexuality, country of residence, religion, ethnicity, qualifications, occupation, and where they heard about the study.

Participants were asked to complete a series of psychometric measures, all of which used Likert-type responding. They were told they would be presented with various statements, and they should select the extent of which they agree/disagree. Participants were advised to answer as honestly as possible.

At the end of the study, participants were presented with a debrief page. This signposted participants on who to contact should they feel the need to, following completion of the study. Participants were also signposted to various agencies should they have any concerns regarding extremism, given that it is a growing concern. A copy of the debrief page can be found in Appendix E.

Participants could not advance to the next page of the study, unless they had provided an answer for every question. If participants tried to move forward without answering a question, they would be alerted to provide the missing answer. This eliminated the possibility of missing answers in scales. Upon completion of the study, a unique code was generated online for each participant so that they could not be identified in any way.

3.3.4. Measures

Five psychometric measures were used, measuring various attitudes, beliefs and personality traits, described below.

3.3.4.1. The Militant Extremist Mind-set (MEM) Questionnaire

The Militant Extremist Mind-set (MEM) Questionnaire (Stankov et al, 2010a) is a questionnaire which measures the degree to which an individual has an "extremist mindset". The Questionnaire (Appendix F) consisted of 24 items, comprising three scales: Pro-violence (e.g. "war is the beginning of salvation"); Vile World (e.g. "evil has been re-incarnated in the cult of markets and the rule of multinational companies"), and Divine Power (e.g. "at a critical moment, a divine power will step in to help our people"). It is measured using a

5-point Likert-type scale, where 1 equals strongly disagree and 5 equals strongly agree. This questionnaire has been normed on populations across numerous countries (Stankov et al, 2010a), suggesting generalisability across cultures.

3.3.4.2. The Mechanisms of Moral Disengagement (MMD) Questionnaire

The Mechanisms of Moral Disengagement Questionnaire (Bandura et al., 1996) is a 32-item questionnaire which features the eight moral disengagement mechanisms: 1) Moral justification, 2) Advantageous comparison, 3) Diffusion of responsibility, 4) Displacement of responsibility, 5) Euphemistic labelling, 6) Dehumanization of victim, 7) Attribution of blame, and 8) Distortion of consequences. Items are measured using a 5-point Likert-type scale, where 1 equals strongly disagree and 5 equals strongly agree. A higher score reflects a higher level of moral disengagement. The wording of the scale was modified slightly in the present study, to apply more suitably to an adult sample. An example of this is that references to school in the original scale were replaced with the workplace in the present study. See Appendix G for a copy of the questionnaire.

3.3.4.3. The Short Dark Triad (SD3)

The Short Dark Triad (SD3) (Jones & Paulhus, 2014) is a 27-item questionnaire which measures personality traits: Machiavellianism, psychopathy and narcissism. These subscales comprise 9 items each, and are measured on a 5-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (5). A higher score on a scale reflects a higher level of the trait that is being measured. Research has investigated the reliability and validity of the three subscales, and it was found that the tool offered a measure of the Dark Triad of personalities which are both valid and reliable (Jones & Paulhus, 2014). The measure also documented high internal consistency. See Appendix H for a copy of the questionnaire.

3.3.4.4. HEXACO Personality Inventory - Revised (HEXACO-PI-R)

The HEXACO Personality Inventory -Revised (HEXACO-PI-R) (Lee & Ashton, 2018) is a personality questionnaire assessing six key personality features: 1) Honesty-humility, 2) Emotionality, 3) Extraversion, 4) Agreeableness, 5) Conscientiousness, and 6) Openness to experience. The items are measured on a 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). A high score on a scale reflects a higher tendency toward that scale. Although there is a shorter version of the inventory (60 items), it is recommended by the authors to use the 100-item version in research studies to attain higher internal consistency. The inventory has demonstrated high internal consistency and convergent validity (Lee & Ashton, 2004). See Appendix I for a copy of the questionnaire.

3.3.4.5. The Balanced Inventory of Desirable Responding Short Form (BIDR-16)

The Balanced Inventory of Desirable Responding Short Form (BIDR-16) (Hart, Ritchie, Hepper, & Gebaeur (2015) is a questionnaire assessing socially desirable responding across two domains: self-deceptive enhancement (SDE) and impression management (IM). This particular inventory is a short-version of the 40-item Balanced Inventory of Desirable Responding (BIDR). The present study adopted the short version for practicality, as the present study already included other lengthier scales within the study. It is suggested that the short-version upholds the two dimensions being measures, whilst maintaining its reliability and validity (Hart, Ritchie, Hepper, & Gebaeur, 2015). Each scale includes 8 items each, where respondents rate them on a 7-point Likert-type scale, ranging from 1 (disagree strongly) to 7 (agree strongly). See Appendix J a copy of the questionnaire.

3.3.5. Ethics

The study was approved by The Division of Psychiatry & Applied Psychology's Research Ethics Sub-Committee (authorised by the Faculty of Medicine & Health Sciences Research Ethics Committee) at The University of Nottingham. See Appendix K. Ethical considerations were addressed where necessary. It was considered that participants would be asked to answer questions that may be

deemed sensitive. It was highlighted on the participant information page that individuals did not have to participate and could withdraw at any time during the study. Participants were signposted on the debrief page on who to contact if they had any issues or concerns. Anonymity was highlighted and participants were not asked to disclose any information that could identify them in any way. As the study was internet-mediated, participants were likely to be completing it in private, alleviating any pressures to respond in a certain way.

As participants were required to complete this study online, they were not under any time limit to complete it. This alleviated any pressures to complete the study within a certain time frame. This was facilitated by allowing participants to view how much of the study they had completed on each page, which was shown as a percentage at the bottom of each page. Additionally, the website allowed them to come back to the study as long as they left the window open on the device they were completing it on. If the window was left open, the page would not expire, allowing participants to take a break if they needed. Potential participants were also advised that the study would take up at least 35-40 minutes of their time, so they could make an informed decision of whether they would want to continue, and so were not misled regarding the time it would likely take. All participants were presented with the questionnaires in exactly the same order. Although it would have been ideal to randomly allocate the order of the questionnaires to reduce order effects, the website software did not allow for this feature to be implemented.

3.3.6. *Data Analyses*

Total and mean scores for all measures and relevant subscales were calculated. For the MEM Questionnaire, scores were summed for total MEM score, and Pro-violence, Vile World, and Divine Power subscales. For personality measures, scores were summed for Emotionality, Extraversion; Agreeableness, Conscientiousness, Openness to Experience, Honesty-Humility, Machiavellianism, Narcissism, and Psychopathy subscales. For the moral disengagement and social desirability questionnaires, total scores were summed. Reverse scoring was accounted for on all scales. Tests of normality and reliability conducted. Data were non-normally distributed for MEM total, and the Pro-violence and

Divine Power subscales, so parametric and non-parametric tests were used accordingly. Correlations analyses were performed, and hierarchical regressions were then conducted to determine the most significant psychological predictors of MEM and each of its subscales. Due to unmet assumptions of normality, and signs of heteroscedasticity, regression analyses were bootstrap corrected (Field, 2013). There were no issues with multicollinearity.

3.4. Results

3.4.1. *Descriptive statistics and reliability*

Table 3.1 shows the mean scores and reliability values for subscales of the MEM Questionnaire, HEXACO, SD3, MMD Questionnaire, and BIDR-16. The mean score for total MEM was 50.81. Scores ranged between 31 and 112. The maximum score an individual could endorse was 120. The mean score for total moral disengagement was 45.36. Scores ranged between 32 and 72. The maximum score an individual could endorse was 96. The mean score for total social desirability was 4.8. Scores ranged between 0 and 14. The maximum score an individual could endorse was 16.

Table 3.1

Means, Standard Deviations, and Reliability Coefficients for MEM Subscales, HEXACO Subscales, SD3 Subscales, MMD Subscales, and BIDR-16 Subscales

Scale	<i>M</i>	<i>SD</i>	<i>α</i>
Pro-violence (MEM)	16.92	6.05	.78
Vile World (MEM)	19.18	5.83	.86
Divine Power (MEM)	23.04	7.60	.83
Machiavellianism (SD3)	25.52	6.70	.82
Narcissism (SD3)	23.45	5.45	.73
Psychopathy (SD3)	18.68	5.97	.77
Honesty-Humility (HEXACO)	57.70	11.15	.86
Emotionality (HEXACO)	51.89	9.17	.79
Extraversion (HEXACO)	4.05	10.07	.84
Agreeableness (HEXACO)	47.50	9.65	.83
Conscientiousness (HEXACO)	57.91	8.48	.79
Openness (HEXACO)	55.57	9.16	.76
Moral Justification (MMD)	7.06	2.17	.68
Advantageous comparison (MMD)	4.74	1.39	.65
Diffusion of responsibility (MMD)	5.69	1.78	.55
Displacement of responsibility (MMD)	5.79	1.79	.6
Euphemistic labelling (MMD)	5.52	1.53	.5
Dehumanization of victim (MMD)	5.01	1.53	.58
Attribution of blame (MMD)	6.32	1.92	.52
Distortion of consequences (MMD)	5.23	1.46	.55
Self-deceptive enhancement (BIDR-16)	1.96	1.74	.67
Impression management (BIDR-16)	2.84	2.23	.76

3.4.2. *Relationships between MEM and all personality subscales, moral disengagement, and social desirability*

Pearson's r correlations were calculated between Vile World and the personality subscales and moral disengagement. Spearman's rho correlations were calculated between Pro-violence and Divine Power and personality subscales and moral disengagement. Spearman's rho correlations were also calculated for total MEM and the personality subscales, moral disengagement, and social desirability.

Total MEM and the Pro-violence subscale were significantly associated with Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, Machiavellianism, Psychopathy, and Moral Disengagement. For the Vile World subscale, its strongest correlates were Honesty-Humility, Agreeableness, Machiavellianism, Psychopathy, and Moral Disengagement. Openness and Narcissism were the Divine Power subscale's strongest correlates. See Table 3.2.

3.4.3. *Predictors of MEM*

Bootstrapped hierarchical multiple regressions were conducted to analyse whether demographics, personality traits, and moral disengagement predicted total MEM and its three subscales: Pro-violence, Vile World, and Divine Power. For all regressions (Pro-violence, Vile World, Divine Power, and total MEM), independent variables were entered in the following order: Step 1 = age and gender; Step 2 = HEXACO subscales; Step 3 = SD3 subscales; Step 4 = moral disengagement. Social desirability was also assessed as a predictor of total MEM, and was added at step 5 in this regression only.

For all four regressions, the first block (demographics) was significant, whereby age was the only significant predictor in all models. For total MEM, the HEXACO increased the variance explained, F -change (2, 194) = 13.87, $p < .001$. A similar

change was observed for Pro Violence, $F\text{-change}(2, 194) = 13.36, p < .001$. This change was not found for Vile World or Divine Power.

The addition of the SD3 traits decreased the variance explained in the third block for MEM, $F\text{-change}(3, 185) = 2.71, p = .046$, and Pro-violence $F\text{-change}(3, 185) = 2.9, p = .036$. However, this introduction increased the variance explained for Vile World, $F\text{-change}(3, 185) = 3.32, p = .021$; and Divine Power, $F\text{-change}(3, 185) = 2.8, p = .042$. The introduction of moral disengagement increased the variance explained considerably for total MEM, $F\text{-change}(1, 184) = 24.48, p < .01$, and Pro-violence, $F\text{-change}(1, 184) = 21.02, p < .01$. An increase, though smaller, was also observed for Vile World, $F\text{-change}(1, 184) = 3.35, p = .069$. This change was not observed for Divine Power. The final block for MEM, with an entry of social desirability, substantially decreased variance explained, $F\text{-change}(1, 183) = .1, p = .75$.

With regards to independent predictions, total MEM was negatively predicted by Honesty-Humility, (standardised beta = $-.56, t = -4.15, p < .01$), and positively predicted by Moral Disengagement (standardised beta = $.37, t = 4.94, p < .01$). Pro-violence was also negatively predicted by Honesty-Humility (standardised beta = $-.35, t = -4.21, p < .01$), and positively predicted by Moral Disengagement, (standardised beta = $.35, t = 4.59, p < .01$). Divine Power was negatively predicted by age (standardised beta = $-.23, t = -2.97, p = .003$), and Openness (standardised beta = $-.18, t = -2.62, p = .01$). In block 3, Machiavellianism predicted Vile World, however it became non-significant with the entry of Moral Disengagement in the final block. Vile World did not have any significant predictors in the final block model. Table 3.3 shows the results for the final models of bootstrap-corrected multiple regressions predicting total MEM, Pro Violence, and Divine Power from personality measures, and moral disengagement. For total MEM, the adjusted R^2 value indicated that 42% of this variance could be explained by the significant independent variables.

Table 3.2

Correlations Between Personality Subscales, Moral Disengagement, Social Desirability and MEM and its Subscales (n = 197)

	MEM	Pro-violence	Vile World	Divine Power
Honesty-Humility (HEXACO)	-.461**	-.465**	-.188**	.097
Emotionality (HEXACO)	-.184**	-.184**	.001	.27
Extraversion (HEXACO)	-.289**	-.270**	-.045	.108
Agreeableness (HEXACO)	-.277**	-.288**	-.165**	.115
Conscientiousness (HEXACO)	-.334**	-.332**	-.160*	-.026
Openness (HEXACO)	-.123	-.118	-.053	-.199**
Machiavellianism (SD3)	.339**	.341**	.298**	.150*
Narcissism (SD3)	.141*	.146*	.159*	.241**
Psychopathy (SD3)	.480**	.475**	.249**	.166*
Moral Disengagement	.461**	.45**	.310**	.150*
Social Desirability	-.306**	-	-	-

Note. Significance *p < .05 level, **p < .01 (two tailed)

Table 3.3

Bootstrap-Corrected Hierarchical Multiple Regression Predicting Total MEM, Pro Violence, and Divine Power from Personality Measures, and Moral Disengagement

	R	Adj R²	F	P<	Significant predictors for the final regression model
Pro-violence	.66	.40	12.25	.01	Honesty-Humility, Moral Disengagement
Divine Power	.45	.15	3.89	.01	Honesty-Humility, Moral Disengagement
Total MEM	.67	.42	11.68	.01	Age, Openness

3.5. Discussion

3.5.1. *Findings*

The present study aimed to investigate the influence of personality and moral disengagement on the MEM. Results found that the most significant predictors for total MEM were Honesty-Humility, and Moral Disengagement. Honesty-Humility negatively predicted these dependent variables, whilst Moral Disengagement was a positive predictor. The Vile World subscale had the strongest associations with Honesty-Humility, Agreeableness, Machiavellianism, Psychopathy, and Moral Disengagement in the correlation analysis, however these associations were no longer significant in the regression analysis, with the exception of Machiavellianism in block 3. Vile World did not have any significant predictors in the final block model. The Divine Power subscale was significantly predicted by Openness and age; both of which were negative predictors. Social desirability did not predict total MEM, indicating that this type of response bias was not a concern in the present study.

3.5.2. *HEXACO traits*

Lower Honesty-Humility predicted stronger Pro-violence attitudes and total MEM. Low endorsement of this trait is associated with risk taking behaviours (de Vries, de Vries & Feij, 2009), and violence (Pailing et al., 2014). The results of this study extend on these findings, indicating that individuals who endorse higher Honesty-Humility are more likely to be more attitudinally violent. More importantly, the present study proposes lower levels of Honesty-Humility to be a significant underpinning of militant extremism - a relationship which has not been investigated previously.

With regards to the Divine Power subscale, the present findings suggest that less Openness predicts the belief that a divine authority can act as a justification for advocating for, or engaging in, violence. This finding appears rational, since individuals who endorse higher openness scores are more sceptical about religious beliefs than individuals who are less open (Grubbs,

Wilt, Stauner, Exine & Pargament, 2016). The results also support the idea that less openness generates the foundations for polarisation, as it is these types of people who are keen to circulate their opinions, whilst disregarding the opinions of others (Alizadeh et al., 2017). Younger participants in the present study endorsed stronger Divine Power attitudes than older participants. This partially supports previous well-known findings suggesting that as a typical extremist is likely to be young (Silke 2008; Monahan, 2012). However, the findings in this particular study suggests that younger people believe more strongly in higher powers that can act as a justification for violence, than older people. Age was not a significant predictor of MEM overall, related to disposition.

3.5.3. *The Dark Triad*

Whilst Machiavellianism, Narcissism, or Psychopathy did not play a predictive role in the present study, correlation analyses revealed significant associations. The present findings suggest that DT may play an important role in relation to MEM, however in the regression analyses, the relationship between the Dark Triad weakened when other key variables were included in the model. Of the three traits, psychopathy was the most reoccurring correlate, whereby it was positively associated to total MEM, Pro-violence, and Vile World. This compliments previous findings where it has been found that psychopathy is associated with political extremism (Duspara & Greitmeyer, 2017). Međedović & Knežević (2018) found that psychopathy predicted all MEM subscales, however this was not found in the present study. Međedović & Knežević's study included more men than women, and the present study included more women. The difference in these findings may be explained by gender differences, as males demonstrate more psychopathic tendencies than females (Grann, 2000; Jackson, Rogers, Neumann & Lambert, 2002; Salekin, Rogers & Sewell, 1997; Warren et al., 2003).

Machiavellianism positively correlated with Vile World, however, did not predict it. Machiavellians are said to have a cynical view of human nature (Ináncsi, Láng & Bereczkei, 2016), and greater levels of suspiciousness, and distrust in others (Ináncsi, Láng & Bereczkei, 2015). This may explain this association, as higher scorers in Machiavellianism endorsed stronger beliefs

that the world is an unfair and vile place. A study exploring the relationship between Machiavellianism and radicalisation found this trait positively influenced radicalised cognitions and behaviours (Morgades-Bamba, Raynal & Chabrol, 2018). No other studies have explored the relationship between Machiavellianism and extremism, therefore further research exploring this relationship is warranted to offer a clearer consensus.

Narcissism was a significant correlate of Divine Power. Divine Power has been linked to religiosity (Stankov et al., 2010a), and there are also findings to suggest that there is a positive relationship between narcissism and religiosity e.g. motivation towards faith, and self-serving spiritual beliefs (Hermann & Fuller, 2017). In the present study, the idea that a divine authority is a justification for engaging in violent behaviour could be the self-serving spiritual belief. Future research could look at exploring the relationship between divine power, narcissism, and religiosity.

Generally

3.5.4. *Moral Disengagement*

Moral disengagement significantly predicted Pro-violence. This supports previous findings, as it has been suggested that individuals who endorse high levels of moral disengagement, are more likely to be violent (McAlister et al., 2006; Paciello et al., 2008), and aggressive (Gini, Pozzoli, & Hymel, 2014; Obermann, 2011). In this case, a person who supports or advocates for violence is more likely to believe ethical standards are not applicable to them in this context. Moral disengagement also significantly predicted total MEM. Past associations between moral disengagement and extremism have been found (Aly, 2009; Hafez, 2006; Lieber et al., 2010). The present study extends on these findings by suggesting that moral disengagement uniquely predicts the MEM. A key limitation in previous studies is that they relate to Islamist extremism, limiting generalisability, as only a Muslim participant can participate in such studies. The present study's findings are more generalisable as the MEM model relates to extremism in a more general sense, and did not limit who could participate based on their faith. Moral

disengagement seems to be personal risk factor underlying the attitudinal support for violent extremism.

3.5.5. Limitations

Limitations within the current study must be acknowledged. Firstly, the sample size was smaller than other studies investigating constructs relating to MEM. A larger percentage of our sample was female, and a substantial proportion of the sample was Muslim (almost half). Future studies would benefit from a larger, and a more demographically balanced sample. MEM scores were low overall, suggesting that the majority of the sample did not endorse high MEM. Despite anonymity guarantees, it is unlikely that an individual will willingly admit the extent to which he/she may agree with an extreme statement. It is also important to consider that MEM is viewed on a spectrum, and more extreme statements could have been influenced by political events at the time of the study. The timing of this 'snapshot' may not necessarily be representative of a person's most consistent extremist mindset. The study was lengthy as it incorporated various psychometric tests. To reduce boredom effects, shorter versions of measures were used (e.g. SD3). However, it would have been unreasonable to use shorter versions of every measure as this would limit reliability and validity.

3.5.6. Implications and conclusions

The results in the present study support the idea that the MEM constitutes three distinct attitudes (Stankov et al., 2010a). It is proposed that an increase in the presence of each factor, increases attitudinal propensities toward MEM. The present findings suggest that Pro-violence attitudes are perhaps the most significant component of the MEM, as both demonstrated similar associations with distinct personality traits, alongside moral disengagement. The personality traits relevant in these two scales, however, demonstrated no relevance to Vile World, and Divine Power, indicating a range of factors are likely to influence the overall MEM. In other words, whilst Honesty Humility and Moral Disengagement were significant indicators of

Proviolent attitudes, they had no association with Vile World or Divine Power. Likewise, whilst age and Openness were significant indicators of Divine Power, they had no association with the other two scales. Certain dispositions can increase one component of the MEM, and not influence the other two components (Međedović & Knežević, 2018). An interesting point to highlight is that gender was not a predictor of the MEM in the present study. Although previously asserted that a typical extremist is male (e.g. Monahan, 2012), there has been a rise in female extremists (Khosrokhavar, 2014). A news article recently reported killings conducted by female “fanatics” in pursuit to restore ISIS control (The Australian, 2019). The present findings suggest there may be less gender differences in extremist attitudes than initially claimed.

The present study offers insight into the psychological underpinnings of the MEM. Importantly, past assertions that there are no unique personality characteristics that predict extremism (Horgan, 2003; Silke, 2008), can be disputed. More extremist attitudes were characterised by less Honesty-Humility, and less Openness. The psychological process of moral disengagement was also significant. These psychological constructs could be considered in interventions relating to violent extremism. For example, it could encourage professionals to consider individual differences when taking preventative action. With regards to moral disengagement, activating mechanisms relating to internal moral control through teaching programmes could promote resilience to radicalisation (Aly, Taylor & Karnovsky, 2014). This indicates that the mechanisms of moral disengagement could be successfully applied to intervention and prevention programmes.

Chapter 4 – The Militant Extremist Mindset, Linguistic Patterns, and The Dark Triad

4.1. Abstract

Communicating beliefs is an important aspect of a violent extremist's activity. They strive to share their beliefs with others in efforts to persuade others that they are accurate. The language extremists use in their communications can offer insight into their psychological states. Previous research suggests that certain linguistic categories are more common in extremists, including longer word length, negative emotion, certainty, power, and plural pronouns. The present study aimed to explore relationship between these linguistic categories and The Militant Extremist Mindset (MEM), and its subscales; Pro-violence, Vile World, and Divine Power. Participants (n=161) answered stimulus questions relating to different aspects of extremism, constructing a narrative for linguistic analysis. The Linguistic Inquiry Word Count (LIWC) software was used to analyse linguistic patterns, and MEM was assessed on The Militant Extremist Mindset Questionnaire. Correlation analyses found that negative emotion and anger were correlates of total MEM; third person plural pronouns were correlates of Pro-violence; first person plural pronouns were correlates of Vile World, and negative emotion and anger were correlates of divine power. Regression analyses found the only significant linguistic predictor was third person plural pronouns, negatively predicting the Pro-violence subscale. It was tested whether its predictive ability was influenced by the Dark Triad personality traits, measured by the SD3. However, no associations were found. Findings are compared to relevant studies, and limitations and implications are discussed.

4.2. Introduction

Communication is key for violent extremists. They often widely communicate their beliefs with others and construct a narrative that compliments their cause. The content of their beliefs can provide snippets of an individual's psychological states, as language often shapes cognition (Boroditsky, 2011). Assessing language style can provide indication of whether a person who is more inclined to engage in extremism may follow different linguistic patterns compared to a person who is less inclined to engage in extremism (Kaati, Shrestha & Cohen, 2016). Understanding linguistic patterns of those more inclined to engage in extremism may benefit prevention and intervention.

The present study's goals were to investigate where individuals sit on a Militant Extremist Mindset spectrum and explore their language use, by testing which language categories best predict Militant Extremist Mindset. It was then investigated whether any significant language categories, predicting MEM or its constructs, were associated with *dark* personality constructs; Machiavellianism, narcissism, and psychopathy.

4.2.2. *Militant Extremist Mindset*

Militant Extremist Mindset (MEM) describes an individual with beliefs and attitudes that excessively support or advocate violence (Stankov, Saucier & Knežević, 2010a). The authors suggest that the adoption of three components make up an extremist mindset, making an individual more susceptible to support, advocate, or even resort to violence to achieve a socio-political goal. The three components of MEM are Pro-violence (i.e support or advocating for violence), Vile World (i.e. belief that the world they live in is an unfair place), and Divine Power (i.e. belief in divine authority that excuses acts of violence). An individual who endorses high scores on the MEM Questionnaire, which is made up of these three constructs, are more likely to advocate for violence, are dissatisfied with the world we live in, and excuse violence with divine authority. The authors suggest that a person who scores highly on the questionnaire overall may be more inclined to use actual violence to achieve a goal, compared to a person who endorses lower scores.

It is assumed that everybody can be placed on the MEM spectrum, which ranges from absent or very weak (i.e. the individual does not support the use of violence at all) to very strong (i.e. the individual strongly supports the use of violence and is likely to resort to it to achieve a goal). As everybody can be placed somewhere on the spectrum, the present study used the MEM Questionnaire to assess how 'extreme' an individual is, and then test whether there are distinct patterns in their language use.

4.2.3. *Linguistic Inquiry and Word Count (LIWC)*

There has been increasing research into the linguistic patterns of extremists. This research is often drawn from open sources, such as printed materials (e.g. periodical articles), books, and most commonly, the internet. Verbal and written expression can be a reflection of a person's psychological states (Kaati et al., 2016). Research suggests that there is an association between language use and psychological states (Pennebaker, Mehl & Nieder, 2003), so exploring language use could potentially aid in identifying those who are radicalised, or even at risk of becoming radicalised. The internet is currently a common place to transmit propaganda by supporters of violent extremism (Torrerogrosa, Thornburn, Lara-Cabrera, Camacho & Trujilli, 2019; Frimer, Brandt, Melton, & Motyl, 2018). Traditionally, language is analysed qualitatively, however computerised methods have attempted to replace this time-consuming analysis. The text analysis tool Linguistic Inquiry and Word Count (LIWC) is a computerised method that has become an increasingly popular way to efficiently categorise words (Pennebaker, Boyd, Jordan & Blackburn, 2015). The tool matches text with words in its dictionary to categorise linguistic patterns within the written text. For example, words such as "hate", "kill", and "annoyed" fall under a category called 'Anger'. This method has become a well recognised way to analyse language use of extremists (e.g. Kaati et al., 2016). Below, the evidence for linguistic patterns of extremists is discussed.

4.2.4. *Cognitive flexibility and ambiguity tolerance*

Low cognitive flexibility and low ambiguity tolerance are characteristics recognised to be associated with extremists (Jost et al., 2007; Victoroff, 2005). Cognitive flexibility is a type of executive function, defined as the ability to shift between different concepts, and adjust behaviours to respond to a change in the environment (Scott, 1962). Low tolerance to ambiguity simply refers to an individual's ability to bear conflicting ideas, uncertainty, and unpredictability. Kaati et al (2016) proposed that such characteristics are likely to be reflected in a language category labelled 'Certainty'. They found that extremist offenders used more certainty words in their narrative in comparison to a baseline text. This category features assured and confident words such as "always" and "never" (i.e. no ambiguity).

Extremists communicate in a way to convince others to join them, so the use of certainty words, and less flexibility in their communication would be more likely persuasive to an audience. It is suggested that political extremists hold their own beliefs in such high regard that they will be less vulnerable to psychological anchoring (Brandt, Evans & Crawford, 2015). Psychological anchoring is a cognitive bias that occurs in decision making, where an individual relies too heavily on past information they have learned, impacting their future judgments (Tversky & Kahneman, 1974). This indicates a black and white way of thinking, such that they are unaffected by pre-existing information and are confident in their own beliefs and decision-making. However, opposing views have also been proposed in the literature, whereby a negative association between extremism and certainty has been found, arising from the difficulty in upholding a view that deviates from the norm in society (Alizadeh, Weber, Cioffi-Revilla, Fortunato & Macy, 2019).

4.2.5. *Emotional states*

Emotionality has been explored in extremist texts, and differences between positive and negative words have been observed. Victoroff (2005) described an extremist as having a need to express intrinsic aggressivity, alongside a desire for revenge, recognition and identity. Al-Qaeeda texts have been found

to have much higher negative word use (Pennebaker, Chung, Krippendorf & Bock, 2008) than control groups. This has been recently supported where it was found that Pro-ISIS Twitter users used more negative words compared to random non-extremist Twitter users (Torregrosa et al., 2019). Anger is a key potential driver towards extremism; it can act as an incentive to behave aggressively towards others, and for one to take greater risks (Lerner & Keltner, 2001). Further, as levels of anger rise, the urge of a motive will rise (Trip et al., 2019). In linguistic analyses, it has been found that anger words are common in Al-Qaeda leaders (Pennebaker, Chung, Krippendorf & Bock, 2008), left- and right-wing extremist groups (Alizadeh et al., 2017), and lone offenders (Kaati, et al., 2016). A negative and angry emotional tone has been found in both liberal and conservative extremists (Frimer, Brandt, Melton, & Motyl, 2018). Anxiety has been a questioned characteristic in extremists, and findings have been mixed. It has been suggested that extremists experience increased anxiety (Duckitt, 2001; Roccato & Rosso, 2017). Furthermore, anxiety predicts political conservatism (Jost et al., 2003). However, this cannot be generalised to extremism in a broader context (Jost et al., 2007).

4.2.6. *Personal pronouns*

The use of third-person plural pronouns (e.g. *they, them*) (Pennebaker et al., 2008; Torregrosa et al., 2019) and first person-plural pronouns (e.g. *we, us*) (Glazzard, 2017; Kaati et al., 2016) have also been observed in the language use of violent extremists. This may be explained by “groupthink” (Janis, 1972) where it becomes significant for a group to reach an agreement and think alike – a common feature in extremists (Wiktorowicz, 2005). Torregrosa et al (2019) suggested that extreme individuals are less individually focussed in online communications, observed on social media. Additionally, a study found that ISIS’s language use encouraged group cohesion (Vergani & Bliuc, 2015). Uncertainty-identity theory may also help explain this idea. This argues that extremists aim to reduce uncertainty in aspects of their life (e.g. about their identity), and this can be overcome by group identification (Hogg & Adelman, 2013) i.e. adopting a “we” stance. Based on this research, plural pronouns may be proposed, in context, to be pertinent indicators of

extremism. It has also been found that first person pronouns were not used any more by extremists compared to a control group (Torregrosa et al., 2019), which may warrant further investigation.

4.2.7. *Power words*

Violent extremists are also described as having unmet personal needs, of which one is "power" (Victoroff, 2005; Sandler & Enders, 2004). Research has shown language associated with power in extremists (Kaati et al., 2016; Trip et al., 2019). However, it must be noted that linguistic patterns relating to power have produced mixed findings (Figea, Kaati, & Scrivens, 2016; Torregrosa et al., 2019; Vergani & Bliuc, 2015). Additionally, these studies have focussed on specific violent extremist groups e.g. pro- ISIS, thus warranting further investigation.

4.2.8. *Word count*

Research suggests that longer words are likely associated with extremist texts. Kaati et al (2016) explored the language of lone extremist offenders and found that their narratives included lengthier words (defined as six letters or more) compared to a control group. It has been found that longer words are associated with psychological distancing (Pennebaker, 2011). Torregrosa et al (2019) recently identified a similar pattern in ISIS supporters.

4.2.9. *The Dark Triad*

The Dark Triad (DT) of personality includes three traits (Paulhus & Williams, 2002). The first trait is Machiavellianism, which relates to manipulation. The second trait is narcissism, which relates to a grandiose nature. The third trait is psychopathy, which relates to anti-sociality and callousness. A key theme within this triad is a lack of empathy (Jones & Paulhus, 2014). A study exploring the relationship between language use and dark personality traits found that individuals who endorsed high Machiavellianism and psychopathy scores used more words associated with negative emotion on Twitter (Summer, Byers, Boochever & Park, 2012). Higher scorers in

Machiavellianism also used more first-person plural pronouns. Panichiva, Ledovaya and Bogolyubova (2015) found language use of higher scores on Machiavellianism correlated negatively with long sentences, but correlated positively with high scorers on narcissism. High scorers on Machiavellianism also used less first-person plural pronouns and less positive emotion. These findings reflect the notion that Machiavellians are more strategic in how much they share, presenting as more cautious and guarded than others (Rauthmann & Kolar, 2012). As there is current research that suggests linguistic patterns are present in individuals who endorse higher DT scores, the present study will investigate whether any linguistic categories predicting MEM, can be explained by these darker personality traits.

4.2.10. *Limitations in the current literature*

Although research has demonstrated promising findings regarding linguistic patterns in extremists, the majority of these studies have explored specific types of extremist groups, for example pro-ISIS (Torrergrosa et al., 2019; Vergani & Bliuc, 2015), lone offenders (Kaati et al., 2016), and white supremacists (Figea et al., 2016). Research into a general extremist mindset is limited. Additionally, an increasing amount of studies have explored language use in extremists online e.g. their social media accounts (Frimer et al., 2018; Torrergrosa et al., 2019). Social media, such as Twitter, where many studies have been conducted, are limited to a certain number of words per post, obliging people to deviate away from traditional language use (Johansson, Kaati & Sahlgren, 2016), thus making it more challenging to pick up and analyse. Additionally, social media is a very complex place; how can one be certain that somebody is an extremist (or not) based on a social media account alone? It may be that some users simply adopt and indicate stronger political opinions, rather than advocate extremism specifically. Control groups in some of the studies discussed earlier are individuals who are not affiliated with extremism. This begs the question of, would someone discussing extremism online, for example, naturally adopt a more negative emotional state, compared to a control group narrative which is discussing something more positive? In other words, is the control group a fair comparison to draw conclusions from?

4.2.11. *The current study*

The present study aims to investigate linguist patterns discussed above adopting a different methodology. Persons are assessed on the MEM scale, then asked stimulus questions relating to current extremism. The linguistic variables best associated with total MEM and its subscales are examined, and then tested for the possibility that linguistic variables can predict MEM. In doing this, we can observe language patterns of those who adopt a more extremist mindset. Stimulus questions for all persons are the same, so we can directly compare linguistic patterns in their responses. The study will look at each component of MEM attitudes separately; Pro-violence, Vile World, and Divine Power, as well as total MEM. Following this, if any significant linguistic predictors are found, it will be tested whether they are associated with any of the dark personality traits.

Of the many linguistic categories possible in the LIWC computerised text analysis, the present study investigated categories which have an existing evidence base in relation to extremism (discussed above). These categories used were: words above six letters, negative emotion, anger, anxiety, certainty words, power words, personal pronouns (first person plural, and third person plural).

The relationship between MEM and these linguistic variables were assessed to answer the following:

- (1) Which linguistic categories are best associated with each of the three components of MEM?
- (2) Which linguistic categories are best associated with MEM overall?
- (3) Which linguistic categories best predict an individual's propensity to each of the three components of MEM?

(4) Which linguistic categories best predict an individual's propensity to MEM overall?

(5) If any linguistic categories are found to predict total MEM or its components, can this be explained by any of the Dark Triad personality traits?

Based on existing literature discussed above, it was hypothesised that: (H1) there will be a significant relationship between total MEM (and its subscales) and words relating to certainty and power; (H2) there will be a significant relationship between MEM (and its subscales) and words with six or more letters; (H3) there will be a significant relationship between MEM (and its subscales) and first- and third-person plural pronouns; (H4) there will be a significant relationship between MEM (and its subscales) and negative emotion, anger, and anxiety.

4.3. Method

The data for the present study was collected during data collection for the primary study in the previous chapter. Below, the tools and measures relevant to the present study will be discussed.

4.3.1. *Design*

The present study used a cross-sectional design, whereby language use was assessed in relation to MEM.

4.3.2. *Participants*

A convenience sampling method recruited participants through word of mouth, social media (e.g. Facebook, Twitter, and Instagram), academic network websites, the internet email of some businesses, and a poster advertising the study at a University. All participants gave informed consent. When missing responses were excluded, the final sample was 161 (Female: Male = 86:72).

The age ranged from 18 to 68 ($M = 35.8$, $SD = 12.6$) years. Participants reported their ethnicity (39.8% White, 41.0% Asian/Asian British (Pakistani), 8.1% Asian/Asian British (Indian), 0.6% Asian/Asian British (Bangladeshi), 1.2% Mixed Race (White and Black Caribbean), 0.6% Mixed Race (White and Black African, 8.7% other), religion (45.3% Muslim, 0.6% Jewish, 1.2% Sikh, 4.3% Hindu, 23% Christian, 25.5% other), level of education (1.2% no qualifications, 9.9% secondary education, 15.5% post-secondary education, 9.9%, vocational qualification, 36% undergraduate degree, 23.6% post-graduate degree, 3.7% doctoral degree), occupation (68.9% employed, 13% self-employed, 3.1% unemployed, 1.9% homemaker, 10.6% student, 1.2% retired, 1.2% unable to work), and sexuality (90.1% heterosexual, 2.5% homosexual, 3.1% bisexual, 4.3% other). At the time of partaking, 75.2% of participants lived in Europe, 8.1% lived in Asia, and 16.8% lived in North America.

4.3.3. *Measures*

A combination of psychometric measures and stimulus questions were used.

4.3.3.1. *The Militant Extremist Mindset Questionnaire*

The Militant Extremist Mindset Questionnaire (Stankov et al., 2010a) is a questionnaire which measures the degree to which an individual has an "extremist mindset". The Questionnaire includes 24 items, comprising three scales: Pro-violence, Vile World, and Divine Power. It is measured using a 5-point Likert-type scale (1 equals strongly disagree and 5 equals strongly agree). See Appendix F for a copy of the questionnaire.

4.3.3.2. *The Short Triad (SD3)*

The Short Dark Triad (SD3) (Jones & Paulhus, 2014) is a 27-item questionnaire which measures personality traits: Machiavellianism, psychopathy and narcissism. Each trait comprises 9 questions each, measured on a 5-point Likert-type scale (1 equals strongly disagree and 5 equals strongly agree). See Appendix H for a copy of the questionnaire.

4.3.3.3. *Stimulus Questions*

Participants were presented with a free-text response section in which they could respond to five questions and elaborate for up to 1000 characters for each question. The questions aimed to invite participants to discuss different aspects of extremism, so that they would build a reasonable narrative for linguistic analysis.

The stimulus questions asked:

- (1) Is there a difference between a car attacking a crowd of people outside a mosque and attacking a crowd of people walking on a seafront?
- (2) Are there circumstances where you think political violence can be justified?
- (3) Is there anything wrong in going to any extent to acquire power?
- (4) What are the reasons which contribute for a person's inclination towards extremism?
- (5) What might be the impact of extremism on society?

4.3.4. *Procedure*

The study was internet-mediated whereby participants were required to complete psychometric measures and provide free-text responses to five questions. The study was created on the 'online surveys' website, and a direct online link to the study was provided when advertised. Participants were presented with an information page describing the focus of the study, alongside information about anonymity and their right to withdraw (Appendix C). They were then presented with a consent page and were required to give consent (See Appendix D) prior to commencing the study. Participants were asked to provide demographic information including age, gender, religion, ethnicity, country of residence, sexuality, educational level, and occupation. They then completed the MEM questionnaire, the SD3, and stimulus questions. Upon completion, participants were debriefed (See Appendix E). A

unique code was generated online for each participant so that they could not be identified in any way.

4.3.5. *Ethics*

The study was approved by The Division of Psychiatry & Applied Psychology's Research Ethics Sub-Committee (authorised by the Faculty of Medicine & Health Sciences Research Ethics Committee) at The University of Nottingham. See Appendix K. Ethical considerations were addressed where necessary, as discussed in the previous chapter.

4.3.6. *Data Analyses*

Items on the MEM Questionnaire and SD3 were reverse scored where necessary and summed. For each participant, a score for each MEM subscale (Pro-violence, Vile World, Divine Power) was calculated, as well a total MEM score. A score was also calculated for each dark personality construct on the SD3. Mean scores were calculated for all subscales, and for each independent variable (word length, first person singular pronoun, third person singular, third person plural, negative emotion, anger words, certainty words, and power words). Tests of normality were conducted. Data were normally distributed for MEM overall, and the Vile World subscale. Data were non-normally distributed for Pro-violence and Divine Power, therefore both parametric and non-parametric tests were used accordingly. Correlations analyses were performed to find the strongest associations between MEM and linguistic categories. Regression analyses were then conducted to determine if the relevant linguistic categories were able to predict MEM and each of its subscales. Due to signs of heteroscedasticity, and deviations from normal distribution, boot-strap correction was applied to regression analyses (Field, 2013). Tests of association were then performed between the DT personality traits and any linguistic categories that predicted MEM or any of its three components.

4.4. Results

Of 202 initial respondents, 41 did not provide responses for the stimulus questions, leaving an n of 161 who contributed to linguistic data.

4.4.1. *Descriptive statistics and reliability*

Table 4.1 shows descriptive statistics and reliability values for the MEM Questionnaire and the SD3. All scales obtained good internal consistency. The mean score for total MEM was 58.68. Scores ranged from 27 to 93. The maximum score an individual could endorse was 120. Table 4.2 shows descriptive statistics for each linguistic category. Means and ranges in Table 4.2 are expressed as a percentage for each category, with the exception of with 'words above six letters', which is expressed as total number of words.

4.4.2. *Relationships between MEM and linguistic categories*

Tests of normality found that data were normally distributed for MEM total and Vile World, and non-normally distributed for Pro Violence and Divine Power so parametric and non-parametric tests were used accordingly. Pearson's r correlations were calculated between total MEM and Vile World and the nine linguistic categories. Spearman's rho correlations were calculated between Pro-violence and Divine Power and the nine linguistic categories. Negative emotion and anger significantly and positively correlated with MEM. Third person plural significantly and negatively correlated with Pro-violence. First person plural significantly and positively correlated with Vile World. Negative emotion and anger both significantly and positively correlated with Divine Power. See Table 4.3.

4.4.3. *Predictors of MEM*

Bootstrapped (multiple) linear regressions were conducted using the enter method to examine the degree linguistic categories predicted total MEM and its subscales.

A multiple linear regression was conducted to predict total MEM based on negative emotion, anger, and power. A non-significant regression equation was found $F(3,156) = 3.85, p > .01$, with a R^2 of .069 indicating only 6.9% of the variance could be predicted from these linguistic categories. It was found that neither negative emotion, ($t=1.29, p > .01$), anger, ($t=.76, p > .01$), nor power, ($t=1.73, p > .01$) did not significantly predict total MEM.

A linear regression was conducted to predict Pro-violence attitudes based on third person plural pronouns. A significant regression equation was found $F(1,158) = 7.39, p < .01$, with a R^2 of .045. It was found that third person plural pronouns, ($t=-2.71, p < .01$) significantly and negatively predicted Pro-violence. See Table 4.4.

A linear regression was conducted to predict Vile World attitudes based on first personal plural pronouns. A non-significant regression equation was found $F(1,158) = 3.99, p > .01$, with a R^2 of .025, indicating only 2.5% of the variance could be predicted from this linguistic marker. First person plural pronouns, ($t=2, p > .01$) did not significantly predict Vile World.

A multiple linear regression was conducted to predict Divine Power attitudes based on negative emotion and anger. A significant regression equation was found $F(2,157) = 7.04, p = .001$, with a R^2 of .082. However, it found that neither negative emotion, ($t=2.32, p > .01$), nor anger, ($t=1.23, p > .01$) significantly predicted Divine Power individually.

4.4.4. *Relationships between significant linguistic predictors and the dark triad*

As the category of third person plural pronouns was the only significant predictor in this study, it was tested to see if this language category could be explained by the DT of personality: Machiavellianism, narcissism, or psychopathy. Spearman's rho correlations were calculated to test for an association; however, no association was found (Machiavellianism: $r = .01, p > .01$; narcissism: $r = .09, p > .01$; Psychopathy: $r = .02, p > .01$).

Table 4.1

Means, Standard Deviations, and Reliability Coefficients for MEM Subscales and SD3 Subscales

Scale	<i>M</i>	<i>SD</i>	<i>α</i>
Pro-violence (MEM)	17.12	5.88	.78
Vile World (MEM)	19.12	5.93	.87
Divine Power (MEM)	22.44	7.67	.84
Machiavellianism (SD3)	25.6	6.76	.83
Narcissism (SD3)	23.35	5.5	.76
Psychopathy (SD3)	18.58	5.9	.77

Table 4.2*Means, Standard Deviations, and Ranges of Linguistic Categories*

	Words>6 letters	1st pers plural	3rd pers plural	Negative Emotion	Anger	Certainty	Power	Anxiety
Mean	25.9	.1	1.5	7.6	2.9	1.9	5.4	1.3
SD	10.88	.43	2.87	6.05	3.84	3	6	2.54
Range	0-75	0-3	0-20	0-30	0-25	0-20	0-40	0-13

Notes. Means and ranges are expressed as a percentage (%) for 1st pers plural; 3rd pers plural; negative emotion; anger; certainty; power; anxiety. Means and ranges for words>6 letters are expressed as the numbers of words

Table 4.3*Correlations Between Linguistic Categories and Total MEM and Subscales (n = 161)*

	Words> 6 letters	1st pers plural	3rd pers plural	Negative Emotion	Anger	Certainty	Power	Anxiety
Total MEM	.137	-.037	-.081	.207**	.189*	-.033	.211**	.013
Pro- violence	-.043	-.048	-.200*	-.012	.058	.022	.077	-.064
Vile World	-.086	.157*	-.004	.055	-.039	-.036	.091	.028
Divine Power	.060	-.064	-.033	.282**	.219**	-.074	.117	.024

Note. Significance *p < .05 level, **p < .01 (two tailed)

Table 4.4

Bootstrap-Corrected Linear Regression Predicting Pro Violence from Third Person Plural Pronouns Category

	R	Adj R²	F	P<	Significant predictors
Pro-violence	.21	.39	7.39	.01	Third-person plural pronouns

4.5. Discussion

The objective of the present study was to extend on existing literature relating to extremist rhetoric, by exploring whether linguistic elements - words above six letters, negative emotion, anger, anxiety, certainty words, power words, personal pronouns (first person plural, and third person plural) – were associated with MEM. Any associations between significant linguistic predictors and dark personality traits were then tested.

Correlation analyses found that that total MEM correlated with negative emotion, anger, and power; Pro-violence attitudes correlated with third personal plural pronouns; Vile World attitudes correlated with first person plural pronouns; and Divine Power attitudes correlated with negative emotion and anger. However, regression analyses for total MEM and its subscales only found that the category of 'third person plural pronouns' significantly and negatively predicted the subscale Pro-violence. It was tested to see if this particular finding could be explained by darker personality effects, however no association was found. There were no significant linguistic predictors of total MEM and Vile World and Divine Power subscales.

4.5.1. *Relationships between MEM and linguistic categories*

The relationship between third person plural pronouns and Pro-violence attitudes contradicts previous findings (Torregrosa et al., 2019; Pennebaker et al., 2008). In the present study, a significant negative correlation was found. The previous studies that found positive associations explored Islamist extremism specifically, which may indicate that previous findings relating to third person plural pronouns may be more applicable to this type of extremist group. An increase in "they" words may be more prominent in such samples, where a clear ingroup has already been defined. Individuals may recognise greater likenesses between themselves and the ingroup (Tropp & Wright, 1999). They then become more inclined to protect it (Tropp & Brown, 2004). Allen & Wilder (1979) found that individuals perceive themselves to be more similar to the group which they

belonged to. This belief intensifies when an individual belongs to a minority group (Simon & Brown, 1987). Loza (2007) highlighted the importance of a group to extremism, stating that in a group context, members allow group interests to dominate personal interests. This is a recognised pathway to radicalisation and extremism. The present study explored extremism in a broader context, where specific group type and identification remains more unclear, thus a lack of “us” and “them” culture.

Interestingly, however, there was a significant positive association between Vile World attitudes and first-person plural pronouns (e.g. *we, us, our*), suggesting people with higher scores on this subscale had a less individualistic social orientation. People who endorse higher scores on the Vile World subscale believe that the world is an unfair place. Sageman (2004) highlights that those who feel a sense of injustice are more vulnerable to radicalisation. This shared view about the world, in some way, can reflect a type of group in itself, and this belief can increase an individual’s propensity to extremism. This may explain an increased usage of words in this particular category. Pro-violence attitudes, on the other hand, do not necessarily reflect an explicit group type, as people’s reasoning for advocating for violence can differ from person to person. Discrepancies in pronoun use across subscales in the present study partially mimics findings by Kaati et al (2016). Although they found an increase in plural pronouns in most lone offenders, this was not the case for all. Future research could focus on comparing pronoun use between different types of extremists.

Divine Power had a positive association with negative emotion and anger. This linguistic variable, along with power, was also significantly and positively associated with total MEM, echoing some previous findings. A high use of power words is indicative that these individuals are more likely to enquire about people of status and with control (Pennebaker, 2011). The indication here is that those who endorsed higher MEM scores were more concerned with this concept. Interestingly, power words did not significantly correlate with Divine Power. This may be because those who endorse higher levels of Divine Power may be more concerned with a higher power belief and regard its power more significant than their own – particularly if they use a divine authority to justify extreme actions (Stankov et al., 2010a). Findings in relation to negative emotion and anger

words are consistent with previous findings. Those who endorsed higher MEM scores (and Divine Power thinking) adopted more negative emotion and anger words. There is a significant relationship between perceived grievance and extremism (Allan, Glazzard, Reddy-Tumu & Winterbotham, 2015; Gupta, 2005). This perceived injustice is likely to fuel negative emotions.

There were no associations between total MEM and word length, certainty words, and anxiety. With regards to word length, this category has positively correlated with psychological distancing (Pennebaker, 2011). Victoroff (2005) highlighted psychological distancing as a trend amongst extremists. In the present study, no association could be explained by how much information participants were willing to provide. This may reflect the 'unthinking-extremist' perspective, which supports the notion that this type of extremist uses less complex language (Tetlock, 1986), than the confident extremist who spends more time gathering information to gain a more informed political perspective (Brandt, 2015). This may indicate that those who endorsed higher scores on total MEM adopt these views for the sake of it, rather than careful consideration of issues (Brandt, 2015). It is also important to note that the stimulus questions section of the study was optional, advising participants that they could provide responses to the questions "if they wish". Consequently, participants may have perceived this section as less significant. Further, as there was no minimum limit, they may have opted for vaguer, shorter responses, so making use of shorter words.

With regards to certainty words, the present study did not find any significant associations with MEM. Generally, MEM scores in the present study were not high, perhaps representing more a 'low' or moderate' extremist-mindset at best, indicating that this sample may have been more likely tolerant of ambiguity in general (Brandt, 2015). Alizadeh et al (2019) recently found that certainty did not differ between extremists and a control group. Deviation from 'normal' views to extremist views demands more effort and resources (Kruglanski et al., 2017). With regards to anxious language, no associations were found between this and MEM. Whilst this association has been found in conservatism (Jost et al., 2007; Jost, Glasser, Kruglanski & Sulloway, 2003) and left-wing extremists (Alizadeh et al., 2019), the extension to extremism in a broader context remains inconclusive. As, on the whole, the present study did not identify individuals

with an extremist mindset, it indicates respondents were, in most part, unconcerned by extremist issues, therefore likely less anxious about it.

4.5.2. *Linguistic predictors of MEM*

In the present study, no linguistic category significantly predicted total MEM, or attitudes related to Vile World, or Divine Power. Third personal plural pronouns significantly and negatively predicted Pro-violence. An increased usage of more third person plural pronouns predicted a decrease in endorsement of Pro-violence attitudes, and vice versa. Past research has found the opposite effect, whereby third person plural pronouns were a positive predictor of extremism (Pennebaker, 2008). However, these were isolated groups, such as American Nazis, rather than a community cohort. As discussed earlier, this area warrants further research on different types of extremist groups to assess if plural pronouns' predictive ability remains consistent across different extremist groups as compared to the general population.

4.5.3. *Limitations and conclusions*

Whilst this study adopted a different methodology to previous studies in this field, it is not without limitations. Firstly, the mean MEM score was less than half of the maximum score, indicating that generally, with few exceptions, respondents did not endorse a high MEM. It is unlikely that people will openly agree with extremist statements in these circumstances. Secondly, with regards to the stimulus questions, respondents were likely to have been careful in sharing their beliefs openly. Furthermore, as this section of the study was at the end, participants would be more likely to opt for more vague and short responses, as the study overall was time-consuming. Including a minimum word count limit in the future may encourage respondents to elaborate on their responses more. Alternatively, although more time-consuming, an interview could be conducted to encourage elaboration via prompts to identify more prominent linguistic patterns. It is worth considering that MEM is viewed on a spectrum, and the endorsement of extremist statements may be influenced by

socio-political occurrences at the time of the study. If this study was replicated at a different point in time, it may yield different findings.

A reoccurring issue in the field of violent extremism is the limited access to real offenders. The likelihood of having 'real extremists' in the present study is low considering the convenience sampling method. A similar study conducted on real extremist groups would be likely to yield richer findings. Further, a clear cut off score to determine a low and high extremist mindset would allow for analysis between two groups. The idea of MEM on a spectrum limits differentiation between two groups as it may only be significant over a particular 'tipping point'. Future research could consider identifying two groups (low extremist vs. high extremist) measured in the same way to directly compare the two. This may be executed by considering alternative psychometric measures. The present study adopted text analysis software (LIWC). Whilst it is known to deliver efficient and effective analysis of words, it is suggested that traditional qualitative methods (e.g. thematic analysis) alongside may strengthen analyses (Firmin, Bonfils, Luther, Minor & Salyers, 2016). LIWC does not consider misspelled words and slang terms, so could miss important information.

Overall, the present study found significant associations between linguistic categories and total MEM and its subscales, namely: negative emotion, anger, power, first person plural pronouns, and third person plural pronouns. Third person plural pronouns also significantly and negatively predicted Pro-violence attitudes. This research lends support to studies conducted on social media to identify linguistic patterns in radicalisation online. The use of extremist groups on social media is a growing concern and an increasing number of studies have recognised this (Alizadeh et al., 2019; Torregrosa et al., 2019). Future research could consider combining human qualitative analysis alongside computerised software.

Chapter 5 - A Critique of The Violent Extremist Risk Assessment-2 Revised

5.1. Abstract

This review discusses and critiques a formal assessment used within the field of violent extremism: The Violent Extremist Risk Assessment 2 Revised (VERA-2R). Psychometric properties, and its applicability to practice are discussed. Whilst some research has demonstrated good reliability and validity, studies investigating this are limited. Issues with validation in the field of violent extremism are discussed, given the sensitive nature of data. Issues relate to untested theory. Advantages and disadvantages of the tool in forensic practice are noted, and alternative and complimentary tools are considered. Overall, the VERA-2R has sound practical advantages, however recommendations include future research of independent studies examining its psychometric properties.

5.2. Introduction

Several measures claim to assess extremism. These include, the Militant Extremist Mindset Questionnaire (Stankov Saucier & Knežević, 2010a), the Right-Wing Authoritarianism Scale (Altemeyer & Hunsberger, 1992), the Social Dominance Orientation scale (Sidanius & Pratto, 1993; Sidanius & Pratto, 1999), the Activism and Radicalisation Intention Scale (Moskalenko & McCauley, 2009), and the Multi-Dimensional Fundamentalism Inventory (Liht, Conway & O'Neill, 2011), to name a few. Whilst these tools may give an indication as to who may be more attitudinally accepting of extremism, they do not necessarily tell us much about future behaviour. For example, regarding the Militant Extremist Mindset Questionnaire, the authors state that a high score does not mean a person will subsequently commit a violent act (Stankov et al., 2010a). Such measures are used in studies with general population samples to investigate potential links between extremism and other factors such as, irrational beliefs (Tripp et al., 2019), and psychopathic tendencies (Međedović & Knežević, 2018). There are fewer tools used in forensic practice to assess *real* offenders, which tell us more about the future risk of violent extremism (VE).

This chapter will discuss and critique The Violent Extremist Risk Assessment-2 Revised (VERA-2R; Pressman, Rinne, Duits, & Flockton, 2016), a tool used in the assessment of risk related to VE. The aim is to critique its psychometric properties, and its applicability to forensic settings. Possible alternative and supplementary methods or assessments are discussed alongside. The rationale behind this critique is to identify and discuss the assessment of extremists in the real world, and consider whether this tool is good enough to assess and reduce risk of violent extremists. Given that one of the biggest threats that society faces is VE (HM Government, 2015), it is important to consider whether professionals in the field are doing enough to minimise these threats.

The initial version of the assessment (the Violent Extremist Risk Assessment; VERA) was developed by Pressman in 2009 in light of the literature into violence and violence prediction at the time (Pressman, 2009). The purpose of its development was to serve as a structured professional judgement tool. In 2010 and 2012, revised versions of the tool were created following discussions with

experts in the field (Pressman & Flockton, 2012). In 2015, the VERA-2R was developed, which included “offence-specific risk indicators” after further discussion with experts (Pressman & Flockton, 2014).

5.3. Structured professional judgement (SPJ)

Initial research into future risk and management of violence focused on violence in general to assess future reoffending, leading to proposals of varied methods by which this may be best achieved. The introduction of discretionary (SPJ) tools such as the HCR-20 (Douglas, Webster, Hart, Eaves & Ogloff, 2002) and Risk for Sexual Violence Protocol (RSVP) (Hart et al., 2003) have received considerable praise as the risk factors are well researched and empirically grounded. Such tools largely focus on dynamic risk factors which aid in the facilitation of treatment planning in order to reduce the future risk of violence. Subsequently, researchers built on the existing literature, and made developments in risk assessment tools for VE related offending. Despite ongoing debate between discretionary (SPJ) and non-discretionary (actuarial) approaches (e.g., Hart & Cooke, 2013; Hart, Michie, & Cooke, 2007), in the field of VE there was limited support for non-discretionary approaches, and as such, a discretionary approach is the empirically validated recommendation (Borum, 2015; Monahan, 2015). Despite both approaches using a type of system to decide whether a risk factor is present, an actuarial approach uses an algorithm to decide whether a risk factor is present (Douglas & Kropp, 2002).

Typically, SPJ tools assessing violence take a systematic method to consider the likelihood of future violence via a scoring system where the more risk factors present, the greater the risk of future violence. However, given the speed with which a person can be radicalised (Transitional Terrorism, Security, & The Rule of Law, 2008), it was advised that this was not necessarily the case for engagement in VE, and general risk assessment tools such as the HCR-20 were insufficient for assessing the risk of extremism due to key differences in the literature from non-extremist offenders (Borum, 2015; Pressman, 2009; Dernevik, Beck, Grann, Hogue & McGuire, 2009; Monahan, 2012). Such differences include, but are not limited to, less mental disorder, more stable

family environments, less impulsivity, higher educational attainment, and more professional success in extremists.

5.4. Overview of the VERA-2R

In light of the above, researchers developed a VE risk assessment tool built around the literature base, with more appropriate risk factors relating to this type of offending. The VERA was one of the tools developed in order to meet this need. Developed in Canada, the VERA follows the structure of extensively researched risk assessments such as the HCR-20, and consists of risk factors relating more specifically to politically and ideologically motivated offenders. As research in the field has progressed, revised versions of the assessment have been proposed; the most up-to-date being the VERA-2R.

The VERA-2R is designed to assess the likelihood of violent reoffending in male individuals already who have already committed offences relating to VE. It is used to track and manage fluctuations in risk of VE across time. The VERA 2-R is the most commonly used tool assessing an extremist population (RTI International, 2018) and consists of thirty-four risk indicators. The risk indicators fall into five categories including social context and intention (e.g. contact with violent extremists via websites or face-to-face); beliefs, attitudes and ideology (e.g. rejecting societal values); history, action and capacity (e.g. early exposure to ideological motivations); commitment and motivation (e.g. sense of belonging), and protective indicators (e.g. shift in ideological beliefs). There are a further thirty-one indicators falling into the categories of personal history, psychiatric characteristics, personality traits, and radicalisation. Similar to other SPJ tools, each factor is scored as low, moderate or high. The more risk factors present, the higher the future risk of VE offending, based on an overall score of risk (low, moderate, or high). The factors within this assessment are all pertinent to VE and radicalisation (Pressman, 2009). The VERA-2R is regarded as a lighter approach to SPJ, which contrasts to a fuller SPJ stance (Logan & Lloyd, 2019). The main difference between these approaches is that the latter is inclusive of formulation and scenario-planning (i.e. a more comprehensive assessment completed by an expert), whereas the light approach can also be completed by non-experts, but still relevant professionals, e.g. police forces, social workers (McEwan, Bateson & Strand, 2017).

5.5. Evidence base for the VERA-2R

It can be said that the understanding of a VE offender is more complex compared to other types of violence (e.g. sexual violence, intimate partner violence workplace violence, or fire-setting). This is because it has been difficult to discern common features of a violent extremist (Borum, 2015; Horgan, 2003). The type of attack may vary in terms of the use of weapons involved (e.g. guns, vehicles, explosives), targeted victims (e.g. specific members of the public such as targeted groups), and whether the attack is carried out alone or alongside others (Logan & Lloyd, 2019). In short, VE offenders may have multiple motivations, and rehabilitation needs (Roberts & Horgan, 2008). This can make the assessment and management of offenders more challenging, as there is a lack of clarity of what a 'typical' VE offender is. Differences in VE theories may also make it difficult to establish which risk factors to incorporate into a risk general assessment tool (e.g. pyramid and stage theories; Moghaddam, 2005; McCauley & Moskalenko, 2008; Wictorowicz, 2005).

Some factors identified and associated with radicalisation and VE include perceived injustice (Doosje, Loseman & van den Bos, 2013), issues about identity (Wright, 2015), a desire for recognition, reduced emotional arousal, and negative beliefs about the world (Huesmann, 2010). Common characteristics of VE offenders include commitment to a cause, feeling alienated, believing to be a victim of, or from a community which has experienced injustice, (Hudson, 1999) and grievance and dehumanisation of others (Kruglanski, Chen, Dechesne, Fishman & Orehek, 2009; Monahan, 2012). Risk factors in the VERA-2R are based upon such findings in the literature, as well as consultation with a variety of experts in the VE field (Khader, Neo & Dillon, 2016).

5.6. Validity

Despite risk indicators being derived from extensive research in the field, a tool such as the VERA-2R faces challenges regarding validation. Accessibility of relevant data is likely to be an issue, given that data on these types of offenders is protected for security purposes, so it is not viable in the real world to sample VE offenders easily (Hart, Cook, Pressman, Stang & Lim, 2017). In this area of psychology, researchers tend to rely on inferences drawn from studies to generate theories relating to VE offending, and currently that is the type of

evidence-base that mostly drives practice. Monahan (2012, p.18) highlighted: *“The sample size of people who actually engage in terrorist acts will never be large enough to allow the statistical power needed to determine the optimal quantitative combination of risk factor scores, or to generate a final estimate of risk that does not rely in substantial part on clinical judgment”*. Further, it would be unrealistic to suggest that a tool such as the VERA-2R can be easily validated by locating a variety of VE offenders, risk assessing them, and then discharging them to monitor their subsequent behaviour to examine if the findings of the assessment were true for each offender. It may be possible with resources, but for now, given the risks, this poses the question of whether the VERA-2R does measure what it in fact claims to measure, as it is based mostly on untested theory, rather than clinical practice.

There have, however, been some studies that have attempted to examine the validity of the VERA-2R. It is suggested that the VERA risk indicators can be applied to both lone actors and those acting in a group, regardless of what the specific drivers to offend may be (Pressman & Flockton, 2015). Beardsley and Beech (2013) investigated whether the risk indicators within the VERA-2R could be applied to a small sample of VE offenders. Generally, it was found that the majority of the VERA-2R indicators were relevant and applicable to future VE offending, demonstrating sound content validity. However, a minority of indicators were not applicable to their sample. For example, a contextual indicator regarding internet use in VE offenders was not applicable to the sample of VE offenders used within the study. This could be because the internet is easily accessible and common nowadays, whereas the most recent attack of offenders within the sample used by Beardsley & Beech was carried out in 1995, when the internet was not as widely used. It is clear that future research is warranted in this area related to contemporary VE offending, particularly as individuals can become radicalised online (Behr, Reding, Edwards & Gribbon (2013). It is therefore advised some risk indicators need strengthening within this risk assessment (Khader et al., 2016). Beardsley & Beech (2013) also found that early exposure to violence (a historical item) was not applicable to the sample used within this study. This rejects the idea that early exposure to violence is likely to influence offending related to VE (Huessman, 2010).

Despite promising results from Beardsley & Beech's study, it is important to note that only five real-life cases of VE offenders were examined, and information on these offenders was gathered using search engines such as Google, suggesting that information may be inadequate, inaccurate or in fact, unreliable. This 'real-life' application is comparable to the development of a widely used tool in England and Wales - the Extremist Risk Guidance (ERG22+' Lloyd & Dean 2011; Lloyd & Dean, 2015). This tool is used for the assessment and management of risk and needs of convicted VE offenders (similar to the VERA-2R), as well as for the assessment of those vulnerable to committing VE offences. The ERG22+ tool was created from initially unpublished data (Lloyd & Dean 2011) and from the information of fifty real-life, VE offenders (Lloyd & Dean 2015). It requires an assessor to consider the presence of a risk factor across three domains. Since its development, it has been tested on convicted offenders both in prison and in the community (Lloyd & Dean 2015), whereas the VERA-2R is best known for its use in high-security settings to inform decisions regarding future release of VE offenders. Based on a higher number of real-life case studies and methods of data extraction, one could pose the question whether the ERG22+ has better ecological validity compared to the VERA-2R. However, it must be considered that the risk factors in the ERG22+ derive from UK based offending only, whereas the evidence for the VERA-2R derives from a cross-cultural evidence base.

A potential significant limitation in the use of the VERA-2R is that the risk factor's relevance is based upon the literature, and researchers have not had access to actual VE offenders. However, Beardsley and Beech's study found that the VERA-2R demonstrates sound construct, content and user validity. Regarding the VERA-2R items, the authors simply stated that experts in the field perceived them to have validity (Pressman & Flockton, 2014). It remains unclear how this was determined. It was also suggested that the VERA-2R demonstrated good deductive validity (Pressman & Flockton, 2016) and face validity (Pressman & Flockton, 2014) whereas the psychometric properties of the ERG22+ have not been formally investigated. A recent study suggested that ERG22+ could be improved via the inclusion of subscales in order to ensure construct validity (Powwis, Randhawwa & Bishop, 2019).

5.7. Reliability

The VERA-2R also has shown adequate inter-rater reliability (Beardsley and Beech, 2013). Two evaluators had an agreement level of almost 90% regarding scoring on risk indicators. Pressman & Flockton (2016) reported significant inter-rater reliability. Four VERA trained experts (and one who was not trained), found that coefficients of concordance ranged from .6 to .8. When the untrained assessor was excluded, coefficients were even stronger. Amongst the four expert assessors, there was unanimous agreement on the overall risk score of the cases assessed. This study supports Beardsley and Beech's findings; however, findings should be accepted with caution until there is further investigation with a larger VE offender sample concluding similar findings. The study also demonstrates the significance of a high level of training in the VERA-2R before formal use. Other assessments used to measure extremism, mentioned earlier (e.g. Militant Extremist Mindset Questionnaire and the Right-Wing Authoritarianism Scale) do not require the same training and resources as the VERA-2R. These assessments are most commonly used on general population samples, from which inferences are then drawn. They are less comprehensive and are not regarded as formal risk assessments, but instead, may provide indication of any risks, which may warrant further investigation. Furthermore, they can be completed by the individual in question, and do not require any professional input, increasing self-report bias.

Regarding reliability, another assessment relating to VE, the Identifying Vulnerable People (IVP) guidance (available from www.tacticaldecisionmaking.org) (a checklist tool to help identify those vulnerable to VE), has demonstrated varied levels of reliability (Egan et al, 2016). This tool was most useful when used as a screen for conventional VE, however there was missing data within the analysis. Elsewhere, the level of agreement amongst different assessors has not been tested with the ERG22+ therefore inter-rater reliability of that instrument is currently unknown. An alternative SPJ tool is the Multi-Level Guidelines (MLG) (Cook, Hart & Kropp, 2013) which targets the assessment and management of group-based violence, and has been considered appropriate for use in assessing risk of VE (Hart et al.,

2017). It was found that this tool demonstrates good inter-rater and structural reliability and produced similar results to well-researched SPJ tools such as the HCR-20 and RSVP (Cook, 2014). Moreover, it may have potential wider uses than the VERA-2R, as the VERA-2R is only applicable to those who have had a history of VE offending (Pressman, 2009), therefore omits those who may have been recently radicalised (a strength of the IVP). The VERA-2R does, however, allow professionals to plan for management plans to prevent the risk of further VE offending. For optimal use, it has been suggested that the VERA-2R may be best used in conjunction with another risk assessment such as the HCR-20 (Pressman & Flockton, 2012). This is likely to provide a more comprehensive assessment of the future risk of violence overall, and is not just limited to VE offending. This may give indication of other types of future risk, relating to more general violence. There are also recommendations for the VERA-2R to be used alongside assessments such as the Terrorist Radicalisation Assessment Protocol (TRAP-18) (Meloy & Gill, 2016; Meloy, Roshdi, Glaz-Ocik & Hoffman, 2015). To optimise cross-validation, the inclusion of multiple tools in the risk assessment of VE is advised (Hart et al., 2017).

A systematic review exploring the psychometric properties of extremism tools found that the studies focussing on tools used operationally by professionals, such as the VERA-2R were of poorer quality than studies focussing on tools developed as research measures (Scarcella, Page & Furtado, 2016). Studies relating to tools used operationally by professionals also failed to report internal consistency, whereas studies relating to tools developed as research measures reported sound internal consistency. With regards to the VERA specifically, the systematic review found that studies did not report many of its psychometric properties, such as criterion validity, construct validity, and test-retest reliability. This highlights a significant gap in research.

5.8. The VERA-2R in practice

The ERG can be used to assess individuals with any motivation relating to ideology, any gender, and on individuals acting alone or within groups (Lloyd & Dean, 2011). However, the VERA-2R may be more beneficial in the assessment

of VE offenders who act as part of a group rather than alone (Beardsley & Beech, 2013). This is because of the presence of risk indicators that refer to feelings of alienation and seeking social support. These factors may not be applicable to VE offenders part of an established group. An advantage of the VERA-2R, however, is that it monitors risk over time, whereas other tools such as ERG22+ consider the present time only. This, along with the inclusion of protective factors, allows for assessors to be more objective in their evaluations and consider interventions proportionate to risk at that particular time. The inclusion of protective factors offers a more balanced assessment (de Vries, de Vogel & Stam, 2012). As risk is managed over time, a benefit is the incorporation of responsivity, which signifies an offender's readiness for change and response to rehabilitation (Andrews, Bonta & Hoge, 1990). What might strengthen this further is an inclusion of formulation and scenario planning, similar to the HCR-20. This can aid in spotting any warning signs that require the implementation of preventative measures (Douglas et al., 2014).

It can be difficult for assessors to be entirely objective when using an SPJ approach. In the case of the VERA-2R, it is scored by a variety of professionals. Different types of professionals may score risk indicators in different ways due to their own knowledge and experience within the field in which they work. There is research to suggest that SPJ approaches may not demonstrate adequate inter-rater reliability in larger organisations (D'Andrade, Benton & Austin, 2005). Agreement amongst professionals will always be hard to establish as the SPJ approach is, in fact, quite subjective. Despite being trained in a tool in the same way, individual differences and experiences remain undeniable, which may subconsciously impact the way in which we assess others. It may be worthwhile to conduct inter-rater reliability tests across a range of professionals who are likely to come into contact with this tool. Furthermore, providing training on a tool does not necessarily equate to automatic competence. Risk assessment requires practice and experience (Nilsson, Munthe, Gustavson, Forsman & Anckarsater, 2009). An assessor would need the confidence to use the tool appropriately, particularly if the tool is not used that often. If that is the case, then top-up training may be appropriate for the VERA-2R.

The VERA-2R is a tool with restricted access, so, like many other larger risk assessments, can only be purchased by relevant professionals (Hart et al., 2017). The expense of the tool may be problematic in some organisations and therefore they may opt for cheaper alternatives. This may be more likely in organisations where VE offenders may be rare. In organisations where the tool is accessible, assessing an offender using the VERA-2R is likely to be a time-consuming process, as there would be a requirement to access all possible sources of information, such as file reviews, interviews, results from other assessments, along with general behavioural observations. Assessors may not have all the relevant information in order to score each indicator. They may have to rely heavily on interviews, where the likelihood of gaining accurate information may be questionable, given the nature of the offending. If crucial information is missed, then the overall risk score may be inaccurate, potentially leading to disproportionate management plans. These concerns indicate that an assessor would require a lot of information in order to proceed with using this assessment. The VERA-2R may benefit from some kind of screening version to assess whether a VE offender warrants a further, more comprehensive assessment. This is an advantage of the ERG22+, where the short version of it can be used to assess offenders sentenced for other types of crimes if professionals have suspicions that they might be susceptible to involvement in VE offending (Lloyd & Dean, 2015).

General advantages of the VERA-2R have been noted. These include the inclusion of numerous risk factors (Pressman et al., 2016), as well as its translation into other languages and its use across organisations across continents (Khader et al., 2016). The ERG22+ on the other hand, is widely known for his development and use in England and Wales and is not available in other languages. However, it was translated by researchers into French in order to analyse any translation issues due to language complexity (Herzog-Evans, 2018). Although none were found, this would require a formal validation test.

Assessing and managing VE is the role of several organisations (e.g. prisons, secure hospitals, MI5), so in an ideal world, multi-disciplinary working across these organisations to enhance services would be the ideal (Sarma, 2018). This

may alleviate pressures of professionals who may be required to work alone, as the assessment and management of VE offenders is a complex task, with likely high-risk consequences, if not tackled appropriately and to a high-standard. However, it is clear that this type of working would likely be more time-consuming, expensive and challenging in practice. Organisations may also become defensive in the face of change (Sloper, 2004). Given security issues with intelligence relating to extremism (Boer, 2015), multi-agency working is likely to be difficult.

5.9. Conclusions

Overall, whilst there are some clear advantages of the VERA-2R, there are challenges in the way VE offenders are assessed and managed in the real world. Advantages of the VERA-2R over other instruments include relevance to risk based on theory, ability to observe changes in risk over time, the consideration of responsivity, and the inclusion of protective factors. However, whilst some studies demonstrate promising findings relating to the psychometric properties of the VERA-2R and other comparable assessments, there is still research to be conducted to fully understand the strengths and limitations of tools within the field of VE and compare them effectively. Specifically, this review indicates that there is a need for further investigation into both the validity and reliability of the VERA-2R, as well as other comparable tools. Currently, there are limited studies that objectively assess this. Scarcella et al (2016) suggested that future studies would need to be of better quality. It is surprising that current studies relating to an important tool used in forensic practice are not of good quality.

Future studies would ideally be led by independent researchers, as much of the current research conducted is by the authors of the tool themselves. The validity of tools is especially important in forensic settings (Scarcella et al., 2016). Studies need to determine validity from multiple angles, as an absence of this could have detrimental consequences (Heilburn, Rogers & Otto, 2004). This is particularly crucial in forensic contexts, as this would assist in the pursuit of recognising risk more accurately. Whilst further validation needs to be conducted; the methodology would require careful consideration due to the

challenges discussed earlier in assessing the information relating to these types of assessments. Data relating to VE is complex and sensitive (Boer, 2015), and there has to be a will to share data for such research to be conducted.

Chapter 6 - General Discussion

6.1. Introduction

The aims of the present thesis was to extend on existing psychological literature in the field of violent extremism, investigating its psychological underpinnings using new methods for assessing antagonistic personality. Personality traits, the process of moral disengagement, and linguistic markers were examined as predictors of the militant extremist mindset (MEM). Given the extent of extremist attacks, today, informed counter-extremism campaigns are especially significant in the present day for the government and policy makers. Thus, a wider aim of this research was to identify findings that could potentially guide organisations and authorities to counter violent extremism, benefitting prevention and intervention. Psychological influences could be considered within their programmes. The present chapter will highlight the findings of each chapter within this thesis, and provide overall conclusions, alongside implications and directions for the future.

6.2. Findings

6.2.1. *Chapter Two*

Chapter Two presented a systematic review exploring the relationship between The Dark Triad and extremism, terrorism, radicalisation, fundamentalism, and authoritarianism. There were no previous reviews exploring this relationship. A meta-analysis standardised recorded effects from each study so findings could be synthesised and integrated effectively. The studies included in the review measured radicalised cognitions and behaviours, political extremism, religious fundamentalism, and the MEM, indicating that extremism is measured in a variety of ways in the field. Machiavellianism was the least investigated dark triad trait within the review, and psychopathy was the most. Only six

independent studies were included within the systematic review. The publication dates of these studies ranged between 2016 and 2018, indicating that this area is a fairly new research interest. The findings of the systematic review suggested that influence of Machiavellianism on the process of radicalisation is heightened when high scores on other dark traits were endorsed. It may well be that high Machiavellianism alone is not sufficient for an individual to resort to violence. Four of the six studies found that psychopathy was associated with an extremist domain. Effect sizes were small, however increased when grouped alongside sadism and Machiavellianism, suggested a combination of the dark traits may be more influential. Psychopathy was consistently associated with the pro-violent attitudes, across two studies. Interestingly, the most salient trait within the systematic review appeared to be narcissism. Narcissism alone was associated with higher radicalised behaviours, influenced radicalised cognitions, and correlated with political extremism, and religious fundamentalism. This was a noteworthy finding, given that narcissism is the 'brightest' of the three traits (Rauthman & Kolar, 2012). Limitations in the systematic review included the generalisability of findings as studies were limited to specific sample types, such as one gender, one culture, or an all student sample. The use of self-report measures also limit findings, as responses may be over or under-stressed. Self-selection bias was also an issue across studies. Future directions included future research into the relationship between all the dark traits and extremism, as studies were limited. Some suggestions included the use of social desirability measures and more diversity within samples.

6.2.2. *Chapter Three*

Chapter Three presented a quantitative research study, investigating the relationship between the MEM, and personality and moral disengagement. With regards to personality measure, The HEXACO model of personality traits was used. Previous studies have explored "the big five" traits in the field of violent extremism. The study in Chapter Three included the added dimension of Honesty-Humility. Furthermore, the HEXACO personality measure used was more comprehensive than measures used in previous studies. Findings from the systematic review also provided a rationale to include the Dark Triad traits, as well as a measure of social desirability. Statistical analyses examined which

psychological constructs best predicted the MEM and its subscales. Results found that Honesty-Humility and moral disengagement were significant predictors of the total MEM, as well as its Pro-violence subscale. Honesty-humility negatively predicted total MEM, and Pro-violence. Moral disengagement positively predicted total MEM, and Pro-violence. A younger age and lower Openness predicted the Divine Power subscale. The results supported the idea that the MEM constitutes three distinct attitudes (Stankov et al, 2010a). The study offered some insight into factors which influence the MEM, and importantly factors that, with further research, could be considered in counter-extremist campaigns, for example countering moral disengagement cognitions.

6.2.3. *Chapter Four*

Chapter Four presented a second quantitative research study, investigating which linguistic categories used to justify moral decisions are best associated with the MEM and its subscales. This study adopted a new methodology to explore this relationship. Negative emotion and anger significantly correlated with higher MEM. Third person plural pronouns significantly correlated with lower Pro-violence attitudes. First person plural pronouns significantly correlated with higher Vile World attitudes. Negative emotion and anger significantly correlated with higher Divine Power attitudes. With regards to the predictive ability of any of the linguistic categories, it was found that third person plural pronouns negatively predicted Pro-violence attitudes. This contradicted previous findings, as Pennebaker (2008) found this category to be a positive predictor of extremism. The advantage of this study over Pennebaker's is that it was not limited to a particular extremist group, instead, measuring a general extremist mindset overall. Further analyses were conducted to examine whether the finding could be explained by the Dark Triad personality traits, however no associations were found. Future research is needed, perhaps on different types of extremist groups, to assess if plural pronouns' predictive ability remains consistent across different extremist groups as compared to the general population. Given that the internet increases the speed of radicalisation (Behr, Reding, Edwards & Gribbon, 2013), this study extends on existing research and offers insight to the communication style of extremists, particularly online. It is advised that future research could consider a combination of

traditional qualitative analysis, and the LIWC software used in the present thesis.

The mean score of the total MEM was low across both quantitative studies, indicating that the majority of respondents did not endorse a high MEM. A key issue in the field of violent extremism, as discussed within this thesis, is the limited accessibility to real extremist offenders. Whilst tools such as the MEM Questionnaire are useful in research, given that most studies within this field have to be conducted on the general population, they do not provide a formal indication of the future risk of offending. This provided the rationale for a more formal assessment to be discussed and critiqued in the penultimate chapter of this thesis. This was to offer insight into how extremists are being assessed in the real world, and whether current assessments being used are robust enough to both assess and reduce risk.

6.2.4. *Chapter Five*

Chapter Five presented a review discussing and critiquing The Violent Extremist Risk Assessment 2 Revised (VERA-2R). Some of its advantages include strong evidence base behind the incorporated risk indicators, the inclusion of protective factors, and its ability to monitor risk over time. Studies into its psychometric properties demonstrated some promising findings, however more research is warranted conducted by independent researchers to reach a stronger consensus. Indeed, the difficulties in assessing validity are apparent, given the complex and sensitive nature of data in this field.

6.3. Limitations

A limitation within the current literature is that many previous studies have focussed on specific types of extremist groups, or specific sample types. The studies within this thesis tried to overcome this limitation by adopting a general measure of extremism, not limited to a specific type as such. Additionally, anybody over the age of eighteen from the general public were able to participate. Of course, these decisions come with their own limitations, which have been discussed throughout this thesis. A standout limitation relates to the

MEM Questionnaire. Whilst advantages of this measure have been noted in this thesis, a disadvantage is that it is viewed on a spectrum. Extremism on a spectrum limits differentiation between two groups. A measure with an explicit cut off score to indicate where a 'more extreme' person actually lies would allow for independent group analysis. This may be the next best thing, after independent group analysis between a real extremist group, and non-extremist group, given that accessibility to real extremists is unlikely. The measure of attitudinal extremism does not necessarily relate to subsequent real-life behaviours. In this case, agreeing with more extreme statements, does not mean an individual will commit an extremist attack. The incorporation of other measures of extremism in the studies may have been worthwhile. For example, scales measuring fundamentalism, or authoritarianism, alongside the MEM would help establish whether findings are consistent across *types* of extremism.

6.4. Overall conclusions and implications

Reflecting on the thesis as a whole, it is clear that more research is warranted in this field. The systematic review found that there was a gap for more research to be conducted in relation to the Dark Triad traits. Further research in the field of violent extremism also highlighted a gap for other personality traits and moral disengagement to be examined. Findings in the present thesis contradict earlier claims from researchers (e.g. Silke, 2008) suggesting unique characteristics making up an extremist personality do not exist. Currently, in the absence of further research, it would be premature to suggest that the psychological constructs found in this thesis should be incorporated in counter-extremism strategies. However, it is worth considering how it may be useful longer-term. For example, it may support the idea that education focussing on moral development may help reduce the propensity to engage in radicalised behaviours, by strengthening moral values (Pels & de Ruyter, 2012). Overall, the present thesis contributes to the field of violent extremism, improving our knowledge, and extending on existing findings. The research was novel with the incorporation of more extensive measures of personality, antisocial cognitions such as moral disengagement, as well as new methods looking at the structure of language.

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Appendices

Appendix A: Syntax for Each Database

Database	Syntax
PubMed	((terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism)) AND (dark triad OR dark personality OR narcissism OR psychopathy OR Machiavellianism.)
Web of Science	#1 TS= (terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism) <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i> #2 TS=(dark triad OR dark personality OR narcissism OR psychopathy OR Machiavellianism) <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i> #2 AND #1 <i>Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH, ESCI, CCR-EXPANDED, IC Timespan=All years</i>
PsycARTICLES	((terrorism or radicalisation or extremism or fundamentalism or authoritarianism) and dark triad) or dark personality or narcissism or psychopathy or Machiavellianism. Mp. [mp=title, abstract, full text, caption text]
Scopus	<i>terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism AND dark AND triad OR dark AND personality OR narcissism OR psychopathy OR machiavellianism</i>
PsycINFO	(terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism) AND (dark AND triad OR dark AND personality OR narcissism OR psychopathy OR machiavellianism)
Social Science Premium Collection	(terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism) AND (dark AND triad OR dark AND personality OR narcissism OR psychopathy OR machiavellianism)
IBSS	(terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism) AND (dark AND triad OR dark AND personality OR narcissism OR psychopathy OR machiavellianism)
Science Database	(terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism)

Political Science Database	AND (dark AND triad OR dark AND personality OR narcissism OR psychopathy OR machiavellianism) (terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism)
Criminology Collection	AND (dark AND triad OR dark AND personality OR narcissism OR psychopathy OR machiavellianism) (terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism)
Criminal Justice Database	AND (dark AND triad OR dark AND personality OR narcissism OR psychopathy OR machiavellianism) (terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism)
Worldwide Political Science Abstracts	AND (dark AND triad OR dark AND personality OR narcissism OR psychopathy OR machiavellianism) (terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism)
ASSIA	AND (dark AND triad OR dark AND personality OR narcissism OR psychopathy OR machiavellianism) (terrorism OR radicalisation OR radicalization OR extremism OR fundamentalism OR authoritarianism)

Appendix B: AXIS Tool (Downes, Brennan, Williams, & Dean, 2016)

	Question	Yes	No	Don't know/ Comment
<i>Introduction</i>				
1	Were the aims/objectives of the study clear?			
<i>Methods</i>				
2	Was the study design appropriate for the stated aim(s)?			
3	Was the sample size justified?			
4	Was the target/reference population clearly defined? (Is it clear who the research was about?)			
5	Was the sample frame taken from an appropriate population base so that it closely represented the target/reference population under investigation?			
6	Was the selection process likely to select subjects/participants that were representative of the target/reference population under investigation?			
7	Were measures undertaken to address and categorise non-responders?			
8	Were the risk factor and outcome variables measured appropriate to the aims of the study?			
9	Were the risk factor and outcome variables measured correctly using instruments/measurements that had been trialled, piloted or published previously?			
10	Is it clear what was used to determine statistical significance and/or precision estimates? (e.g. p-values, confidence intervals)			
11	Were the methods (including statistical methods) sufficiently described to enable them to be repeated?			
<i>Results</i>				
12	Were the basic data adequately described?			
13	Does the response rate raise concerns about non-response bias?			
14	If appropriate, was information about non-responders described?			
15	Were the results internally consistent?			
16	Were the results presented for all the analyses described in the methods?			
<i>Discussion</i>				
17	Were the authors' discussions and conclusions justified by the results?			
18	Were the limitations of the study discussed?			
<i>Other</i>				
19	Were there any funding sources or conflicts of interest that may affect the authors' interpretation of the results?			
20	Was ethical approval or consent of participants attained?			

Appendix C: Participant Information Page

Project Title: The Militant Extremist Mindset, Personality, and Moral Disengagement

Researcher: Zara Janjua (Zara.Janjua@nottingham.ac.uk)

Supervisor: Vince Egan (Vincent.Egan@nottingham.ac.uk)

Ethics Reference Number: 288- 1803

We would like to invite you to take part in a research study examining *polarised socio-political viewpoints and aspects of personality*. Before you begin, we would like you to understand why the research is being done and what it involves for you.

What is the purpose of this study?

The purpose of the study is to investigate whether there is an association between polarised socio-political viewpoints and aspects of personality.

Why have I been invited?

You have been invited because you are a member of the general public who has come across this study and taken an interest based on its description. Anyone over the age of 18 is invited to take part in this study, as it is important to look at this information in all types of people.

Do I have to take part?

It is up to you to decide whether or not to take part. And you may change your mind about being involved at any time, or decline to answer a particular question. You are free to withdraw at any point before or during the study without giving a reason.

What will I be asked to do?

If you choose to take part, you will be asked to complete a series of questionnaires, and asked to answer them as honestly as possible.

Will the research be of any personal benefit to me?

If you take part, the research will be able to contribute to fields of forensic psychology, and may provide important information, specifically in relation to understanding if there are associations between polarised socio-political viewpoints and aspects of personality.

What will happen to the information I provide?

Once your questionnaire is submitted it will be anonymised in line with Data Protection Legislation. This will maintain confidentiality and prevent you (and others) from being directly or indirectly identified through e.g., your work location or demographic information.

Whilst we will take steps to ensure that your online questionnaire is gathered and retained securely using a secure website, which only I and my supervisor have access to, it remains a possibility that these security measures can be breached by hackers. A further limitation of Internet based research is that your anonymity may be compromised if you complete the questionnaire within a public space in view of others. For example, if you decide to use a computer within an organisation (e.g., work) that monitors computer use, your responses may not be entirely confidential. Consequently, you may wish to take additional measures to maintain confidentiality whilst in the process of completing the questionnaire.

Note that the responses from your questionnaire along with that of others will later be uploaded from the secure website and analysed using the Statistical Package for Social Sciences (SPSS). Access to this statistical database will be password protected and accessible only to me and my supervisor (Vince Egan). At the end of the project your raw data alongside that of other people involved in the research will be retained securely (password protected) and electronically by the University of Nottingham for 7 years before being destroyed. Access to this statistical database will be password protected and accessible only to me and my supervisor (Vince Egan).

At the end of the project your raw data alongside that of other people involved in the research will be retained securely (password protected) and electronically by the University of Nottingham for 7 years before being destroyed in line with University data handling policy).

What will you do with the data?

The data will contribute to the researcher's doctoral thesis. The results of the study may be published in scientific journals and presented at scientific conferences. The data will be reported anonymously, with any identifying information removed. If you would like a summary of the results, you can contact the researcher using the email address above.

What if there is a problem?

If you have any queries or complaints, please contact the student's supervisor (Dr Vincent Egan, Vincent.egan@nottingham.ac.uk) in the first instance. If you remain unhappy and wish to complain formally, you can do this by contacting the FMHS Research Ethics Committee Administrator, c/o The University of Nottingham, Faculty PVC Office, B Floor, Medical School, Queen's Medical Centre Campus, Nottingham University Hospitals, Nottingham, NG7 2UH. E-mail: FMHS-ResearchEthics@nottingham.ac.uk.

We believe there are no known risks associated with this research study; however, as with any online activity the risk of a breach is always possible. We will do everything possible to ensure your answers in this study will remain anonymous.

Appendix D: Participant Consent Page

1. Have you read and understood the Participant Information?
2. Do you agree to participate in questionnaires about polarised political viewpoints and aspects of personality?
3. Do you know how to contact the researcher if you have questions about this study?
4. Do you understand that you are free to withdraw from the study without giving a reason?
5. Do you understand that for anonymous questionnaire studies, once you have completed the study and submitted your answers, the data cannot be withdrawn?
6. Do you give permission for your anonymised data from this study to be shared with other researchers in the future (with research ethics approval)?
7. Do you understand that non-identifiable data from this study including quotations might be used in academic research reports or publications?
8. I confirm that I am 18 years old or over

"By clicking the 'Next' button below I indicate that I understand what the study involves and I agree to take part. If I do not want to participate I can close this window/press the exit button."

Appendix E: Participant Debrief

Thank you for participating in this study on *polarised socio-political viewpoints and aspects of personality*. We hope that you have found it interesting and have not been upset by any of the topics discussed. However, if you have found any part of this experience to be distressing and you wish to speak to one of the researchers, please contact:

Zara Janjua - Zara.Janjua@nottingham.ac.uk

OR

Vincent Egan - Vincent.Egan@nottingham.ac.uk

With concerns about home-grown terrorism, or young people going off to fight, it is not surprising that a growing number of people may be worried that people they know might be drawn into extremism.

If you are worried about anybody you know, and concerns persist, you should ring:

- the police, through the school (or prison authorities) or directly.
- 999 if there is an immediate threat to life, or ring the police on 101 who would put you in touch with your local officer who has a Prevent remit. Prevent is a counter-terrorist programme which aims to stop people being drawn into terrorist-related activity.
- the police anti-terrorist hotline on 0800 789 321. This number is available 24/7 for members of the public to report any suspicious activity. Calls are answered by specially trained counter terrorism officers who make some initial enquiries before passing on details to local counter terrorism officers for further investigation where appropriate.

- NSPCC who recently launched a free 24 hour helpline on 0808 800 5000 for parents worried about radicalisation and the impact of terrorism. They have access to trained counsellors.
- Crimestoppers on 0800 55511 who can be contacted anonymously with information about crime.

For further information, please click the following link:

<https://www.met.police.uk/advice/advice-and-information/t/terrorism-in-the-uk/how-to-report-possible-terrorist-activity/>

Appendix F: The Militant Extremist Mindset Questionnaire

1. We should never use violence as a way to try to save the world.
2. Armed struggle is the only way that youths can redeem themselves and their society.
3. All problems can be solved through negotiations and compromise.
4. Killing is justified when it is an act of revenge.
5. If violence does not solve problems, it is because there was not enough of it.
6. The only way to teach a lesson to our enemies is to threaten their lives and make them suffer.
7. Our enemy's children are like scorpions; they need to be squashed before they grow up.
8. War is the beginning of salvation.
9. Those who claim to be against the use of any form of force are on their way to becoming slaves.
10. A good person has a duty to avoid killing any living human being.
11. Today the human race is on the edge of an enormous calamity.
12. Modern governments have overstepped moral bounds and no longer have a right to rule.
13. Evil has been re-incarnated in the cult of markets and the rule of multinational companies.
14. The world is headed for destruction.
15. Our people are in danger, everybody is trying to divide us and hurt us.
16. The present-day world is vile and miserable.
17. Only an idiot would go into a challenging situation expecting help from a divine power.
18. Those who obey heaven will receive beautiful rewards.
19. I do not believe in life after death.
20. Martyrdom is an act of a true believer in the cause, not an act of terrorism.
21. All suffering in this life is small in comparison to the eternal pleasures one will receive after death.
22. Our leaders are decent people.

23.If you believe you have received commands from God, you are certainly crazy.

24.At a critical moment, a divine power will step in to help our people.

Appendix G: The Mechanisms of Moral Disengagement Questionnaire

1. It is alright to fight to protect your friends.
2. Slapping and shoving someone is just a way of joking.
3. Damaging some property is no big deal when you consider that others are beating people up.
4. A person in a gang should not be blamed for the trouble the gang causes.
5. If people are living under bad conditions they cannot be blamed for behaving aggressively.
6. It is okay to tell small lies because they don't really do any harm.
7. Some people deserve to be treated like animals.
8. People are not at fault for misbehaving at work if their manager mistreats them.
9. It is alright to beat someone who bad mouths your family.
10. To hit an obnoxious person is just giving them "a lesson."
11. Stealing some money is not too serious compared to those who steal a lot of money.
12. A person who only suggests breaking rules should not be blamed if other people go ahead and do it.
13. If people are not disciplined they should not be blamed for misbehaving.
14. People do not mind being teased because it shows interest in them.
15. It is okay to treat badly somebody who behaved like a "worm."
16. If people are careless where they leave their things it is their own fault if they get stolen.
17. It is alright to fight when your group's honour is threatened.
18. Taking someone's bicycle without their permission is just "borrowing it."
19. It is okay to insult a colleague because beating him/her is worse
20. If a group decides together to do something harmful it is unfair to blame any person in the group for it.
21. People cannot be blamed for using bad words when others do it.
22. Teasing someone does not really hurt them.
23. Someone who is obnoxious does not deserve to be treated like a human being.
24. People who get mistreated usually do things that deserve it.
25. It is alright to lie to keep your friends out of trouble.

- 26.It is not a bad thing to "get high" once in a while.
- 27.Compared to the illegal things people do, taking some things from a store without paying for them is not very serious.
- 28.It is unfair to blame an individual who had only a small part in the harm caused by a group.
- 29.People cannot be blamed for misbehaving if others pressured them to do it.
- 30.Insults among people do not hurt anyone.
- 31.Some people have to be treated roughly because they lack feelings that can be hurt.
- 32.People are not at fault for misbehaving if others force them too much.

Appendix H: The Short Dark Triad

1. It's not wise to tell your secrets.
2. I like to use clever manipulation to get my way.
3. Whatever it takes, you must get the important people on your side.
4. Avoid direct conflict with others because they may be useful in the future.
5. It's wise to keep track of information that you can use against people later.
6. You should wait for the right time to get back at people.
7. There are things you should hide from other people to preserve your reputation.
8. Make sure your plans benefit yourself, not others.
9. Most people can be manipulated.
10. People see me as a natural leader.
11. I hate being the centre of attention.
12. Many group activities tend to be dull without me.
13. I know that I am special because everyone keeps telling me so.
14. I like to get acquainted with important people.
15. I feel embarrassed if someone compliments me.
16. I have been compared to famous people.
17. I am an average person.
18. I insist on getting the respect I deserve.
19. I like to get revenge on authorities.
20. I avoid dangerous situations.
21. Payback needs to be quick and nasty.
22. People often say I'm out of control.
23. It's true that I can be mean to others.
24. People who mess with me always regret it.
25. I have never gotten into trouble with the law.
26. I enjoy having sex with people I hardly know.
27. I'll say anything to get what I want.

Appendix I: The HEXACO-100

1. I would be quite bored by a visit to an art gallery.
2. I clean my office or home quite frequently.
3. I rarely hold a grudge, even against people who have badly wronged me.
4. I feel reasonably satisfied with myself overall.
5. I would feel afraid if I had to travel in bad weather conditions.
6. If I want something from a person I dislike, I will act very nicely toward that person in order to get it.
7. I'm interested in learning about the history and politics of other countries.
8. When working, I often set ambitious goals for myself.
9. People sometimes tell me that I am too critical of others.
10. I rarely express my opinions in group meetings.
11. I sometimes can't help worrying about little things.
12. If I knew that I could never get caught, I would be willing to steal a million dollars.
13. I would like a job that requires following a routine rather than being creative.
14. I often check my work over repeatedly to find any mistakes.
15. People sometimes tell me that I'm too stubborn.
16. I avoid making "small talk" with people.
17. When I suffer from a painful experience, I need someone to make me feel comfortable.
18. Having a lot of money is not especially important to me.
19. I think that paying attention to radical ideas is a waste of time.
20. I make decisions based on the feeling of the moment rather than on careful thought.
21. People think of me as someone who has a quick temper.
22. I am energetic nearly all the time.
23. I feel like crying when I see other people crying.
24. I am an ordinary person who is no better than others.
25. I wouldn't spend my time reading a book of poetry.
26. I plan ahead and organize things, to avoid scrambling at the last minute.

27. My attitude toward people who have treated me badly is "forgive and forget".
28. I think that most people like some aspects of my personality.
29. I don't mind doing jobs that involve dangerous work.
30. I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.
31. I enjoy looking at maps of different places.
32. I often push myself very hard when trying to achieve a goal.
33. I generally accept people's faults without complaining about them.
34. In social situations, I'm usually the one who makes the first move.
35. I worry a lot less than most people do.
36. I would be tempted to buy stolen property if I were financially tight.
37. I would enjoy creating a work of art, such as a novel, a song, or a painting.
38. When working on something, I don't pay much attention to small details.
39. I am usually quite flexible in my opinions when people disagree with me.
40. I enjoy having lots of people around to talk with.
41. I can handle difficult situations without needing emotional support from anyone else.
42. I would like to live in a very expensive, high-class neighborhood.
43. I like people who have unconventional views.
44. I make a lot of mistakes because I don't think before I act.
45. I rarely feel anger, even when people treat me quite badly.
46. On most days, I feel cheerful and optimistic.
47. When someone I know well is unhappy, I can almost feel that person's pain myself.
48. I wouldn't want people to treat me as though I were superior to them.
49. If I had the opportunity, I would like to attend a classical music concert.
50. People often joke with me about the messiness of my room or desk.
51. If someone has cheated me once, I will always feel suspicious of that person.
52. I feel that I am an unpopular person.
53. When it comes to physical danger, I am very fearful.
54. If I want something from someone, I will laugh at that person's worst jokes.

- 55.I would be very bored by a book about the history of science and technology.
- 56.Often when I set a goal, I end up quitting without having reached it.
- 57.I tend to be lenient in judging other people.
- 58.When I'm in a group of people, I'm often the one who speaks on behalf of the group.
- 59.I rarely, if ever, have trouble sleeping due to stress or anxiety.
- 60.I would never accept a bribe, even if it were very large.
- 61.People have often told me that I have a good imagination.
- 62.I always try to be accurate in my work, even at the expense of time.
- 63.When people tell me that I'm wrong, my first reaction is to argue with them.
- 64.I prefer jobs that involve active social interaction to those that involve working alone.
- 65.Whenever I feel worried about something, I want to share my concern with another person.
- 66.I would like to be seen driving around in a very expensive car.
- 67.I think of myself as a somewhat eccentric person.
- 68.I don't allow my impulses to govern my behaviour.
- 69.Most people tend to get angry more quickly than I do.
- 70.People often tell me that I should try to cheer up.
- 71.I feel strong emotions when someone close to me is going away for a long time.
- 72.I think that I am entitled to more respect than the average person is.
- 73.Sometimes I like to just watch the wind as it blows through the trees.
- 74.When working, I sometimes have difficulties due to being disorganized.
- 75.I find it hard to fully forgive someone who has done something mean to me.
- 76.I sometimes feel that I am a worthless person.
- 77.Even in an emergency I wouldn't feel like panicking.
- 78.I wouldn't pretend to like someone just to get that person to do favours for me.
- 79.I've never really enjoyed looking through an encyclopaedia.
- 80.I do only the minimum amount of work needed to get by.
- 81.Even when people make a lot of mistakes, I rarely say anything negative.

82. I tend to feel quite self-conscious when speaking in front of a group of people.
83. I get very anxious when waiting to hear about an important decision.
84. I'd be tempted to use counterfeit money, if I were sure I could get away with it.
85. I don't think of myself as the artistic or creative type.
86. People often call me a perfectionist.
87. I find it hard to compromise with people when I really think I'm right.
88. The first thing that I always do in a new place is to make friends.
89. I rarely discuss my problems with other people.
90. I would get a lot of pleasure from owning expensive luxury goods.
91. I find it boring to discuss philosophy.
92. I prefer to do whatever comes to mind, rather than stick to a plan.
93. I find it hard to keep my temper when people insult me.
94. Most people are more upbeat and dynamic than I generally am.
95. I remain unemotional even in situations where most people get very sentimental.
96. I want people to know that I am an important person of high status.
97. I have sympathy for people who are less fortunate than I am.
98. I try to give generously to those in need.
99. It wouldn't bother me to harm someone I didn't like.
100. People see me as a hard-hearted person.

Appendix J: The Balanced Inventory of Desirable Responding

Short Form

1. I have not always been honest with myself.
2. I always know why I like things.
3. It's hard for me to shut off a disturbing thought.
4. I never regret my decisions.
5. I sometimes lose out on things because I can't make up my mind soon enough.
6. I am a completely rational person.
7. I am very confident of my judgments.
8. I have sometimes doubted my ability as a lover.
9. I sometimes tell lies if I have to.
10. I never cover up my mistakes.
11. There have been occasions when I have taken advantage of someone.
12. I sometimes try to get even rather than forgive and forget.
13. I have said something bad about a friend behind his/her back.
14. When I hear people talking privately, I avoid listening.
15. I never take things that don't belong to me.
16. I don't gossip about other people's business.

Appendix K: Ethical Approval Letter



**University of
Nottingham**
UK | CHINA | MALAYSIA

Email: FMHS-ResearchEthics@nottingham.ac.uk

Faculty of Medicine & Health Sciences Research Ethics Committee

c/o Faculty PVC Office
School of Medicine Education Centre
B Floor, Medical School
Queen's Medical Centre Campus
Nottingham University Hospitals
Nottingham, NG7 2UH

08 October 2018

Zara Janjua
Doctorate in Forensic Psychology
c/o Dr Vincent Egan
Associate Professor, Director of Forensic Psychology Programme
Room B23, Yang Fujia
University of Nottingham - Jubilee Campus
Wollaton Road
Nottingham
NG8 1BB

Dear Ms Janjua

Ethics Reference No: 288-1803 – please always quote	
Study Title: Extremist mindset, moral disengagement, and personality	
Chief Investigator/Supervisor: Dr Vincent Egan, Associate Professor, Director, Forensic Psychology Programmes, Centre for Forensic and Family Psychology, Division of Psychiatry and Applied Psychology, School of Medicine.	
Lead Investigators/student: Zara Janjua, Doctorate in Forensic Psychology	
Type of Study: Internet mediated, DForenPsy	
Proposed Start Date: 08/10/2018	Proposed End Date: 31/03/2019 4mths
No of Subjects: 250	Age: 18+years

Thank you for notifying the Committee of minor amendment no 1: 03.10.2018 as detailed and the following revised documents were received:

- FMHS/DPAP REC Application form and supporting documents final version 1.0: 03.10.2018
- MEM questionnaire and the Moral Disengagement questionnaire.

These have been reviewed and are satisfactory and the study has been given a favourable opinion.

A favourable opinion has been given on the understanding that:

1. The protocol agreed is followed and the Committee is informed of any changes using a notice of amendment form (please request a form).
2. The Chair is informed of any serious or unexpected event.
3. An End of Project Progress Report is completed and returned when the study has finished (Please request a form).

Yours sincerely

Professor Ravi Mahajan
Chair, Faculty of Medicine & Health Sciences Research Ethics Committee