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Acknowledgements

I was in two minds about embarking on a DBA. I had originally planned to study for an MSc in Psychology. However, after attending an open evening at Greenlands on the Henley campus, talking with Professor Claire Collins, and learning about the DBA programme, convinced me to give it a try. After all, I had already completed an MBA at Henley some years before which offered continuity and its proximity to where I live meant I could access the array of resources on offer.

Not least of which is my first supervisor, Professor Victor Dulewicz, who along with Professor Collins encouraged and supported me to extend my field of research and be rigorous in my application. It is helpful, of course, when you can combine academic rigour with a common interest which Vic and I share which is football. My thanks to Vic in extending access to his academic network so that I could interview leading exponents and experts in the field of personality assessment during the pilot phase of my studies and for being an ever-present mentor.

I would also like to thank Hogan Assessments for sharing with me the secondary data sample that formed the basis of my analysis in this study. In particular, to Dr Jeff Foster for enabling this and to Dr Brandon Ferrell and Karen Fuhrmeister in critically reviewing my earlier draft chapters.

Thanks, of course, to my family. My daughters, Stephanie, and Olivia and to my son, Joseph for all their interest, support, and encouragement along the way.

Dedication

I dedicate this work to my late wife, Carole and to my children, Stephanie, Joseph, and Olivia. Thanks for all your love, support, and encouragement over what has been an epic journey.

Abstract

This research study investigates the presence of the "dark triad" (DT: Machiavellianism, psychopathy, and narcissism) in organisations and its relationship with job performance.

It poses three primary research questions:

1) What are the relationships between scores on dark triad personality measures and job performance?

2) Will age, tenure, and gender act as moderator variables?

3) What are the relationships between scores on the dark triad personality measures and Horney's "global" factors?

The principal research instrument used is the Hogan Development Survey (HDS). Comprising eleven scales, it is an inventory of dark personality traits designed to measure dysfunctional personality in normal populations. Two of the eleven scales, Bold and Mischievous were defined to capture the core characteristics of the narcissistic and psychopathic personalities respectively, as they might manifest themselves in organisational settings. The Bold and Mischievous scales are used to define all three scales in this research study (see table 3.6). Based on clinical definitions of personality disorders, the HDS is not designed to measure Machiavellianism with a specific scale construction since it is not a clinically defined personality disorder. The eleven scales of the HDS map to Horney's (1950) global factors of "Moving Towards" people; "Moving Against" people and "Moving Away" from people as they relate to the preferred strategies of each member of the DT when interacting with others in the workplace.

A review of the extant DT literature identified ten new hypotheses to be investigated. A quantitative research design was applied. Secondary data comprising a sample of 918 managers from a large US based retail chain store was analysed using a combination of t-tests, correlations, bivariate and partial correlations.

The ten hypotheses were analysed using a combination of bivariate and partial correlations. Hierarchical regression, and model testing through analysis of variance statistical techniques were used to assess the predictive power of each DT variables. The results show that all ten hypotheses were supported, with all three variables that comprise the DT (Psychopathy, narcissism, and Machiavellianism) negatively predicting job performance; and with age, gender and tenure acting as moderating variables.

The psychopath and the narcissist show a strong preference to Move Against others in the workplace, whilst the Machiavellian shows a strong preference to Move Away from others.

One of the major contributions to knowledge of this research is the finding that all three DT variables negatively and significantly predict job performance. This finding extends previous research which identified psychopathy and Machiavellianism as significant predictors. In addition, there is the compilation of a new scale for Machiavellianism comprising six scales of the HDS: Excitable, Skeptical, Reserved, Leisurely, Bold, and Mischievous. Along with this contribution, is the extension to the HDS measure of psychopathy (Mischievous) to include the Skeptical, Bold, Colorful and Imaginative scales. The same is true for the HDS measure of narcissism (Bold) with an extension to include the HDS scales of Cautious (Reversed), Bold, Mischievous, and Imaginative. A further contribution to knowledge is the identification of age, tenure, and gender as moderating variables of the effect of each the DT variables on job performance.

The contribution to practice made by this research is in management selection and development. The HDS can now be applied as a single measure of the DT, particularly with regard to Machiavellianism, as the new scale obviates the need to apply separate DT scale measures. Finally, this research also contributes to the current debate relating to those researchers that consider the DT a single unified construct (lumpers) and those that argue for their distinctive differences (splitters). The results of this research support the "splitters" case for two pairs of the three DT personality scales (Machiavellianism and narcissism and psychopathy and Machiavellianism). Both pairs show high percentages of non-common variance.

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List of abbreviations

ADA   Assertive styles, Denigrating types, Antisocial disorders

APA   American Psychiatric Association

ASPD   Antisocial Personality Disorder

CEN   Confident styles, Egotistic type, Narcissistic disorder

DSM   Diagnostic and Statistical Manual

DT   Dark Triad

HDS   Hogan Development Survey

HPI   Hogan Personality Inventory

IPC   Interpersonal Circumplex

NPI   Narcissistic Personality Disorder

PD   Personality Disorder

UK   United Kingdom

US   United States

1   Introduction and Overview of Thesis

1.1   Introduction

The original focus for this research study had been to answer the calls in the literature for further investigation into the phenomenon referred to as the "corporate psychopath". What has emerged is a broader enquiry into the "dark triad" (DT) of personality traits, which incorporates Machiavellianism along with the sub-clinical manifestations of psychopathy and narcissism. Researchers are agreed that the DT share a common core of callousness in their day-to-day interactions with others. There is a clear interest in the literature as to the presence of the DT in the workplace and to its relationship with important organisational outcomes such as job performance. These terms, or constructs, are introduced along with the research questions, aims and objectives, before outlining the thesis structure and concluding with a statement as to the key contributions this study will make to the current field of DT research.

1.2   Background to the research problem

Until relatively recently, the focus of leadership research has been dominated by the study and impact of "good" or effective leaders (Kellerman, 2004). The Global Financial Crisis of 2008, as well as the collapse of global organisations such as Enron, WorldCom, and Lehman Brothers, triggered the emergence of the study of "dark", "dysfunctional" or "bad leadership" as a key theme in management research (Allio, 2007; Batra, 2007; Boddy, 2006; Clements and Washbrush, 1999). It has been accompanied by calls to explore its nature, consequences, and antecedents (Tepper; Benson and Hogan; cited in Higgs, 2009). According to Boddy (2011a), psychopaths working in corporations and in financial corporations, played a major part in causing the Global Financial crisis in 2008. Boddy also called for the study of the personalities and behaviours of the leaders most responsible (Boddy, 2011a).

*"…psychopathy combines some of the features of narcissism and Machiavellianism with aggressive anti-social tendencies. We might refer to psychopathy as the **mean** side of the dark triad"* (Babiak and Hare, 2006: p.125).

Personality refers to individual differences in patterns of thinking, feeling, and behaving, which are relatively stable across situations and over time (Pervin; cited in Palmer et al, 2020). Clinically, psychopathy is a personality disorder (Andrews and Furniss, 2009) involving a lack of empathy and attachment to others, superficial charisma and charm, manipulation, and the violation of social norms (Hart et al, 1994). A personality disorder (PD)

is:

"An enduring pattern of inner experience and behaviour that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, has an onset in early adulthood, is stable over time, and leads to distress and impairment" (Diagnostic and Statistical Manual version IV-Text Revision (DSM IV-TR); American Psychiatric Association (APA), 2000. p.685).

As Furnham et al (2015) point out, some PDs can look like other disorders such as anxiety, mood, psychotic, and substance-related disorders. However, they do have unique features. Personality disorders should be distinguished from personality traits that do not reach the threshold in order to be defined as a personality disorder. Personality disorders are so defined when they are inflexible, maladaptive (the person does not or cannot adjust adequately or appropriately to the situation or environment they are in) and persistent, causing significant functional impairment or subjective distress. The diagnosis of a PD requires an evaluation of the individual's long-term patterns of functioning, with the particular personality features evident by early adulthood (DSM IV-TR, APA, 2000: p.686). These disorders often powerfully influence interpersonal relations at work. They reveal themselves in how people:

"…complete tasks take and/or give orders, make decisions, plan, handle external and internal demands, take or give criticism, obey rules, take and delegate responsibility, and cooperate with other people" (Oldham and Morris, 1991: p.24).

Those with PDs have difficulty expressing and understanding emotions. It is the intensity with which they are expressed and their variability that makes them *odd.*

 "More importantly, they often have serious problems with self-control" (Furnham et al, 2015).

An earlier scoping review had focused primarily on the successful or "corporate psychopath". This concept denotes a psychopath who works and operates within the organisational arena, differentiating them from their more violent criminal counterparts (Boddy, 2010). They have also been variously described as *Executive Psychopaths, Industrial Psychopaths, Organisational Psychopaths*, and *Organisational Sociopaths* (Pech and Slade; cited in Boddy, 2011b). Corporate psychopaths are different from their criminal counterparts in that they are much more in control of themselves (and others) and appear to be charming, polished, likeable, and even charismatic (Walker, 2005).

Whilst the unsuccessful psychopath often ends up in prison (Hare, 1999), the successful psychopath can sometimes be found in senior roles in organisations (Babiak,

1995, Board and Fritzon, 2005, Babiak and Hare, 2006). A successful psychopath, therefore, is defined as an individual who presents a subclinical manifestation of psychopathic traits, who has not been incarcerated in the judicial or mental health systems and is more likely to engage in manipulative and antisocial behaviour (Stevens et al, 2012). They are often seen as successful particularly to those who have not yet experienced the impact of their ruthlessness and lack of conscience (Boddy, 2010).

Wu and LeBreton (cited in LeBreton et al, 2018) note that focusing on clinical levels within the DT would virtually nullify the importance and relevance of these traits to the organisational sciences. This is because of the relatively low base rates associated with clinical expression of DT traits which are likely to be below 1% in the general population. Those with clinical personality disorders are often housed in criminal and psychiatric settings (Hare, 1999) which further reduces the likelihood of encountering these individuals in the workplace. In contrast, subclinical expressions of the DT have base rates as high as 15% of the general population (Gustafson and Ritzer; Pethman and Earlandsson, cited in LeBreton et al, 2018). LeBreton et al (2006; 2018) comment that the difference between clinical and subclinical traits is not in the:

"…types or categories of behaviour, affect, interpersonal relationships or rationalisations, but in the degree, magnitude or frequency of those behaviours" (Le Breton et al, 2006: p.389)*. In other words, within the sub-clinical variant, "…the pervasiveness and levels of impaired functioning are not as extreme because the individual manifests the symptoms at a commensurately lower level and rate"* (Le Breton et al, 2018: p.319).

Nonetheless, it has long been hypothesised by psychologists that the psychopaths who work in corporations and other organisations destroy the morale and emotional well-being of their fellow employees (Hare, 1999). They do this by humiliating them, lying about them, abusing them, using organisational rules to control them, not giving them adequate training, blaming them for the mistakes made by the psychopath, bullying and coercing them into unwanted sexual activities (Clarke 2005; 2009, Stout 2005). In addition, they use their manipulative skills to manage "discrepant views" of supporters and detractors resulting in successful career moves (Babiak, 1995).

"Unfortunately, once decision makers believe that an individual has future "leader potential", even bad performance reviews or evaluations from subordinates and peers do not seem to be able to shake their belief" preferring to rely on their "gut feeling"" (Babiak et al. 2010).

As a result of books such as *Snakes In Suits: When Psychopaths Go To Work* (Babiak and Hare, 2006), which raised public awareness of their presence in organisations and in society in general, the authors note that:

"…there is considerable public and media interest in learning more about the types of person who violate their positions of influence and trust, defraud customers, investors, friends and family, successfully elude regulators and appear indifferent to the financial chaos and personal suffering they create" (Babiak, Neumann and Hare, 2010).

So, at the beginning of the research process, it was the successful corporate psychopath, operating outside of the clinical setting, which was to be the subject of the research. The initial research question framed as a result of a review of the organisational psychopathy literature was, *"How do the dysfunctional behaviours of managers affect job performance?"*

The aim was to join academic research that was anchored in Babiak's (1995) case study of a single psychopath in an industrial setting. Prior to this point, research was based primarily in prisons or hospitals and it suggested that psychopaths led unsuccessful lives. Babiak's research is presented as an example of a successful industrial psychopath. Future research needs as seen in 1995 related to ascertaining the extent of psychopathy in industry and to measure its effects on people and the organisation.

A major weakness of research into psychopathy, however, is acknowledged to be an inability to generalise from it because of the dominant use of criminal populations (Chapman, Gremore and Farmer, 2003; Kirkman, 2002; Kirkman, 2005; Salekin, Trobst and Krioukova, 2001). There is certainly an extensive literature on the role of psychopathy in the criminal justice system, however, we know much less about corporate psychopathy and its implications. This is partly because of the difficulty in securing the active co-operation of business organisations, which has limited research to a few small sample studies (Babiak, Neumann and Hare, 2010) and because of:

"…the lack of reliable, valid and generally accepted tools for the assessment of psychopathy." (Hare and Neumann, 2007, p.219).

Babiak (1995) adds that the ability of the psychopath to mask his/her antisocial traits and present an opposite [prosocial] demeanour, poses an obvious measurement problem for clinical and organisational researchers alike (ibid. p.172).

The refinement of empirical knowledge on psychopathy, alongside the multiple assessment instruments measuring psychopathy has caused some researchers to conclude that psychopathic personality traits in adults and adolescents are best viewed as existing on

a continuum (Clark; cited in Hare and Neumann, 2008). The diagnostic approach used in the DSM-IV-TR (APA, 2000) represents the categorical perspective which is that personality disorders are distinct clinical syndromes. However, an alternative to the categorical approach, which is now being adopted in the DSM 5 (Trull et al, 2013), is the dimensional perspective that PD's:

"…represent maladaptive variants that merge imperceptibly into normality and into one another" (DSM-IV-TR, APA, 2000: p.689)*.*

A dimensional trait is one in which there is a continuation of a trait or variable along a continuum, while a discrete category suggests that a distinct class or end point exists, qualitatively different from others or things (Edens, Marcus, Lilienfeld, and Poythress; cited in Brooks and Fritzon, 2020). Whilst dimensional trait domain scores can also be translated into categorical diagnoses through the use of cut-off points, classification systems that employ trait domain dimensions, that is, quantitatively scaled continua, are viewed as more flexible and informative than the classic perspective of the distinct class or forced choice paradigm (Millon et al; Widiger; Widiger and Trull cited in Millon, 2011).

In a survey of members of the International Society for the Study of Personality Disorders and the Association for Research on Personality Disorders, 80% of respondents indicated that:

"Personality disorders are better understood as variants of normal personality than as categorical disease entities" (Bernstein et al; cited in Trull et al (2013)).

The preponderance of evidence supports a dimensional model (Krueger and Eaton; cited in Guenole, 2014).

"Among the personalities that present problems for society in general and the corporate world in particular are narcissism, Machiavellianism, and psychopathy…sometimes referred to collectively as the dark triad" (Babiak and Hare, 2006: p.124)*.*

In 2002, Paulhus and Williams called attention to the "dark triad" (DT) a constellation of three conceptually distinct but empirically overlapping personality variables. The three traits, Machiavellianism, sub-clinical narcissism, and sub-clinical psychopathy are all characterized by the tendency to influence others for selfish gains. They correlate positively with disagreeableness and are associated with an instrumental approach to people and organizations (Jonason and Webster, 2010) and represent a problem to organisations and society in general (Paulhus and Williams, 2002). The DT now represents a taxonomy of dark personality traits that have been extensively studied (LeBreton et al, 2018). Empirical findings point to the damage that individuals high in these traits can do to other

organisational members and effective organisational functioning (Schyns et al, 2019). So, what is the impact of the DT on organisations and society in general?

Parker and Carpenter (2020) note that according to the Report to the Nations: 2020 Global Study on Occupational Fraud and Abuse, published by the Association of Certified Fraud Examiners (ACFE), fraud costs organisations 5% of revenue each year, with an average loss per case of more than $1.5 million. The report also highlights that a typical fraud case is not uncovered for a median of 14 months after it starts—and in some cases five years or later—allowing plenty of time for the losses to pile up. Despite the efforts of regulators and the accounting and legal professions, occupational fraud continues to be a major problem for organisations.

The authors also note that current regulatory approaches (e.g., The Sarbanes - Oxley Act, 2002 in the U.S. and the Fraud Act, 2006 in the U.K.) focus on reducing the opportunity to commit fraud through the creation of additional rules but overlooks the behavioural aspects that rationalise fraud. They identify the DT as having a higher tendency to rationalise. They are also more likely to participate in unethical behaviour, including risky financial endeavours. Possessing low levels of anxiety and an overall lack of remorse, the psychopath is distinguished by a willingness to take risks with little empathy for others. Machiavellians are known as the manipulative personality type due to their ability to use soft tactics that are acceptable in society, including humour, appearance, or compliments, to gain favour. Narcissism is characterised by grandiosity, ego reinforcement, a sense of entitlement with strong emotional reactions. Their desire to appear better than other individuals drives their behaviour. These characteristics, they contend, are indicators of an ability to perpetrate fraud and advise that a focus on personality type and traits should be a critical component of the fraud risk assessment and oversight within company procedures.

Referring most notably to the recent corporate accounting scandal at Wirecard, Mutschmann et al (2020) investigated the relationship between DT traits of managers, the prevalence of fraud and the reporting by other employees of manipulation. Utilising a primary sample of 837 professionals working in accounting and finance departments, they found that managers who exhibit DT traits are associated with a higher prevalence of fraudulent accounting practices in their respective accounting and finance departments. Traditional risk management mechanisms were found to be only partially effective in mitigating the effect which suggests that managers exhibiting DT behaviours were effective in manipulating other employees.

The Price Waterhouse and Coopers Global Fraud Report (2020) comprising over 5,000 respondents, found that corporate losses due to fraud in the past two years amounted to $42

billion. They found that the perpetrator could be internal, external, or in many instances there will have been collusion as business partners remain a risk. What is most illuminating in their report is that fraud committed by management is trending upward with middle-level, operations and senior management involved as internal perpetrators accounting for 34% of the fraud. They remark that for senior managers, these crimes are often the most insidious because of their ability to override internal controls.

Consequently, researchers are seeking to understand how these traits are related to other models of personality (such as the Five Factor Model (FFM: McRae and Costa, 1987; Barrick and Mount, 1991) as well to organisationally relevant processes and outcomes such as job and organisational performance, counterproductive workplace behaviours and leadership (LeBreton et al. 2018).

The pilot study that preceded this main research study comprised a panel of global experts in the field of personality and personality assessment. The principal purpose of the study was to discuss and assess the feasibility of the proposed research design in order to answer the initial research question identified earlier. A full description of the process is described later in chapter three.

In summary, and in light of the difficulties discussed earlier associated with gaining direct access to respondents in organisations to gather primary data, the consensus view was to extend the research enquiry to include other "toxic" sub-clinical personalities such as the narcissist and the Machiavellian. The instrument of choice should be the HDS (Hogan and Hogan, 2009), a proven and valid measure of "dark side" personality (Gaddis and Foster, 2013). Comprising eleven scales, the Hogan Development Survey (HDS: Hogan and Hogan, 1997/2009) is a "dark side" measure now extensively used in organisational research and practice to measure dysfunctional personality in a normal population of working adults (Furnham et al. 2012: p.910).

The study of dysfunctional behaviour has a long history in psychology. Theorist such as Adler, Horney, Erikson, and Stack Sullivan argue that people's problems are based on how they interact with others. Individuals can best be described in terms of their beliefs and expectations as to how others will treat them (Hogan and Hogan, 2009). The scales of the HDS have their roots in several taxonomies of flawed interpersonal characteristics including Horney's (1950) "neurotic needs". Horney summarised these needs in terms of three themes or global factors: Moving Toward people (Managing one's insecurities by building alliances in which the threat of criticism can be minimised; Moving Away from people (Managing one's feelings of inadequacy by avoiding others); Moving Against people (Managing one's self-

doubts by dominating and intimidating others). The HDS will be discussed in more detail in the next chapter.

1.3 Research questions, aims and objectives

One of the main aims of this research study is to contribute to the literature that started with Bentz (1985), regarding the investigation of personality defects in organisations and managers using non-clinical measures. As a consequence of this approach, the locus has shifted from Babiak's (1995) study of a single, successful psychopath to Bentz's (1985) longitudinal investigation into dark side personality dimensions amongst managers in Sears, a large US retail chain. Bentz observed that otherwise intelligent and skilled managers failed due to "over-riding personality defects" including difficulty building teams, delegating, dealing with complexity, and maintaining relationships. Consistent with earlier studies (McCall and Lombardo; Bentz; Leslie and VanVelsor; Hogan, R., Hogan, J., and Kaiser) which found twelve published estimates of base rates of managerial failure ranging from 30% to 67% with an average of 50% suggesting that bad leadership is common and highly consequential for the effectiveness of organisations (Cited in Hogan and Hogan, 2009: p.2).

There is an emerging consensus that dark traits are those that lead individuals to *"derail"* in their everyday lives and that are likely to emerge under periods of stress (Hogan, 2007; Harms and Spain, 2015). The term "derailer" refers to "poor self-control and relationship problems (Hogan et al, 2010). They result from individuals applying interpersonal strategies that are no longer functional (Hogan, 2007). Such a definition provides a better alignment with research and shows that derailing characteristics often reflect strengths that become weaknesses when over-used (McCall and Lombardo; cited in Hogan and Hogan, 2009). Hogan and Hogan (2001) are of the view that the reason for leadership failure or "derailment" lies in the personality disorder of the leader. Hogan and Kaiser (2005) extended their model to suggest that personality directly determines leadership style, this in turn affects employee attitudes and team functioning and ultimately organisational performance.

A meta-analysis by Gaddis and Foster (2013), which was research made directly available as one of the outcomes of the pilot study as mentioned earlier, found that that not all dark side personality characteristics consistently have negative relationships with different work outcomes. However, reviewing the limitations of their analyses, they proposed a number of directions for future research examining relationships between dark side personality characteristics and job performance. This is particularly the case with regard to observer ratings of personality which may provide better predictions than self-ratings. That is:

"Observer ratings of performance provide incremental validity above and beyond self-ratings but, the reverse is not true".

Gaddis & Foster (2013) conclude that:

"Because similar research has yet to be conducted on the relationships between dark side personality characteristics and job performance, future research should explore these possibilities" (p.22)

In response to the call from Gaddis and Foster (2013), the dependent variable in this research analysis will be job performance. This research will also seek to extend the meta-analysis research conducted by O'Boyle et al (2012) who found that reductions in the quality of job performance were consistently associated with increases in Machiavellianism and psychopathy. This research study also tests for the possible presence of moderators of the relationships between each of the DT variables and job performance in response to calls from O'Boyle et al (2012) and LeBreton (2018) to examine the impact of contextual moderators. The moderators identified in the secondary sample that comprise this study are age, tenure, and gender.

This research study then, broadens the enquiry to include all the elements of the DT applying the HDS as a single, valid, and reliable research instrument investigating secondary data. This is something that has not been done before and will answer the call of researchers (Wu and Le Breton, 2011; O'Boyle et al, 2012; LeBreton et al, 2018) for improved measurement of the DT. Dark traits are distinguished from clinical pathologies in that they do not reflect an inability to function in everyday life (Hogan and Hogan, 2001).

Consequently, the initial research question, *"How do the dysfunctional behaviours of managers affect job performance?"* was broadened to incorporate the DT and the influence of moderators and forms three research questions.

They are:

RQ 1: What are the relationships between scores on the Dark Triad (DT) personality measures and job performance?

RQ 2: Will age, tenure, and gender act as moderator variables?

RQ 3: What are the relationships between scores on the Dark Triad personality measures and the Horney Global factors?

The overall objective of this research study is to answer these three research questions.

1.4 Thesis structure

This research study comprises six chapters and is so structured to answer the three research questions and to test ten research hypotheses derived from the research questions and from the literature review. This first chapter sets the context for the research which is to investigate the predictive power of the DT in explaining a key organisational outcome, job performance, whilst also assessing the role of other moderating variables against the three research questions.

Chapter two, the literature review, identifies the seminal research studies in the DT literature. It is a critical and systematic review and assessment of the key literature to identify research gaps to be addressed in the main research study.

The third chapter introduces the research philosophy and methodology which is defined and then discussed, prior to introducing the results of the pilot study. The scales that comprise the main research study are then introduced and discussed. They include the HDS, the Horney (1950) global factor scales and each of the DT scales. The mapping of the three DT scales to nine of the eleven HDS scales is described and shown. The three research questions and ten research hypotheses are identified along with the job performance research model. The data used in the main research study, based on a sample of 918 managers from a large US based retail chain store, is also introduced along with the full descriptive statistics for the dataset.

Chapter four covers the statistical analysis. T-tests, correlations and partial correlations are carried out on the demographic data as well as between the DT, HDS Scales and job performance. In addition, the Horney global factor scale correlations with the DT scales are included. The results of the hierarchical regression analysis of the research model as well the results of hierarchical regression analysis for each of the DT scales and job performance are reported. The relationships between each of the DT variables are also presented before concluding with an overview of the research model and hypotheses testing.

Chapter five discusses the main findings of the research and their links to the extant literature. Finally, chapter six summarises the main research findings and discusses the principal contributions to knowledge, theory, and practice of this research. It then proceeds to a summary of what has been learnt from a personal perspective throughout the research process before concluding with answers to the three research questions posed.

1.5 Contribution to knowledge, theory, and practice

The contributions made in this research are aimed at those researchers who are most likely to be interested in the independent variables applied in the research model and who would also consider clear empirical evidence of a moderated outcome to be of interest.

One of the major contributions to knowledge of this research is the finding that all three DT variables negatively and significantly predict job performance. This finding extends previous research which identified psychopathy and Machiavellianism as significant predictors. In addition, there is the compilation of a new scale for Machiavellian. This new scale comprises six scales from within the Hogan Development Survey (HDS: Hogan and Hogan, 2009). These scales are Excitable, Skeptical, Reserved, Leisurely, Bold, and Mischievous. The scale origins, their themes and implications are identified and discussed in the next chapter. In addition, this research extends the scale for psychopathy by adding the Bold, Colorful and Imaginative scales to the existing Mischievous scale in the HDS. The narcissism scale is also extended by the addition of the Cautious, Mischievous, and Imaginative scales to the existing Bold HDS scale.

Furthermore, this research adds to the debate in the literature between those researchers that believe that the DT is a single construct (the "lumpers") and those that believe they are ultimately separate constructs (the "splitters"). The overall findings support the "splitters" case in relation to two pairs of the three DT scales (Machiavellianism and narcissism and psychopathy and Machiavellianism).

The contribution to practice is that the HDS can be applied in employee selection, recruitment and development as this research confirms the viability of the HDS as a single, valid, and reliable questionnaire to measure all three Dark Triad personalities. The next chapter covers a systematic review of the key literature that relates to the dark side of personality.

2 Literature review

2.1 Introduction

As stated in chapter one, the focus of this research study is the DT. The sub-clinical corporate psychopath and narcissist along with the Machiavellian, are amongst those personalities that present problems for society in general and the corporate world in particular because of their shared tendency to be callous in their day-to-day dealings with others (Paulhus and Williams, 2002: Babiak and Hare, 2006: Furnham et al, 2013).

According to Easterby-Smith et al (2013), there are three key elements that should be included in any doctoral literature review. The first is an overview of the research topic that is under investigation, and which contributes to an understanding of how the research topic has developed over time. This overview was described in section 1.2 in chapter one which covered the background to the research problem. It is considered good practice that what should follow is a critical systematic review and assessment of the key literature to identify the research gaps to be addressed. The systematic review of the literature involves an objective process aimed at building a reliable base by accumulating knowledge from a range of key research articles audited for relevance and quality; finally, a supportive search, usually conducted at the end of the research to ensure no new important research that could significantly impact this research project is not missed.

The approach taken in this research study is to employ a systematic review of the literature. As Huff (2009) remarks, the synthesis of data from this type of search is the ideal starting point for empirical research or further conceptual development because the audience can be assured that the efforts of the researcher have taken previous work into account and will not duplicate the work of others (pp.148-154). Another key element of this approach is that it advises the research design by seeking the advice of a panel of experts as to the value of the research plan. The advice given by the panel of experts consulted with in this research is referred to later in this chapter and is covered in more detail in the methodology section in chapter three.

The aims of this literature review, therefore, are to provide a systematic and critical review of the key research concepts and arguments by the principal researchers in the discipline. The review attempts to identify areas of disagreement, gaps in the research as well as evidence of the need for further enquiry, concluding with a justification of the research hypotheses to be investigated and the research questions to be answered.

2.1.1 Search criteria

A Google Scholar alert for articles on the subject of psychopathy and/or psychopaths, organisations and performance was initially setup and then extended to include the dark triad, dark traits, narcissism, Machiavellianism, leadership, management, job performance, performance management and the Hogan Development Survey. In addition, further searches were conducted in Google, originally by the author which led to the Academia database, an online source of research articles that can be browsed before downloading. Finally, Research Gate, a network for scientists and researchers, was used to contact researchers directly for papers. It has over 16 million members from all over the world who use it to share, discover, and discuss research. There were no limits placed on the date range or geographical location. The articles identified were broad and covered research across clinical and non-clinical populations. The abstracts were read to determine their relevance to my research questions, research model and to the epistemological approach of the target audience. As a result, the initial research question based on a review of the psychopathy related literature was: *"How do the dysfunctional behaviours of managers affect job performance?"* This question will be broadened to incorporate the wider DT literature later in this chapter.

2.2 The Dark Triad

Amongst socially aversive personalities (those personalities who tend to cause strong dislike or disinclination amongst others), three have attracted the most empirical attention: Machiavellianism, narcissism, and psychopathy (Paulhus and Williams, 2002). The term "dark personalities" refers to a set of socially aversive traits in the subclinical range. Not extreme enough to invite clinical or forensic attention, they can get along (even flourish) in everyday work settings, scholastic settings, and the broader community (Paulhus, 2014).

The construct of Machiavellianism, in short, the manipulative personality, emerged from the work of Christie and Geis (1970) who published a measure of normal personality based on items and statements from Nicolo Machiavelli's original work, *The Prince, The Discourses* (1532). Their research showed that respondents that agreed with these statements were more likely to behave in a cold and manipulative fashion (Paulhus and Williams, 2002: p.557).

The construct of subclinical or normal narcissism emerged with the publication of the Narcissistic Personality Inventory (NPI; Raskin and Hall, 1979). Certain facets were retained from the clinical syndrome and include grandiosity, entitlement, dominance, and superiority. Its successful transition from the clinical to the subclinical sphere is supported by a strong

research literature (Campbell and Foster; Morf and Rhodewalt; cited in Furnham, Richards and Paulhus (2013)). Whether clinical or subclinical, others find the narcissist to be socially aversive (Leary, Bednarski, Hammon and Duncan; Paulhus; cited in Furnham, Richards and Paulhus, 2013).

The adaptation of psychopathy within the subclinical sphere is the most recent of the three (Paulhus and Williams, 2002). Even at the subclinical level, psychopathy is considered the more malevolent of the three DT elements (Babiak and Hare, 2006, Rauthmann, 2012, Furnham, Richards and Paulhus, 2013). Core character elements include impulsivity, thrill-seeking, low empathy, and an absence of anxiety (Hare; Lilienfeld and Andrews; cited in Paulhus and Williams, 2002). The development of non-clinical measures of all three constructs has permitted the evaluation of empirical associations in normal populations and these measures will be discussed in the following sections (2.2.1 - 2.2.4).

2.2.1 Psychopathy

"Not all psychopaths are in prison. Some are in the board room".

(Hare, 2002 cited in Babiak et al, 2010: p.175).

The Diagnostic and Statistical Manuals (DSM) published by the American Psychiatric Association (APA) have, up until relatively recently, referred to psychopathy under the heading of Antisocial Personality Disorder (ASPD). The DSM is a classification of mental disorders that was developed for use in clinical settings. The diagnostic categories are meant to be employed and interpreted by psychiatrists and psychologists with the appropriate clinical training and experience in diagnosis (American Psychiatric Association (APA: 2000: p. xxxii). The current version, the DSM-5 (APA, 2013) has "upgraded" the reference to the antisocial/psychopathic type (Millon, 2011: p.423). The essential feature of an antisocial personality disorder is a pervasive pattern of disregard for, and violation of, the rights of others. It is a pattern that begins in childhood or early adolescence and continues in adulthood. This pattern has also been referred to as *psychopathy, sociopathy or dyssocial personality disorder* because deceit and manipulation are also considered to be central features (DSM-5: APA, 2013: p.659).

These terms, psychopathy, sociopathy, and antisocial personality disorder are often treated as if they are interchangeable, but they refer to related, not identical conditions (Babiak and Hare, 2006, Smith and Lilienfeld, 2013). Sociopathy is not a formal psychiatric condition. It refers to patterns of attitudes and behaviours that are considered antisocial and criminal by society at large but are considered normal or acceptable in the sub-culture or social environment in which they have developed. The sociopath may have a well-developed sense of conscience and a normal capacity for feeling guilt, empathy, remorse, and loyalty,

but their sense of what is right or wrong is based on the norms and expectations of their respective group or sub-culture within which they have been socialised (Babiak and Hare, 2006).

There are said to be many routes to an antisocial personality, psychopathy is reportedly only one of them (Blair et al, 2006). ASPD is marked by a lifelong pattern of manipulation and violation of others' rights. Although similar in some ways with psychopathy, they are not synonymous. Psychopaths are a more specific group than are those with ASPD (Brinkley et al, 2004). An ASPD diagnosis requires a history of antisocial and criminal behaviour that may not necessarily be present in the psychopathic individual (Levenson, Kiehl and Fitzpatrick, 1995; Smith and Lilienfeld, 2013). As Babiak and Hare (2006) point out, the psychopathic personality includes such traits as a lack of empathy, grandiosity, and shallow emotion (glibness) that are not necessary for a diagnosis of antisocial personality disorder. ASPD is three to four times more common than psychopathy in the general population and in prisons (Babiak and Hare, 2006: p.19). Smith and Lilienfeld (2013) note that dimensional indices of psychopathy and ASPD tend to be only "moderately correlated" (e.g., $r = .50$).

The term antisocial harks back to its ancestral forerunner, "moral insanity" (Kraepelin; cited in Millon, 2011). Kraepelin identified the "morally insane" as suffering congenital defects in their ability to restrain the:

"…reckless gratification of … immediate egotistical desires" (Millon, 2011: p. 281).

Kraepelin referred to these conditions as "psychopathic states" and "psychopathic personalities" and was the first to assert that these disorders display themselves as lifelong morbid personalities (Millon, 2011). Consequently, it is the subclinical psychopath, seemingly able to operate with impunity within organisations, combining some of the features of the narcissist and the Machiavellian with antisocial tendencies, that focuses the attention within this research study of the DT.

It was Cleckley's clinical descriptions, insights, and speculations as detailed in *The Mask of Sanity* (1941;1976) that has had a strong influence on contemporary empirical investigations of psychopathy (Hare and Neumann, 2008; Millon, 2011). Cleckley went on to publish a list of sixteen interpersonal, emotional and lifestyle traits of psychopaths that he believed, based on case histories, classified the features associated with the psychopathic personality (See Appendix A). They include, superficial charm and intelligence, poor judgment, a failure to learn, lack of remorse and shame, unreliability, untruthfulness, and insincerity, absence of delusions or nervousness, impersonal sex life, absence of suicidal acts, antisocial behaviour, loss of insight, poverty in affective reactions, pathological

egocentricity, and an incapacity to love (Cleckley, 1941;1976). As Hare and Neumann (2008) point out, clinical profiles described within Cleckley's *Mask of Sanity* clearly convey that there is a role for antisocial behaviour to play in his description of psychopathy and that there would be problems in inferring psychopathy-related dispositions from only prosocial behaviour (p.229). Cleckley cited not only criminals as being psychopathic, but also provided case examples of businessmen, scientists, doctors, and psychiatrists who had psychopathic personalities (Brooks and Fritzon, 2020).

Hare (1980) expanded upon the work of Cleckley and refined the characteristics associated with psychopathic personality, developing the Psychopathy Checklist (PCL: Hare, 1980) from an item pool of 200 characteristics drawn from the literature. The Self-Report Psychopathy scale (SRP) was developed soon after from items that differentiated clinically diagnosed psychopaths from non-psychopaths (Hare, 1985). The PCL was revised by Hare (1991; 2003) and subsequently reduced to a 20-item checklist of characteristics and then became the Psychopathy Checklist-Revised (PCL-R). Research by Williams and Paulhus (2002) confirmed that the SRP has the same four-factor structure as the PCL-R originally. Considered the "gold standard" tool for assessing and identifying psychopaths (Edens, 2006; Mahmut et al 2007), the PCL-R has been modified for use in business research as the PCL-SV (Screening Version: Hart, Cox, and Hare, 1995) and as the B-Scan 360 (Mathieu, Hare, Jones, Babiak and Neumann, 2013; Mathieu, Neumann, Babiak and Hare, 2015). These instruments are discussed in the sections that follow.

The PCL-R was designed as a research scale to measure the clinical construct of psychopathy (Hare and Neumann, 2008). The PCL-R uses a semi-structured interview, case history information and specific scoring criteria to rate each of 20 items on a 3-point scale (Hare and Neumann, 2008). 0 (no signs of the trait), 1 (some indications) and 2 (clearly indicated for each trait). Eighteen of the items form four factors or dimensions. The first dimension is *Interpersonal*. This refers to glibness/superficial charm, a grandiose sense of self-worth, pathological deception, conning/manipulative; The *Affective* factor or dimension refers to a lack of remorse or guilt, shallow affect, callousness/lack of empathy and a failure to accept responsibility for actions. The *Lifestyle* dimension refers to a need for stimulation and a proneness to boredom, a parasitic lifestyle, lack of realistic long-term goals, impulsivity, and irresponsibility. Finally, the *Antisocial* dimension refers to poor behavioural controls, early behaviour problems, juvenile delinquency, revocation of conditional release and criminal versatility. Two other items (promiscuous sexual behavior and many short-term relationships) do not load on any factor but contribute to the total PCL-R score. The Interpersonal/Affective dimensions and the Lifestyle/Antisocial dimensions (See Appendix B) comprise, respectively, the PCL-R Factors 1 and 2 (Hare and Neumann, 2008: p.220)

The results show that the PCL-based psychopathic personality dimensions reflect a broadly antisocial and "under-controlled" personality disposition, involving deceptiveness, pathological lying, and absence of remorse and guilt, as well as irresponsible, impulsive, and versatile antisocial tendencies (Hare and Neumann, 2008). The next paragraph summarises the principal studies that claim to present empirical evidence for the existence of the corporate psychopath. Additional psychopathy measures are described and assessed (Please refer to the table in Appendix C).

Babiak (1995) hypothesised that the tendency of psychopaths to manipulate and deceive others leads to their rise in the ranks of organisations. His subject, Dave, was later the centrepiece of an influential book entitled, *Snakes in Suits: When Psychopaths Go To Work* (Babiak and Hare, 2006). Previous research on psychopathic populations and penal settings up to that point suggested that they led unsuccessful lives. Babiak's research is presented as a case study of a successful industrial psychopath operating within an organisation undergoing rapid and chaotic change at the executive level as well as culturally. It was not unlike those typically experienced by maturing entrepreneurial organisations (Flamholz, cited in Babiak, 1995).

Babiak also applied the Psychopathy Check List: Screening Version (PCL:SV; Hart, Hare and Forth, 1995). The PCL:SV was developed to complement the Psychopathy Checklist—Revised (PCL-R; Hare. 1991), and for use outside forensic settings (Hart, Hare and Forth, 1995). The PCL: SV has fewer items (12 in all) than the PCL-R, but scores on these two instruments have the same theoretical and practical meaning. Most people in the general population would score less than 3 on the PCL:SV, whilst the average score for criminals is around 13. A cut score of 18 is typically used for a diagnosis of psychopathy (Babiak and Hare, 2006, p.28). The main finding of Babiak's single case study was that the subject was able to effectively manage discrepant views of supporters and detractors resulting in successful career movement and is in line with the earlier research by Cleckley (1976).

Board and Fritzon's (2005) study was influenced by Babiak's earlier case study. As Smith & Lilienfeld (2013) note, "their research findings have been widely cited as evidence for a heightened prevalence of psychopathic personality traits in business settings" (Clow and Scott, 2007; Coynes and Thomas, 2008 cited in Smith & Lilienfeld, 2013: p.210). The aim of their research was to investigate whether there was an overlap between the personality disorder (PD) profile of a *"normal"* population and the PD profiles of *"clinical"* populations known to have high base rates in PDs (p.19).

The authors obtained data from a sample of 39 business managers and chief executives from leading British companies. Their personality profiles were compared with those of a mentally disordered offender sample obtained from patients at Broadmoor Special Hospital in Berkshire, England. One thousand and eighty-five (1085) current and former male patients were selected, and each had received a legal classification of either (Mental Illness (MI) or Psychopathic Disorder (PPD). The sample was divided into two sub-groups using the legal classification (For MI; $n = 768$. For PPD; $n = 317$). Personality disorder data on the participants were collected using the dimensional approach of Morey et al (cited in Board and Fritzon, 2005). These scales are derived from the Minnesota Multiphasic Personality Inventory (MMPI: Hathaway and McKinley; cited in Board and Fritzon) and are designed to assess features of DSM-III (American Psychiatric Association, 1980) personality disorders (Cited in Smith and Lilienfeld, 2013, p:210). They found that senior business managers scored significantly higher on the histrionic personality disorder scale than both the MI and PPD patients. They also scored higher than both comparison groups on the narcissistic personality disorder scale and the obsessive-compulsive personality disorder scale. The authors interpreted these findings as evidence for an elevated prevalence of psychopathic personality traits in senior business management settings. They conclude:

"The reason why people with a PD profile such as that of the business manager sample progress to positions of legitimate power and authority, rather than some socially deviant alternative, remains perplexing" (Board and Fritzon, 2005: p.28).

One of the few studies made of corporate psychopaths where the PCL-R was applied, was carried out by Babiak, Neumann and Hare (2010). The study provided an opportunity to examine psychopathy and its correlates, which comprised demographic and status variables, as well as in-house 360-degree assessments and performance ratings. (Babiak, Neumann and Hare, 2010, p.174). This was based on a sample of 203 corporate professionals selected by their companies to participate in management development programmes. One-hundred and fifty-eight had the rank of supervisor, manager, vice-president, CEO/president, divisional president, or other management rank.

The results of confirmatory factor analysis (CFA) and structural equation modelling indicated that the underlying structure of psychopathy in the sample was consistent with that found in community and offender studies. It provided evidence that a high level of psychopathic traits does not necessarily impede progress and advancement in corporate organisations (Babiak and Hare, 2006). Most of the participants with high psychopathy scores held high ranking positions despite negative performance reviews and other 360-degree feedback data in the hands of corporate decision makers.

Overall, the findings suggest that psychopathy was positively associated with in-house ratings of Charisma/Presentation style (creativity, strategic thinking, and communication skills) and negatively associated with ratings of Responsibility/Performance (being a team player, leadership and management skills and overall accomplishments).

Whilst The PCL-R is widely validated for use with offenders, as well as increasing evidence that it generalizes well across a variety of populations when scored by trained and experienced raters (Hare, 2003; Bolt, Hare, and Neumann, 2007), some have voiced concerns about using the PCL-Revised (PCL-R) in non-forensic populations (Cooke and Michie, 2001). Smith and Lilienfeld (2013) in their review of the psychopathy literature point to its substantial reliance on file information which may limit its use in business and other workplace settings. In addition, the PCL-R and its derivative, the PCL:SV, are restricted to those that have the appropriate qualifications, making them unsuitable for many human resources personnel to administer and the item content may not be appropriate for use in business settings (Matthieu, Neumann, Babiak and Hare, 2015, p.2; Skeem et al, 2011).

A brief note as to the other measures mentioned in table 2 in Appendix C: The Management Research Version (PM-MR V: Boddy et. al, 2010) is an 8-item observer-report measure modelled after the PCL-R Factor 1 criteria deemed to be particularly relevant to the identification of corporate psychopathy. Although the internal consistency of the measure is high (Cronbach's Alpha = .93. Boddy et. al., 2010), Smith and Lilienfeld (2013) contend that there have been no attempts to validate this measure using external criteria such as the PCL-R or self-report indicators of psychology. However, Smith and Lilienfeld (2013) do report that the explicit focus of the PM-MRV on the interpersonal and affective features of psychopathy (Factor 1 in the PCL-R) makes this measure potentially well-suited for assessment purposes in business settings.

As for the Business Scan 360 (B-Scan 360), Smith and Lilienfeld (2013) mention that this may be a promising psychopathy measure for use in business settings, especially as it is tailored for the workplace. However, the B-Scan 360 has received no published construct validation using external criteria. Its use in clinical and research settings must therefore be viewed as preliminary (Smith and Lilienfeld, 2013: p.209; Brooks and Fritzon, 2020).

To close this section, Smith and Lilienfeld (2013) conclude that the "clinical lore" surrounding psychopathy in the workplace imparts the story of ruthless bullies who rise to the top of echelons of organisations, lying in wait to destroy not only companies and lives but also economies (Boddy, 2005, 2006; Boddy, Ladyshewsky and Galvin, 2010). These claims, though strong, remain premature given the *"paucity of empirical corroboration"* (Smith and Lilienfeld: p.206). Smith and Lilienfeld offer several recommendations for future research. Principally, a full examination of psychopathy in the workplace should not overlook its

potentially adaptive manifestation. They also point to the close relationship psychopathy has with both narcissism and Machiavellianism, the other two components of the "dark triad" and advise that future research should clarify the unique correlates, if any, of psychopathy in the workplace (p.216).

2.2.2 Narcissism

As Greek mythology has it, Narcissus, having spurned the advances of the nymph Echo, was punished by the goddess Nemesis, and consigned to pine away as he fell in love with his own reflection in a pond. That the narcissist loves himself is a fallacy. He loves the *reflection* of himself (Vaknin, 2001). The damaged personality that does not know the true self, and so projects an ideal self to others, expecting, even demanding, that the ideal self be loved and admired in return. This amply sums up the nature of the Narcissus namesake, the narcissist:

"…punished by echoes and reflections of their problematic personalities up to this very day" (Vaknin, 2001: p.5).

Opposite in orientation to the dependent and histrionic personalities (please refer to table 2.3 for descriptions of these personality disorders) that look to others to provide the reinforcements of life, both the CEN narcissistic (confident styles, egotistic types, narcissistic disorders) and the ADA (assertive styles, denigrating types, antisocial disorders) spectra, turn to the self for gratification:

"…having learned to rely on themselves rather than others for safety and self-esteem" (Britton; cited in Millon, 2011: p.375).

Although both devalue the standards and opinions of others and find gratification largely within themselves:

"…their life histories and the strategies they employ for achieving these needs are substantially different" (Millon, 2011: p.375).

In contrast to the ADA antisocial personality, the self-centeredness of the CEN narcissist is not anchored in feelings of deep distrust and animosity. Narcissistic individuals are *"benignly arrogant"* (Millon, 2001). They exhibit an indifference to the standards of shared social behavior and feel themselves above the conventions of the cultural group, exempt from the responsibilities that govern and give order and reciprocity to societal living. There is an assumption that others will put aside their desires in favour of the narcissists' comfort and welfare; they operate in the belief that their mere desire is justification for possessing whatever they seek. Their disdainfulness is matched by their exploitativeness, their conviction that they are entitled to be served and to have their own wishes take precedence

over others, without expending any effort to merit such consideration (Hogan and Hogan, 2001). In short, the narcissist possesses illusions of an inherent superior self-worth and moves through life with the belief that it is his or her inalienable right to receive special considerations (Millon, 2011).

It was Havelock Ellis (cited in Millon, 2011), writing in the late nineteenth century, who first gave psychological significance to the term "narcissism" by conceptualizing it as autoeroticism, that is, sexual gratification without stimulation or evocation by another person. Although Freud (cited in Judge et al, 2006) did not use the term narcissism to represent observations, he used the term to describe the relationship between the *libido* and the *ego.* Since Freud's conception of the disorder, psychologists have considered narcissism to sit within the domain of clinical psychology and in a somewhat different manner to Freud (Judge et al, 2006).

Writing over forty years ago, it was the object relations theorist Otto Kernberg, and the self-psychology theorist Heinz Kohut, (cited in Rosenthal, 2006) who advanced the theory that narcissism constitutes a character pathology or personality disorder. Kernberg described patients who presented with an unusual degree of self-regard, an inflated concept of the self with an inordinate dependence on the adulation of others, living emotionally shallow lives, a lack of empathy, vacillating extremes of the idealisation and devaluation of others, exploitativeness, and a charming outward demeanour that conceals an underlying coldness and ruthlessness. "This constellation of haughty and grandiose behaviours is a defense against *"oral rage"*, a pathological process in psychosexual development and an expression of vengeful feelings toward either coldly indifferent, or aggressively rejecting parents" (Rosenthal, 2006: p.43).

On the other hand, Kohut suggested that narcissism has its own independent developmental sequence. This sequence stretches from infancy to adulthood. There are mature, healthy narcissistic processes that produce behaviours such as the use of humour and creativity. Pathological narcissism occurs when the individual is incapable of integrating the idealised ideas that one has of oneself with the stark realities of one's own shortcomings and inadequacies. It is because of the clinical and theoretical interest in narcissism that the APA first included the construct as an Axis II PD in the third edition of the DSM (DSM-III; APA, 1980) and which has also appeared in subsequent revisions (DSM-IV-TR: APA, 2000; DSM 5: APA, 2013). The diagnostic criteria were largely developed from Kernberg's formulation (1967, 1989 cited in Rosenthal, 2006: p.43).

The narcissistic personality disorder (NPD) is defined in the DSM IV-TR (APA, 2000) as: *"A pervasive pattern of grandiosity (in fantasy and behaviour), need for admiration, and lack of empathy, beginning by early adulthood and present in a variety of contexts"* (p.717).

This is usually indicated by the presence of five, or more, of the following behaviours: shows a grandiose sense of self-importance. That is, the narcissist has a tendency to exaggerate achievements and talents and expects to be recognised as superior without the necessary achievements; is pre-occupied with fantasises of unlimited success, power, beauty or ideal love; believes that he, (of those diagnosed with NPD, 50%-75% are male – DSM-IV-TR: APA, 2000: p.716), or she is somehow "special" and unique and can only be understood by other *"special"* or high status people or institutions; has a requirement for excessive admiration; a strong sense of entitlement; is interpersonally exploitative and will take advantage of others for his or her own ends; is callous and lacking in empathy towards the feelings of others; is often envious of others and feels that others are envious of him or her; demonstrates haughty attitudes and behaviours. Along with the psychopathic antisocial personality disorder, the narcissistic personality is grouped in cluster B within the DSM nomenclature. Individuals with this disorder appear more dramatic, emotional, or erratic in their behaviour.

The DSM is helpful in identifying the most useful differentiating feature in discriminating the NPD from the other disorders, such as histrionic, antisocial, and borderline disorders that comprise cluster B disorders, which is the *grandiosity* characteristic of the narcissist. Although the histrionic, antisocial, borderline and NPD may require much attention, those with NPD specifically need that attention to be admiring. Individuals with antisocial and NPD will share a tendency to be tough-minded, glib, superficial, exploitative, and lacking empathy. However, those with NPD do not necessarily include characteristics of impulsivity, aggression, and deceit. In addition, those individuals with antisocial personality disorder may not be as needy of the admiration and envy of others as those with NPD (DSM-IV-TR: APA, 2000: pp.216-7).

Although secure in the belief that they are gifted, unique and with special needs beyond the comprehension of most others, the narcissist has, paradoxically, fragile self-esteem, constantly in need of bolstering. The DSM points out that they are also exceptionally sensitive to setbacks, feeling both humiliated and degraded, they mask this with rage and defiant counterattacks, in line with Kernberg's notion of *"oral rage"*. They may even withdraw from situations that lead to failure and mask their grandiosity with displays of humility.

The concept of narcissism originated in clinical literature and practice (Furnham and Crump, 2005). Along with the concept of psychopathy, both remain as personality disorders

in the DSM. As Furnham et al (2013) note, psychiatric classification has traditionally been categorical. For example, offenders have often been categorized as psychopaths if they have exceeded a score of 30 on Hare's (1991) Psychopathy Check List (PCL). In contrast mainstream personality assessment has relied on dimensional models such as the Big Five and used trait questionnaires as the primary means of assessment. Within the latter tradition, pathological traits are viewed as extremes of *"normality"* (Wiggins and Pincus cited in Furnham et al, 2013).

Narcissism migrated into the mainstream literature with the publication of the Narcissistic Personality Inventory (NPI; Raskin and Hall, 1979). Based on the DSM-III definition, it features 54 items that measure a general construct of trait narcissism (that is narcissism within non-clinical populations). Originally comprising two hundred and thirty-three items, each item is a pair of statements, one narcissistic and the other non-narcissistic. Subjects are required to check one or two statements. For example: A: I really like to **be** the centre of attention; B. It makes me uncomfortable to be the centre of attention. As Raskin and Hall note, the inventory is:

> *"…not necessarily a measure of a personality **disorder**, although future research may show that persons diagnosed as having a narcissistic personality disorder score high on the inventory. For the present, it should be regarded as a measure of the degree to which individuals differ in a trait we have labelled "narcissism.""* (p.590).

In contrast to Raskin and Hall's (1978) original conception of a single construct, a factor analysis revealed four salient dimensions: *leadership/authority, superiority/arrogance, self-absorption/self-admiration,* and *exploitativeness/entitlement* (Emmons cited in Furnham et al, 2014: p.1675).

Raskin and Terry (1988) further developed the NPI, producing the NPI-40, which has become the most popular measure to assess NPD in social psychological research (Cain et al, 2008; LeBreton et al, 2018). The NPI-40 comprises just 40 items with a Guttman alpha of internal consistency statistic of .83. In this version of the NPI seven dimensions were also identified: *authority, exhibitionism, superiority, vanity, exploitativeness, entitlement,* and *self-sufficiency*—all of which were found to have internal consistency levels no lower than .50. The total scale and its dimensions were found to correlate with variety of trait rankings on self-confidence, physical attractiveness, pleasure seeking, and assertiveness as measured by other instruments included in the Institute of Personality Assessment and Research (IPAR) battery (Furnham et al, 2014: p.1675).

As LeBreton et al (2018) note, the factors extracted from the NPI tend to be consistent with the core features of narcissism, as noted above and which Pincus et al (cited in

LeBreton et al, 2018) refer to as *"narcissistic grandiosity."* The authors noted that this aspect of narcissism is often manifested as inter-personally exploitative acts, such as a lack of empathy, intense envy, aggression, and exhibitionism. Pincus et al also suggest that *"narcissistic vulnerability",* which refers to the conscious experience of helplessness, emptiness, low self-esteem, and shame, represents another important aspect of narcissism. However, most research in the organisational sciences focusses on the narcissistic grandiosity as the most relevant to DT research. As LeBreton et al (2018) note:

> *"This emphasis on grandiosity, along with a single global scale measuring narcissism, has stemmed largely from the dominance of the NPI in the organisational sciences"* (p.389).

In the workplace, the narcissistic individual has a grandiose sense of self-importance, exaggerating their talents, expecting to be recognised as superior without the commensurate achievements. They believe that they rightly deserve the trappings of success that reinforce their feelings of "specialness": bigger offices and salary, inflated job titles, larger budgets, and support staff to do with as they please. The narcissist handles stress and heavy workloads badly but seem to do so with ease. Persistent under pressure, they refuse to acknowledge failure or mistakes. Resistant to feedback and any attempts to coach them, they never learn from experience (Furnham, 2015: p.227-9).

Narcissism is not necessarily a handicap in business. Kets de Vries (2006) argues that a certain degree of narcissism is an essential pre-requisite for leadership. If a leader is articulate, educated as well as good-looking, his or her narcissism may be viewed as acceptable. The bright-side narcissist can be a good delegator, team leader and mentor who delivers results. However, the subordinate can learn quickly that things can go wrong especially when the narcissistic manager is crossed or slighted and quickly expresses anger.

It could be argued, notes Furnham (2015), that many organisations at times have the need for some of the characteristics of narcissistic leaders. Like the way that they provide a strong sense of vision and have the courage to make bold decisions. They can temporarily energise faltering organisations or businesses. However, he notes, that one of the most important explanations for the failure of narcissistic leaders is poor decision-making. There are many traits that can explain this, such as the inability to learn from one's mistakes and considerable risk-taking based upon performance hopes rather than hard data, with an insensitivity to the social constraints of breaking the rules. It demonstrates a preference for what is described as System 1 thinking, which is typified by fast, automatic, frequent, emotional, stereotypic, and subconscious thinking and decision-making that often causes the most problems. It favours judgement over analysis. The narcissist does not have a habit of rational analysis or dialogues with others. The decisions they make favour the heart not the

head. They are based on their special ability of insight into complex problems to arrive at the optimal solution.

Paunonen et al (2006), identified two strands in the narcissistic literature. The "dark side" is that although many narcissists are described as charismatic, their egotistical Machiavellianism derails them in the end. The "bright side" suggests that narcissists are low on depression and anxiety and high on subjective well-being. Their strong need for power control and status serves them well to obtain leadership roles. However, their inward focus usually leads to their own self-destruction. Interestingly, compared to the migration of narcissism and psychopathy into the mainstream of personality research as sub-clinical personality disorders, Machiavellianism has an entirely different aetiology.

2.2.3 Machiavellianism

Since the publication of *The Prince, The Discourses* in 1532, the name of its author, Niccolo Machiavelli, has come to designate the use of guile, deceit, and opportunism in interpersonal relations. This construct drew the attention of researchers in psychology and management when Christie and Geis (1970) published a personality measure based on Machiavelli's principles. The "golden standard" of measuring Machiavellianism has become Christie and Geis's (1970) MACH–IV which is applied in almost all studies (Fehr, 1992, Rauthmann, 2013) and comprises twenty items based on Machiavelli's writings. The Machiavellian personality is defined by three sets of inter-related values: a belief in the effectiveness of manipulative tactics in dealing with people (e.g., "*Never tell anyone the real reason you did something unless it is useful to do so*"); a cynical view of human nature (e.g., "*It is safest to assume that all people have a vicious streak and it will come out when they are given a chance*"); a moral outlook that places expediency above principle (e.g., "*It is hard to get ahead without cutting corners here and there*").

Christie and Geis (1970) identify four characteristics that a person who is effective in controlling others will have. The first is *a relative lack of affect in interpersonal relationships*. This is marked by low empathy and treatment of others as objects to be manipulated. "Once empathy occurs, it becomes more difficult to use psychological leverage to influence others to do things they may not want to do" (p.3). The second is *a lack of concern with conventional morality.* Conventional morality considers that lying, cheating and other forms of deceit, though common, are reprehensible. Whether amoral or immoral, they take a utilitarian view of their interactions with others. Third, is *a lack of gross psychopathology.* In other words, they have good reality checks and do not seem to fit into any other category of personality disorder (Furnham, 2015). Finally, there is *low ideological commitment.* Their focus is on the pursuit of tactical goals in the short-term. So, consistent with Machiavelli, high

scorers on the questionnaire measure are cynical, unprincipled, believe in interpersonal manipulation as the key for life success, and behave accordingly. They are, as Rauthmann (2013) observes, *agentically* motivated (e.g., for money, power, status) rather than *communally* (e.g., for love, family, harmony). Although this would not have been Machiavelli's original conceptualisation. They are more concerned with higher career commitment but less organisational commitment (Zettler, Friedrich, and Hilbig, 2011). O'Boyle et al (2012) comment that narrative reviews of the literature by Fehr, Samson and Paulhus (1992) and Jones and Paulhus (2009) generally confirmed these characterisations of Machiavellians (p.558).

Christie and Geis (1970) end their ground-breaking book with a chapter entitled, "Implications and Speculations". Those high in Machiavellian traits view those low in those traits as out-of-touch and naïve, whilst the low Machs see their High Mach counterparts as immoral and lacking in compassion. This model leads the authors to ask under what conditions would a Mach show better or worse leadership behaviour. They believe that it has to do with the structure of the organisation. They note that:

"In general, our observations and theoretical position suggest that that anyone extremely low on Mach would make a poor administrator. He would be too likely to become affectively involved with those whom he was presumably supervising and lack the detachment necessary to depersonalise his relationships with them when a cognitive analysis of the situation was necessary. In almost any organisation hard decisions have to be made which have negative consequences for some of its members- decisions such as not promoting or even firing an ineffective worker who is a nice guy, knowing when to tell people to shape up and being able to do so, and a host of other contingencies which demand taking a hard line for the benefit of the organisation.

The problem with extremely high-Mach administrators is that their cool cognitive analysis of the needs of the organisation coupled with a disregard for the individual needs of those within it could quite easily lead to disaffection and problems of morale which can cripple the organisation" (p.357).

Various researchers have looked at the Machiavellian in the workplace. Those proposing a positive relationship point to the Machiavellians' ability to take on the attitudes and behaviours of those around them whilst subtly manipulating the situation to their favour This skill, it is argued, can potentially allow those high in Machiavellianism to establish powerful social networks, gain the trust and respect of co-workers and extract desired outcomes thus improving job performance (Hurley, cited in O'Boyle et al, 2012). Organisational citizenship behaviours are often motivated by altruistic intentions, the

Machiavellian may engage in a public display of these behaviours to gain favours and to portray themselves in the best possible light (Kessler, cited in O'Boyle et al, 2012). Machiavellianism paired with a high degree of social effectiveness may result in the capacity to mask from others the more aversive aspects of the syndrome (Witt and Ferris cited in O'Boyle, 2012). Becker and Dan O'Hair (2007) note that the Mach's *"latitude for improvisation"* makes them good impression managers. Other researchers note that Machs tend to be relatively successful in their careers, particularly when they work in unstructured and less organised settings. As organisational structure increases, their success tends to decrease. This could be due in part to a lack of success in politicking due to an erroneous belief in their skill at manipulating others (Ferris and King; Ferris et al; cited in O'Boyle et al, 2012). The next section discusses the DT and job performance.

2.2.4 Job performance and the Dark Triad

Researchers are agreed that job performance mainly consists of two main subdimensions, task performance and contextual performance. Task performance is dependent upon individual levels of competence in the technical tasks required by a given job; in contrast, contextual performance is concerned with the interpersonal skills that facilitate or inhibit task-related activities (Motowidlo, Borman and Schmit, 1997; Motowidlo, 2003; Moscoso and Salgado, 2004). Personality has an impact on contextual performance and ultimately influences individual job success. Dysfunctional personality dispositions impair an employee's efforts to "get along" with others within the contextual domain. If a person's job requires interpersonal, as opposed to purely technical skill, task performance can also be negatively impacted by dysfunctional dispositions. Ultimately, this will thwart an individual's efforts to "get ahead" of others (Hogan and Hogan, 2009: p.3).

One of the reasons put forward by researchers for studying the DT is that it is possible to consider the three dimensions as related to derailment and problems at work. Social exchange theory (Blau; Cropanzano and Mitchell; Thibault and Kelley; cited in O'Boyle et al, 2012: p.559) suggests that employees work in exchange for direct and specific rewards, such as pay, as well indirect socioemotional rewards such as admiration and status.

"These exchanges create relationships among employees and employers, which are strengthened when (a) the rewards are valued ones and any costs created by the relationships are minimised; (b) exchange partners trust each other to fulfil their obligations over the long-term; (c) the exchange is judged to be a fair one, with fairness defined primarily by mutual adherence to the norm of reciprocity; and (d) both parties develop a psychological commitment to the relationship, as indicated by increased affective attachment, a sense of

loyalty, mutual support, and an authentic concern for the other's well-being" (O'Boyle, et al, 2012: p.559).

Because those personalities that comprise the DT are so selfish and self-serving, their evaluation of costs and rewards, their willingness to ignore obligations and reciprocity and their lack of emotional attachment to others will likely undermine work relationships. The Machiavellian is cynical and distrustful and less likely to assume that they will be paid reciprocally for any extra effort that they put into the job. The narcissist feels that they will always outperform their co-workers and do not see why the rules of reciprocity and obligation should apply to them. The mean and insensitive demeanour of the psychopath means that they are less likely to act in ways that will please or help others in the workplace (Furnham et al, 2015).

LeBreton et al (2018) note that historically, research on the link between DT traits and job performance has been inconclusive. From the viewpoint of organisational psychology, the role of Machiavellianism with regard to job performance in particular has been examined intensively (e.g., Aziz, May, and Crotts; Jaffe, Nebenzahl and Gotesdyner; Russell; cited in Zettler and Solga, 2013). However:

"…such efforts notwithstanding, there is still no consensus about Machiavellianism's function and value with respect to this important outcome "(Zettler and Solga, 2013: p.545).

Interest in the relationship between narcissism and performance has long attracted the attention of scholars because they identify narcissism as a key ingredient in organisational success (Grijalva, Harms, Newman, Gaddis, and Fraley, 2015). However, to date, research has not rendered a consensus regarding the role narcissism plays in organisational performance. Some studies have a found a positive association (Maccoby, 2000) others a negative association (Soyer, Rovenpor and Kopelman, 1999) and others have suggested no relationships at all (e.g., Judge, LePine and Rich, 2006). The mixed evidence emanates from the use of different measures of both narcissism and performance, either self-reported or by use of objective measures (Campbell, Hoffman, Campbell and Marchisio, 2011). As for psychopathy, as was discussed earlier in section 2.2.1, the evidence linking it to job performance is limited.

In an effort to rectify this, O'Boyle et al (2012), in a major meta-analysis of over 40,000 people, examined the criterion-related validity of the DT traits for predicting job performance and counterproductive workplace behaviours. The authors approached their meta-analysis from the perspective of an evolutionary account of the DT which stresses its adaptive value in terms of extracting resources for the individual from the collective. In social species, such as within human groups, relationship sustaining processes, such as

cooperation, compassion, reciprocal altruism, and the need to feel included are viewed as evolutionary stable strategies. However, under certain conditions, evolution also favours those that employ more self-serving strategies. The Machiavellian, the narcissist and the psychopath differ in emphasis and style, however:

"…their basic strategy is one of apparent and covert exploitation of conspecifics" (O'Boyle et al, 2012: p.559).

Estimates suggest that as many as three million employees and employers could be classified as fully expressing psychopathy (Babiak and Hare, 2006; Babiak Neumann and Hare, 2010 cited in O'Boyle et al. 2012: p.560). Babiak and Hare (2006: p.193) suggest that 3.5% of top executives in organisations earn extremely high scores on standard measures of psychopathy. A figure which is considerably higher than that found in the general population (1%). As is the case with the Machiavellian and the narcissist, some individuals who are psychopathic in their orientation can succeed in the corporate setting, particularly if their work requires a rational and emotionless behavioural style; a consistent focus on achievement, even if that means harming others, with a willingness to take risks and is accompanied by a charismatic demeanour (De Paulo; Yang and Raine cited in O'Boyle et al. 2012).

Such situations are the exception because the psychopath's action would be seen, more often than not, as breaching the basic principles of social exchange theory which covers reciprocity, trust, co-operation, and resource exchange. Psychopathy is also associated with a lack of diligence and a disdain for deadlines. In many corporate settings this type of orientation will lead to failure. Consequently, if their performance reviews and evaluations depend in part or in whole on their ability to work well with others, then their overall performance will likely be negative (O'Boyle et al. 2012).

O'Boyle et al (2012) maintain that the consistent violation of the basic assumptions of a fair exchange relationship makes social exchange theory a likely framework for conceptualizing the impact of the DT on work behaviours. O'Boyle et al (2012) hypothesised that Machiavellianism, psychopathy, and narcissism would all consistently and negatively relate to job performance. The authors found that both Machiavellianism and psychopathy have significant relationships with job performance, but that narcissism does not. The authors also investigated the moderating effect that holding positions of authority (such as managers, leaders, police officers, corrections officers) and group culture (In-group collectivism – IGC) exerted on the relationship of the DT to job performance. Their results indicate that the relationship between narcissism and performance is negative and significant for those individuals in positions of authority. The relationship between narcissism and

performance was negative and stronger for cultures with higher levels of in-group collectivism.

"Overall, these findings suggest that a simple bivariate relationship between DT traits and job performance may be an oversimplification and researchers should consider possible moderators of the relationship between the DT and job performance. In addition to moderators, researchers may also wish to expand their theoretical perspectives to better accommodate curvilinear models" (LeBreton et al, 2018: p.393).

As Furnham and Trickey (2011) point out, there is now a growing research base using the HDS to investigate the presence of dark side factors in the workplace. Studies by Furnham et al (2013) found that the Bold, Mischievous and Colorful (Narcissistic, Antisocial/Psychopathic and Histrionic) (Moving Against) types tended to get more quickly promoted than others. In an earlier study of sales and management potential, Furnham and his colleagues (2012) found that those who scored high on the HDS Mischievous, Colorful and Imaginative scales, also scored high on sales potential. Managerial potential was associated with those that scored high on the Bold, Imaginative and Diligent scales.

Carson et al (2012), in a large study applying the HDS measure, looked at 1,796 employees in a large retail organisation. They were particularly interested to know how the Moving Against and Moving Away factors were related to job tenure, being fired, and leaving the organisation altogether. They found that those managers with dysfunctional Moving Against tendencies were more likely to leave. They concluded that their findings supported their contention that derailment potential is related to the presence of Moving Against tendencies and not merely the absence of functional or effective personality traits (for example, conscientiousness and extraversion). They also found that managers who have a tendency to "move away" from others express needs for self-sufficiency, independence, and perfection (Horney, 1950). These needs may interfere with the capacity to work collaboratively in the workplace. However, managers who exhibit these needs may be perceived as maintaining rigorous performance standards, with high expectations of themselves as well as subordinates:

"These qualities may help managers overcome some of the derailment potential behaviours, including failing to deliver results and failing to take a stand. Our results also indicate that dysfunctional interpersonal tendencies relate to involountary turnover directly" (Carson et al, 2012: p.301).

Gaddis and Foster (2013) looked at critical work behaviours of leaders across the globe and how scores on the dark side personality measures predict those behaviours. They contend that management influences organisational performance and that some managers

are more effective than others. Drawing on Bloom and Van Reenen's (2007) research on over 700 manufacturing firms in the US, France, Germany, and the UK shows that companies that use effective management practices, as noted below, are more profitable than those that do not. The reason for this is because senior leadership drives management practices and ultimately determines the fate of organisations (Hogan, 2007)

"….which is of concern given research suggesting that between 33% and 61% of leaders act destructively" (Aasland, Skogstad, Notelaers, Nielsen, and Einarsen, 2010 cited in Gaddis and Foster, 2013: p.1).

Bloom and Van Reenen's (2007) work relates to several strands in the econometric literature which emphasises the importance of product market competition in increasing productivity. Their study provides support for the view that the productivity-enhancing effects of competition work through improving average management practices. Second, it is the view of some economic historians, such as Landes (1969) and Chandler (1994), who have claimed that the relative industrial decline of the United Kingdom and France in the early twentieth century was driven by their emphasis on family management, compared to the German and American approach of employing professional managers. Bloom and Van Reenen's results suggest that this phenomenon is still important almost a century later. A third strand is work on the impact of human resource management (HRM) which also finds that these management practices are linked to firm performance. Finally, there is the recent contribution of Bertrand and Schoar (cited in Bloom and Van Reenen, 2007). They focus on the impact of changing CEOs and CFOs in large, quoted US firms. This will tend to reflect the impact of management styles and strategies, which they feel complements their work, emphasizing the practices of middle management. They see management practices as more than the attributes of the top managers:

"They are part of the organizational structure and behavior of the firm, typically evolving slowly over time even as CEOs and CFOs come and go" (ibid. p.1355).

There is also speculation as to the cost of ineffective leadership. Estimates vary between $1.5 to $2.7 million for each failed senior manager (DeVries and Kaiser, 2003). Adjusting for the effects of inflation would double these figures today and that is without factoring in hidden costs such as missed corporate objectives, severance packages, lost intellectual and social capital and costs resulting from a disengaged workforce (Hogan, Hogan, and Kaiser, 2010 cited in Gaddis and Foster, 2013: p.1).

Gaddis and Foster (2013) examined work behaviours most critical for work performance such as trustworthiness, work attitudes, leading others, decision-making, problem solving, achievement orientation, dependability, adaptability/flexibility, and interpersonal skills. Their

studies included in the meta-analysis data for applicants applying to or incumbents currently in managerial jobs; include HDS scale data as predictors; use a concurrent or predictive validation strategy with working adults; contain supervisor ratings of overall job performance and one or more critical leader behaviours; and contain information on the study's country of origin.

Although each sample included in the study contained at least one measure of overall job performance and ratings on critical leader behaviour's, the items and response formats used to collect these data varied across samples. Examples of overall job performance ratings include "overall performance", "summed performance ratings", "total score", and "overall effectiveness". Examples for specific work behavior items include "integrity" and "keeps word" (trustworthiness), "displays good judgment" and "makes sound and defensible decisions" (decision making/problem solving), and "dependability" and "reliability" (dependability). Supervisors provided performance ratings in all samples. They found that there is a negative relationship for most dark side traits with job performance:

"The Excitable, Skeptical, Cautious, Reserved and Leisurely scales which comprise Horney's (1950) "moving away from others" factor were responsible for 26 of the 43 statistically significant outcomes across criteria" (p.18).

All five scales negatively predicted overall managerial performance and leading others. A majority of these scales negatively predicted work attitude, making effective decisions, and being perceived as a dependable leader. The Bold, Mischievous, Colorful and Imaginative scales comprising Horney's (1950) "moving against" others factor accounted for 13 statistically significant outcomes with all four scales negatively predicting managerial trustworthiness and individual scales negatively predicting work attitude, achievement orientation, dependability, adaptability, and interpersonal skills. However, these tendencies showed mixed results for overall managerial performance and positively predicted leading others. Finally, the Diligent and Dutiful scales comprising Horney's (1950) "moving toward others" factor predicted only 4 of 43 statistically significant outcomes. Scores on the Diligent scale negatively predicted dependability and interpersonal skills, with Dutiful scores showing mixed findings for trustworthiness and leading others. However, neither of these scales predicted overall managerial performance (pp. 18-19). They found only limited evidence of potential moderators in the relationships between HDS scale scores and overall managerial performance.

Gaddis and Foster (2013) conclude that the dimensions most critical to leaders are not technical work skills, but the basic attributes that are the cornerstone for effective work behaviours and, as a consequence, leadership. They comment that some dark side

personality dimensions are more predictive of performance than others across countries, industries, organisations, and jobs. For certain scale-behaviour pairings, HDS scale scores positively predicted performance. Although dramatic and attention-seeking (i.e., Colorful) behaviour:

"…negatively predicted trustworthiness. That same behavior positively predicted leading others and overall performance for managers" (p.20).

This was due to the limited number of studies available at the time. They note that additional samples would be required to test for the presence and impact of potential moderators.

Some researchers have heeded the call for a more thorough investigation of the DT and job performance and responded by looking at alternative moderating variables. Guedes (2017) concluded that the mixed findings for the bivariate relationship between narcissism and job performance may be partially due to the way in which job performance was measured. Narcissistic individuals tended to provide more positive self-evaluations leading to a significant and positive relationship when job performance was subjectively measured (based on self-reports). Guedes (2017) found that there is a non-significant correlation between narcissism and objective measures of job performance and that individuals who score high on narcissism over-evaluate their performance (p.183).

There has been no recently published research that examined the potential moderators and mediators of the link between Machiavellianism and job performance. However, employing the triarchic model of psychopathy (Patrick and Drislaine, 2015), Blickle et al (2018) found that:

"The predatory orientation of managers high in psychopathy and especially high in the trait of meanness was behaviourally activated by high levels of ascendency prospects and prospects for income increases. High psychopathy, mediated by consideration toward subordinates and moderated by high ascendency prospects and high prospects for income increases, was associated with low supervisory job performance ratings" (p.2).

The triarchic model suggests that psychopathy comprises three distinct constructs: *disinhibition*, i.e., tendencies toward impulsiveness, irresponsibility, oppositionality, and anger/hostility; *boldness*, i.e., the compound of high dominance, low anxiousness, and venturesomeness; and *meanness*, i.e., tendencies toward excitement-seeking, callousness, cruelty, and predatory aggression. Underlying the three dimensions are differing genetic and brain factors as suggested by studies of twins (Bloningen et al; Viding, Blair, Moffit, and Plomin cited in Blickle et al (2018)). The disinhibition dimension is associated with impairments in the prefrontal cortex and anterior cingulate cortex. Boldness is associated

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with an underlying genotypic fearlessness disposition (Vaidyanathan, Patrick, and Bernat), whereas meanness is associated with diminished behavioural and brain responses to aversive events, heightened tolerance for risk, and adverse environmental influences in childhood (Marsh et al; Patrick, Fowles, and Krueger; Caspi et al; cited in Blickle et al a 2018: p.6).

This current research study includes the demographic variables of gender, age, and tenure as potential moderating variables in the relationship between the DT and job performance. These demographic characteristics have long been considered important variables in psychological research. One of the principal reasons for this is because they often play a role in both human resource decisions and performance evaluations (Cohen, 1993; Griffeth et al, 2000; Sturman, 2003). Therefore, understanding the possible moderating effect of these variables upon job performance could be of value to both researchers and practitioners.

According to Klimstra et al (2020), there are at least three reasons to expect gender differences when researching dark traits. The first is that callous affect and manipulation are directly related to the antisocial personality disorder (ASPD; American Psychiatric Association: APA; Few, Lynam, Maples, MacKillop, & Miller), which is more prevalent in men than in women (Oltmanns and Powers) as cited in Klimstra et al, (2020: p.3). According to Oltmann and Powers, gender differences within the narcissistic personality disorder (NPD), of which egocentricity is a principal aspect, are less clear. From a clinical perspective, the DSM-IV-TR (APA: 2000) notes that of those diagnosed with NPD, 50%-70% are male (p.716). However, a meta-analysis conducted by Grijalva et al (2015) found clear evidence of higher scores for narcissism amongst men than women in a non-clinical sample. This finding also suggests that men may exhibit higher levels of egocentricity in comparison to women.

Secondly, evolutionary theory predicts gender differences in dark personality features because they are associated with measures that reflect short-term mating strategies and having multiple sex partners (Jonason, Li, Webster, & Schmitt; Dufner, Rauthmann, Czarna, & Denissen cited in Klimstra, 2020: p.3). Short-term mating strategies were found, on average, to be more costly for women than for men. Thus, a more restrictive mating strategy would be relatively more adaptive for women (Schmitt, Realo, Voracek, & Allik, 2008 as cited in Klimstra et al, 2020: p.3).

The third reason is related to theories on gender role socialisation and may explain why men would score higher than women on dark personality features (West and Zimmerman). Gender roles are socialised from childhood (Fagot, Hagan, Leinbach, & Kronsberg), whilst

cultural norms suppress assertive actions and outward expressions of anger more in women than in men (Chaplin, Chaplin & Aldao), all cited in Klimstra et al (2020: p.3).

The development of "aversive" personalities, such as those that comprise the DT, is often explained in terms of life-history theory (Ellis et al, 2009). This theory states that individual differences in life strategies are influenced by the environments that individuals find themselves in, and that unpredictable environments can lead to the adoption of "fast strategies" (i.e., impulsivity, early reproduction, aggression). The change in social roles is also considered a key factor in the development of personality (Hartung et al, 2020). During adolescence and early adulthood, a certain level of competitiveness and aggression may prove beneficial and even desirable at this life stage (Spurk et al; Berenson et al; cited in Hartung et al, 2020: p.7).

However, with increasing age comes the need to be considered as responsible, reliable, and socially integrated (Roberts & Wood, 2006 cited in Hartung et al, 2020: p.7). Age associated differences relating to the mean levels of certain personality traits are often thought to reflect maturational processes shared by a population (Hartung et al, 2020: pp.7). The maturity principle (Roberts et al), states that individuals become more agreeable, conscientious, and emotionally stable with increasing age (Caspi et al), which is due to increases in adjustment (Staudinger and Kessler) and age-related improvements in the regulation of emotions (Carstensen et al). These factors also mirror biological evidence. Testosterone levels, found to be associated with aversive personalities (Book et al; Eisenegger et al; Mazur & Booth, 1998; as cited in Hartung et al, 2020: p.8), are found to decrease across the adult age range (Fabbri et al; Handelsman et al; as cited in Hartung et al, 2020: p.8). Thus, lower levels of testosterone in older adults could form the basis for lower levels of aggressive and antisocial behaviour (Hartung et al, 2020: p.8).

The Career Development model (Levinson et al, 1978), indicates that individuals with higher tenure will outperform those with lower tenure. Cohen (1991) and Sturman (2003) argue that employees build and accumulate relevant experience as tenure increases, and, as a result, their autonomy and performance also grows. Explicit and tacit knowledge gained as a result of tenure, have unique and positive effects on job performance.

Previous research has shown that gender (Mackey et al, 2019) and age (Waldman and Avolio, 1986) are associated with job performance ratings. "Gender" is a term used to define sociocultural aspects of being a man (i.e., masculinity) and a woman (i.e., femininity) and is composed of different psychological features that are considered "appropriate" for each sex to enact in a given society (Unger, 1990). Masculinity is "reflective of an underlying dimension defined by assertiveness, boldness, dominance, self-sufficiency, and

instrumentality, while femininity is defined by nurturance, expression of emotion, and empathy" (Jonason and Davis, 2018: p.102).

Jonason and Davis assessed how DT traits might be correlated with individual differences in gender roles. They found that DT traits are associated with limited femininity and enhanced masculinity. Narcissism was the most strongly correlated with masculinity with psychopathy strongly linked to limited femininity and was consistently correlated with the masculine gender role. Men were also more psychopathic and Machiavellian than women were. They conclude that their results are:

"…consistent with life history models of the Dark Triad traits, suggesting that gender roles may be part of the coordinated system of adaptations that allow men, in particular, who are characterized by the Dark Triad traits to engage in a selfish approach to social interactions" (Jonason and Davis, 2018: p.104).

The scales of the HDS were investigated in this research for their possible association with gender. The HDS is explicitly based on the DSM-IV-TR Axis II (APA: 2000) personality disorders descriptions (see table 2.1) but it was not developed for all the DSM-IV-TR disorders (Furnham and Trickey, 2011). The HDS focuses only on the core construct of each disorder from a dimensional perspective (Hogan and Hogan, 2001: p.41).

Although based on clinical measures, the DSM-IV-TR does show evidence of gender difference. The Anti-Social personality disorder (ASPD), sometimes referred to as psychopathy in the literature (Furnham and Crump, 2016; Smith and Lilienfeld, 2013) is more likely to be diagnosed in men (3% in males, 1% in women), the Borderline PD (which approximates to the Excitable HDS scale: (75%)), Histrionic (Colorful) and Dependent (Dutiful) personality are more likely to be found in women. Of those diagnosed with narcissistic PD (the Bold HDS scale), 50%-75% are male (APA, 2000: Furnham and Trickey, 2011).

Lynam and Widiger (2007) compared observed gender differences among the PDs. Observed differences were obtained by meta analysing over 30 reports. Their results showed that the greatest overall differences between males and females lay with the narcissistic, antisocial, and paranoid personality disorders. Furnham, Trickey and Hyde (2011) in their study of over 18,000 British adults who completed the HDS questionnaire, found that apart from the obsessive-compulsive disorder (Diligent HDS scale), there were gender differences in personality disorders in the remaining ten HDS scales. Men scored higher than females on roughly half the scales and vice-versa with effect sizes (Cohen's, 1988) *d,* that were relatively small.

Researchers have been interested in the relationship between gender and organisational evaluation of performance for decades (e.g., Landy and Farr; McCarthy, Van Iddekinge and Campion; Nieva and Gutek; cited in Mackey et al (2019: p.2)). Critical mass theory and the "tokenism hypothesis" (Kanter, 1977) proposes that females' job performance is adversely affected by perceptions and experiences that stem from females comprising a smaller proportion of the workforce in organizations than males. Mackey et al (2019) contend that empirical evidence for gender tokenism is both scarce and inconsistent with previous quantitative reviews in this area limited in focus and yield conflicting results. For example, Sackett, Dubois, and Noe found support for the gender token effect, whereas Bowen, Swim, and Jacobs did not (both cited in Mackey et al, 2019: p.2).

Mackey et al (2019) conducted a meta-analysis to provide more robust quantitative evidence as to the nature and magnitude of the relationship between gender and job performance. As a result, their study focussed on job performance as an important organizational outcome that could be affected by the gender token effect. They included studies that applied subjective and objective performance measures, as well as different dimensions of performance (i.e., task performance and organizational citizenship behaviours [OCBs]).

According to Mackey et al (2019) theory and research in various literatures suggest that being a minority (e.g., female) in an "other" majority environment can negatively affect minorities' performance. Their findings show that females consistently score higher than males on measures of overall job performance, task performance, OCBs, and objective measures of performance, regardless of gender representation in organisations. Their results:

"Challenge the commonly held belief that female employees demonstrate lower job performance than males when females represent a smaller proportion of organizations' workforces" (Mackey et al, 2019: p.23).

Alessandri et al (2015) note the results of several major quantitative reviews of the relationship between age and job performance have shown mixed results. Waldman and Avolio's (1986) meta-analysis found that the relationship between age and job performance for older employees was negative, although the sign will vary depending on the measure being used, who carries out the performance rating and the nature of the job role held. Sturman (2003) and Ng and Feldman (2008) found an inverted u-shape relationship between age and performance suggesting age bias by supervisors against older adult employees.

Age has been found to negatively correlate with all three variables of the DT. Harpur and Hare (1994) found that age was negatively correlated with psychopathy, whilst Wilson

and Sibley (2011) found a significant negative relationship between age and narcissism. These results were similar in size to those reported in international studies (Foster et al, 2003). Mudrack (1992) in an investigation of a large sample of employed adults in the same organisation found a significant and negative correlation between age and Machiavellianism.

In a later large study of over 400 participants between the ages of 18 and 74 years of age, Bartlett and Bartlett (2015) found that whilst age was significantly related to all three DT variables, older participants showed lower scores on DT traits due to the effect of emerging facets of adulthood that mediated the relationship between age and each of the DT variables.

As for tenure, Ng and Feldman (2010) found that the overall relationship between "core task" performance (which refers to the basic required duties of a particular job), although positive, is weakly related and the relationship is curvilinear in nature. So, as organisational tenure increases, the strength of the relationship to job performance decreases such that the incremental improvement in performance year-on-year of additional service is lower.

This study is designed to respond to the suggestion made by Gaddis and Foster (2011) to investigate the relationship between scores on dark triad personality measures and job performance. Relating this to the literature reviewed so far, the following hypotheses will be investigated to establish if the relationships between the variables will be significant regardless of that relationship being either positive or negative.

Hypothesis 1.1: There is a statistically significant relationship between the psychopathy measure and job performance.

Hypothesis 1.2: There is a statistically significant relationship between the narcissism measure and job performance.

Hypothesis 1.3: There is a statistically significant relationship between the Machiavellianism measure and job performance.

Hypothesis 2.1: Age, gender and tenure will moderate the relationship between psychopathy and job performance.

Hypothesis 2.2: Age, gender and tenure will moderate the relationship between narcissism and job performance.

Hypothesis 2.3: Age, gender and tenure will moderate the relationship between Machiavellianism and job performance.

The data used for testing these and their results are presented in chapter four and discussed in chapter five. The next section introduces the Hogan Development Survey (HDS) as a valid measure of dark side personality.

2.3 Hogan Development Survey

The Hogan Development Survey (HDS: Hogan and Hogan, 1997) measures dark side personality – interpersonal behaviour that can be strengths, but when overused can cause problems in work and in life. It was developed on the premise that talented people sometimes fail despite competence in skills that are relevant to sound performance in a job role. It is explicitly based on the DSM-IV-TR Axis II personality disorder descriptions and focuses only on the core construct of each disorder from a dimensional perspective (Hogan and Hogan, 2001). The HDS "translates" the DSM-IV-TR personality disorders into dark side traits often associated with managerial derailment. Derailed managers are often technically competent but fail or "derail" due to their perceived arrogance, vindictiveness, untrustworthiness, selfishness, aloofness, abrasiveness, and inability to delegate (Hazucha, Lomabardo, Ruderman and McCauley; McCall and Lombardo cited in Hogan and Hogan, 2019).

The HDS was designed to be used with managers and executives to identify characteristics that pose career limitations; to show how these characteristics impede leadership effectiveness; and to provide developmental feedback to enhance leadership effectiveness (Hogan and Hogan, 2001). Hogan and Hogan (2009) refer to this failure as due to the phenomenon of *"dysfunctional dispositions"* which are characterised by *"the coexistence of technical competence and interpersonal inadequacy"* (p.7). Over time, these dispositions may become associated with a person's reputation and can impede job performance, career success and life satisfaction. (Hogan and Hogan, 2009, Furnham and Crump, 2016).

In the 1970s, psychologists and psychiatrists became more interested in personality disorders (Hogan and Hogan, 2009). These disorders are *"dysfunctional dispositions"* that may or may not be associated with anxiety and depression – the traditional indicators of neuroticism – but which are associated with poor social and occupational performance (Hogan and Hogan, 2001). According to Hogan and Hogan (2001), there is consensus regarding the range of personality disorders that are prevalent in social life and which are identified and described in the DSM-IV-TR. Psychologists and psychiatrists both argue that personality disorders or traits affect how people think (cognition), feel (affect) and act (function socially). It is the point where a person's behaviour "deviates markedly" from the accepted norms of the individual's culture where the disorder has manifested itself. The DSM

makes it clear that "odd behaviour" is not simply an expression of habits, customs, political or religious values held or demonstrated by peoples of a particular cultural origin (Furnham et al, 2015).

Grounded in both interpersonal (Carson; Leary; Wiggins; cited in Hogan and Hogan, 2009) and evolutionary psychology (Barrett, Dunbar and Lycett; Dawkins; cited in Hogan and Hogan, 2009), socioanalytic theory argues that as beings that live in groups, humans have evolved strategies for maximising individual and group survival. Thus, people are motivated to both "get along" (maximise popularity) and to "get ahead" (maximise status relative to other members of a group).

"Behavioural characteristics and personal dispositions are dysfunctional if they interfere with an individual's capacity to get along or get ahead. Even when individuals are satisfied with their position in the status hierarchy, they still must "get along" with others in order to maintain their position within the group" (Hogan and Hogan, 2009: p3).

It should be noted that Hogan and Hogan (2009) retain the concept of Passive-Aggressive personality (no longer present in the current version of the DSM) because it is considered an important theme in the behaviour of some employed adults. Their measure, the Mischievous scale, which parallels the antisocial personality, is designed to address classical psychopathic tendencies (manipulation, deceit and exploitation) rather than the delinquent lifestyle addressed by the DSM-IV-TR (Hogan and Hogan, 2009: p.7).

The HDS assesses eleven of these dysfunctional personality syndromes that become exaggerated under pressure and are difficult to detect in interviews (Furnham et al, 2015). It was designed to be used with managers and executives to identify characteristics that pose career limitations; to show how these characteristics impede leadership effectiveness; and to provide developmental feedback to enhance leadership effectiveness (Hogan and Hogan, 2001). As such, it is intended for a normal, rather than a clinical population. The HDS comprises 154 items in the form of statements to which a respondent indicates 0 = "disagree" or 1 = "agree". Each scale comprises 3 subscales and 14 items that were derived rationally from its distinguishing syndrome feature; scale scores range from 0 to 14. Items are scored so that higher scores represent more dysfunctional tendencies and there is no item overlap between the eleven scales. Responses can be completed in twenty minutes (Hogan and Hogan, 2009: p.14). The measurement goals are to identify the personality characteristics underlying career derailment; to develop reliable scales for assessing these characteristics; and to demonstrate the validity of the scales (Hogan and Hogan, 2001). Scores on the HDS scales indicate the percentile in which a person's "raw score" falls relative to the normative sample:

"In general, higher scores on any HDS scale indicate the person is more likely to engage in maladaptive behaviour" (Hogan and Hogan, 2009: p.99).

For interpreting the meaning of each HDS scale score, Hogan and Hogan (2009: p.101) suggest the following percentile ranges:

- Low: 0% - 39%
- Moderately Low: 40% - 69%
- Moderately High: 70% - 89%
- High: 90% - 100%

A higher score on any HDS scale does not indicate that the dysfunctional behaviours associated with that score will occur consistently. Rather, higher scores indicate a greater likelihood that the behaviour will emerge under stressful conditions (Hogan and Hogan, p.101).

According to Conger (1990), dysfunctional dispositions reflect the "dark side" of personality. These "dark side" characteristics or derailers, which often reflect strengths that become weaknesses when over-used (McCall and Lombardo; cited in Hogan and Hogan, 2009), are now relatively common amongst managers and executives and that some people are more prone to such behaviours than others (Hogan, R; Dotlich and Cairo as cited in Hogan and Hogan 2009). As Hogan and Hogan (2009) remark, it is these behavioural characteristics that can degrade job performance and interfere with the capacity to capitalise on one's strengths. In a workplace experiment conducted in 1992 using measures of "dark side" personality scales, Arneson, Milliken-Davies and Hogan (cited in Hogan and Hogan, 2009) found that several dark side dimensions were strong predictors of unsuccessful performance. They were discovered to be better predictors, although in a negative direction, than the Hogan Personality Inventory (HPI: Hogan and Hogan, 1995, 2007) which is a measure of normal or "bight side" personality based on the Five Factor Model (FFM: McRae and Costa, 1987). It was at this point that Hogan and Hogan decided to develop the HDS (Hogan and Hogan, 2009).

Table 2.1. shows the eleven HDS scales. It also shows their definitions, themes, and implications for behaviour. For the purposes of comparison, the corresponding category from the DSM-IV-TR is listed following the name of each HDS scale. The scale descriptions

indicate how they might undermine a person's occupational success. How should we conceptualise the constructs listed in table 2.1 and how should we measure them? The HDS scales measure interpersonal competencies (Hogan and Hogan, 2009: p.8). They concern dimensions ranging from good interpersonal skills, to flawed, to non-existent skills. An example of this range of skills can be seen with the Excitable scale. This scale is concerned with seeming moody and inconsistent, being enthusiastic about new persons or projects and then becoming disappointed with them. A person scoring low on this scale is considered as "No Risk" (In the 0% - 39% percentile range). They would typically be described as calm, steady, and stable in relationships with colleagues, supervisors, and subordinates. A person scoring in the 40%-69% percentile would be considered "Low Risk". They would typically be considered as someone who can handle frustration well without getting upset. The "Moderate Risk" (70%-89%) denotes someone who is energetic and active but irritable when frustrated and who can become disappointed and quick to doubt projects or people. A person scoring in the 90%-100% percentile range (High Risk) would typically be described as intense and energetic but also unpredictable, volatile, and explosive (Hogan and Hogan, 2011, 2016). Interpersonal competency is normally distributed. Apart from those that are at either end of the distribution, most are in the middle and they are people whose development included failure, disappointment, loss, fights, family discord, humiliation, inadequacy, and betrayal.

The HDS refers to dysfunctional dispositions that feature in interpersonal relationships. People are normally distributed on these dimensions, with the higher scores denoting a greater likelihood that dysfunctional behaviour will emerge in any given interpersonal context. Any single person may have high or low scores on any of the dimensions (Hogan and Hogan, 2009: p.8). The DSM-IV-TR assigns many of the same attributes to more than one personality disorder; for example, sensitivity to criticism is a criterion for defining four of the standard ten disorders. This builds in item overlap which reduces the power of such inventories to discriminate among people. The criteria listed in the DSM-IV-TR are pathological (they define a mental disorder). To avoid these issues, Hogan and Hogan wrote items directed at the heart of each construct, reviewing the item content across scales to minimize indicants of psychopathology and eliminate item overlap:

"In doing so, we sought to enhance the discriminatory power of the entire inventory. The content of each scale is independent of the content of the other scales" (Hogan and Hogan, 2009: p8).

The content of the eleven scales that comprise the HDS contain items that reflect themes from the world of work. That is, how one is perceived at work, how one relates to supervisors, co-workers and friends and attitudes toward the competition and success.

Table 2.1 - HDS and DSM-IV-TR Scales: Themes and Implications

HDS Scale	Corresponding DSM-IV-TR Personality Disorder	Themes and Implications
Excitable	Borderline	Moody, hard to please, with intense but short-lived enthusiasm for people, projects. High scorers are sensitive to criticism, volatile and unable to generate respect from subordinates due to frequent emotional displays.
Skeptical	Paranoid	Cynical, distrustful, and quick to doubt others true intentions. Whilst acutely sensitive to organisational politics, high scorers are easily offended, argumentative and ready to retaliate for perceived mistreatment.
Cautious	Avoidant	Reluctant to take risks or initiatives for fear of failure or criticism. High scorers are good "corporate citizens" but avoid innovation, offering opinions, taking controversial positions, or making decisions.
Reserved	Schizoid	Aloof, detached, uncommunicative, and disinterested in the feelings of others. High scorers work poorly in groups, are reluctant to give feedback, are insensitive to social cues and often appear intimidating.
Leisurely	Passive-Aggressive	Independent, resistant to feedback and quietly resentful of interruption or others' requests. High scorers can be pleasant but difficult to work with due to procrastination, stubbornness, and unwillingness to be part of a team.
Bold	Narcissistic	Unusually self-confident, reluctant to admit shortcomings and grandiose in expectations. High scorers feel entitled to special treatment, are reluctant to share credit and can be demanding, opinionated and self-absorbed.
Mischievous	Anti-Social	Charming and friendly, but impulsive, non-conforming, manipulative, and exploitive. High scorers test limits, ignore commitments, take ill-advised risks and resist accepting responsibility for mistakes.
Colourful	Histrionic	Expressive, dramatic, distractible, attention seeking, and disorganised. High scorers confuse activity with productivity, are unable to allow others to offer suggestions and are intuitive rather than strategic in decision making.
Imaginative	Schizotypal	Creative, eccentric, impractical, and idiosyncratic in thoughts and ideas. High scorers avoid details, are easily bored, lack awareness of their impact on others and often fail to see the practical limitations of their suggestions.
Diligent	Obsessive-Compulsive	Meticulous, perfectionistic, critical, and inflexible about rules and procedures. High scorers micromanage their staff, find it hard to delegate and have difficulty setting meaningful priorities for themselves and their subordinates.
Dutiful	Dependent	Eager to please, reliant on others for guidance and reluctant to take independent action. High scorers have difficulty making decisions on their own, may not stick up for subordinates and promise more than they can deliver.

Source: Hogan and Hogan (2009: p.7)

The scales have labels that do not stigmatise persons with high scores on the various dimensions. It is race/ethnicity, age, and gender-neutral, ensuring that it can be used fairly in decision-making (Hogan and Hogan, 2009: p.8). The following section describes further the background to the development of the HDS and how it draws on Horney's (1950) three themes of "neurotic needs".

2.4 The Horney Taxonomy

It was Horney (1950) who was the first to develop a taxonomy of dysfunctional dispositions, or flawed interpersonal tendencies, by identifying ten "neurotic needs" (Hogan and Hogan, 2009). These needs are summarised, according to Furnham et al (2015), in terms of three factors or themes:

- Moving away from people (A need for independence)

- Moving against people (A need for power).

- Moving toward people (A need for love)

As described by Millon (2011), Horney formulated three-character types to reflect each of these three themes: Moving toward people is found in a compliant type; moving against, in an aggressive type, and moving away, in a detached type. Reconceptualising this typology in line with the way individuals solve intrapsychic conflicts, they correspond roughly to the three themes. They are termed the "self-effacement" solution (Moving toward), the "expansive" solution (Moving against), and the solution of "neurotic resignation" (Moving away).

In the "moving-toward", compliant, and self-effacing orientation are those individuals with a marked need for affection and approval, a willingness to deny personal aspirations and self-assertion, and an assumption that love solves all problems:

"Self-esteem is determined by what others think, personal desires are subordinated, and there are tendencies toward self-accusation, helplessness, passivity, and self-belittlement. In an extreme form, a morbid dependency emerges, which can further develop into a masochistic wallowing in guilt and self-degradation" (Millon, 2011: p.21).

In the "moving-against", aggressive type, individuals glorify themselves. There is a rigid denial of weakness and inadequacy. Life is seen as a struggle for survival; there is a need to control or exploit others, to excel, to outsmart, and to belittle those who have power. Whilst most persons seek strength, the neurotic may be desperate for it. Three subdivisions of this solution were described by Horney (1950). The first, *the "narcissistic solution"*, suggests that individuals believe that they are, in fact, their idealised selves; and to the

extent that others reinforce this belief, they are able to maintain their sense of eliteness and superiority. The second subdivision is referred to as *"perfectionism"*; persons in this type believe that they are, in fact, what social standards expect them to be, and they are heavily invested in. They repress all indications that they will fail to live up to these idealisations (Millon, 2011).

The third subdivision is referred to as *"vindictive sadism"*. Individuals arrogate to themselves all powers and rights that they then seek to deny to others. In the extreme, there is an effort to be all powerful, invulnerable, and inviolable.

"Satisfaction is gained by subjecting others to pain or indignity, and there is a perverse joy in sadistically deprecating them; through these actions vindictive types feel that they restore their pride and glory" (Millon, 2011: p.21).

Finally, there is the detached type found in the "moving-away" theme. Employing "neurotic resignation", these individuals seek the active avoidance of others. They fear that relationships will evoke feelings and desires that will lead ultimately to frustration and conflict. They restrict their life and become detached observers. They achieve peace by curtailing needs and wishes.

"In extreme form, this type becomes severely alienated, moves to the periphery of life, and becomes an automaton who drifts in a dream, unconnected to others" (Millon, 2011: p.21).

So, faced with the insecurities and inevitable frustrations of life, Horney identified three broad modes or themes of relating that tend to emerge as the major solutions to life's basic conflicts. The mapping of the Horney "needs" is presented in table 2.2 which is a principal components analysis of the HDS scale intercorrelations (N= 10,305). It captures the link between Horney's taxonomy of flawed personalities and the eleven Hogan scales.

The first factor, "Moving Away" from others has high loadings with the Excitable, Skeptical, Cautious, Reserved and Leisurely HDS scales. The second factor, "Moving Against" others has high loadings with the Bold, Mischievous, Colorful and Imaginative HDS scales. The third factor, "Moving Towards" others has high loadings with the Diligent and Dutiful HDS scales (Hogan and Hogan, 2001: p.43). This factor structure has been replicated multiple times using both US and global normative[1] samples (Gaddis and Foster, 2013: p.8).

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[1] "Norms are any scores that provide a frame of reference for interpreting the scores of particular persons." (Nunnally, 1967: p.244). By using accurate and up-to-date norms, users can examine one person's scores against a suitable comparison group and, relative to those others, draw conclusions about that person's predicted behaviour (Hogan and Hogan, 2009: p.151).

Table 2.2 - Principal components analysis of HDS scales

HDS Scale	Components		
	I	II	III
Excitable	.78		
Cautious	.72		
Reserved	.70		
Skeptical	.67	.37	
Leisurely	.62		
Mischievous		.78	
Bold		.78	
Colorful		.74	
Imaginative		.69	
Diligent			.79
Dutiful			.70

Source: Hogan and Hogan (2001: p.43)

2.5 The relationship between Dark Triad measures and the HDS

One of the principal reasons for studying the DT is that it is possible to consider the three dimensions of the Dark Triad as dark side personality constructs, or behavioural characteristics that can degrade job performance and interfere with an individual's ability to capitalize on his or her strengths (Hogan and Hogan, 2009). A meta-analysis by O'Boyle et al (2012) indicates that Machiavellianism and psychopathy are related to decreased job performance and that all three constructs are related to counter-productive work behaviours (cited in Ferrell and Gaddis, 2016).

A study by Ferrell and Gaddis (2016) sought to examine the relationships between Dark Triad measures and the HDS at the subscale level. Their results suggest some overlap between scales across measures but indicate that some DT measures only assess part of the dark side personality space with other dimensions of dark side personality unrelated to Dark Triad dimensions. Data were collected from 201 participants (53% female; mean age = 34.62 years) using Amazon Mechanical Turk (MTurk), a validated research method for collecting data relating to a range of constructs (see Ferrell and Gaddis, 2016: p.7).

The measures used included the HDS (Hogan and Hogan, 2009); The NPI-40 (Raskin and Terry, 1988), a shorter version of the NPI (Raskin and Hall, 1979), comprising 40 statements pairing narcissistic and non-narcissistic statements; The Hogan Personality

Inventory (HPI; Hogan and Hogan, 2007), a measure of normal, day-to-day "bright side" personality aligned with the Five-Factor Model of personality (FFM; Digman, 1990; Goldberg, 1992; John, 1990; McCrae and Costa, 1987). Two brief measures of the Dark Triad were also used. The Short Dark Triad (SD3; Jones and Paulhus, 2014), which consists of twenty-seven statements using a five-point Likert response style. The shorter Dirty Dozen inventory (Jonason and Webster, 2010) consists of 12 items also using a five-point Likert-type response scale. Ferrell and Gaddis (2016) note that they obtained higher correlations with the SD-3 scales, which is longer and more reliable than the Dirty Dozen scale which uses only four items to tap each triad member (Furnham et al, 2013). Consequently, the Dirty Dozen correlations are excluded in this review. Ferrell and Gaddis hypothesized the following:

Hypotheses 1a and 1b:	Machiavellianism (1a) and psychopathy (1b) will be *positively related to* the subscales of the *Excitable, Skeptical, Cautious, Reserved*, *and Leisurely* scales (Moving Away Factor) as well as *the subscales of the Bold, Mischievous, Colorful and Imaginative* scales. (Moving Against factor)
Hypotheses 2:	Narcissism will be *positively related to* the subscales of the *Bold, Mischievous, Colorful, and Imaginative* scales. (Moving Against factor)
<u>Hypotheses 3:</u>	Machiavellianism, narcissism *and* psychopathy will be *unrelated to* the subscales of the *Diligent and Dutiful* scales. (Moving Towards factor)

Ferrell and Gaddis (2013) found that Machiavellianism correlates significantly and predominantly with the Moving Away factor comprising twelve of the fifteen HDS subscales that comprise the Excitable, Skeptical, Reserved and Leisurely scales, denoting someone who prefers to be independent. Psychopathy was found to correlate predominantly with the Moving Against factor. All twelve of the subscales that comprise the Bold, Mischievous, Colorful and Imaginative scales correlate with the SD-3 psychopathy measure. Narcissism was found to correlate predominantly with the subscales that comprise the Bold, Mischievous and Imaginative HDS scales and which indicates a preference for the narcissist to Move Against others in the workplace. The preference for the Machiavellian to avoid and move away from others, whilst the psychopath and narcissist prefer to dominate, intimidate and generally work against others are findings that are generally aligned to those in the literature (Ferris and Gaddis, 2016: p.8). The results of the Ferris and Gaddis research study form the basis of the final taxonomy used in this study and are shown in table 3.6 in chapter three.

Bringing together the preceding discussion, table 2.3 shows the threefold classification based on theory and research and combines the DSM-IV-TR personality disorder definitions, along with the Horney and Hogan scale definitions. In the DSM-IV-TR, the personality disorders are grouped into three clusters based on descriptive similarities. Cluster A comprises the Paranoid, Schizoid and Schizotypal personality disorders. Individuals with these disorders often appear odd or eccentric. Cluster B is made up of the Antisocial, Narcissistic, Borderline and Histrionic personality disorders. Persons with these disorders often appear dramatic, emotional, or erratic. Finally, cluster C includes the Avoidant, Dependent, and Obsessive-Compulsive personality disorders. Individuals with these disorders often appear anxious or fearful (DSM-IV-TR: APA, 2006: p.685).

It should be noted that when comparing the classifications, there are three key scale differences between the DSM-IV-TR clusters and the factor loadings of the HDS scales with the three Horney themes as shown earlier in table 2.2. The table (2.2) shows the results of a principal components analysis of HDS scales. Three components account for 59% of the variance in the table and:

"…link nicely with Horney's (1950) taxonomy of flawed personalities and the HDS scales" (Hogan and Hogan, 2001: p.43).

The first of the HDS scale differences is the *Excitable* scale. In the HDS the Excitable scale is aligned to the *Borderline* personality disorder and which is classified in cluster B of the DSM-IV-TR (dramatic, emotional or erratic disorders). The Excitable scale forms part of a significant loading (.78) on the first component which corresponds with Horney's (1950) theme of Moving Away from others. The Excitable scale:

"Concerns a tendency toward unmodulated emotional responding and a readiness to feel disappointed by projects, people or organisations" (Hogan and Hogan, 2009: p.101).

The second HDS scale is *Cautious.* In the HDS the Cautious scale is aligned with the *Avoidant* personality disorder which is classified in cluster C of the DSM-IV-TR (anxious of fearful disorders). The Cautious scale also forms part of a significant loading (.72) on the first component which corresponds with Horney's theme of Moving Away from others. The Cautious scale concerns a tendency to be careful, conservative, worry about making mistakes, and a reluctance to take the initiative for fear of being criticised or embarrassed (Hogan and Hogan, 2009: p.104).

The third HDS scale involved is *Imaginative.* In the HDS the Imaginative scale is aligned with the *Schizotypal* personality disorder which is classified in cluster A of the DSM-IV-TR (odd disorders). The Imaginative scale forms part of a significant loading (.69) on the second component which corresponds with Horney's theme of Moving Against others.

Table 2.3 - The higher order of classification of personality disorders

DSM	Horney	Hogan (HDS)	
Cluster A (odd disorders)	**Moving Away From People**	**Moving Away From People**	
Paranoid personality disorder: characterised by a pattern of irrational suspicion and mistrust of others, interpreting motivations as malevolent	The need for **self-sufficiency** and independence; whilst most desire some autonomy, the neurotic may simply wish to discard other indviduals entirely	Excitable	Moody and hard to please; intense but short-lived enthusiasm for people, projects or things
		Skeptical	Cynical, distrustful and doubting of others good intentions
Schizoid personality disorder: lack of interest and detachment from social relationships, apathy and restricted emotional expression	The need for **perfection**; whilst many are driven to perfect their lives in the form of well-being , the neurotic may display a fear of being slightly flawed	Cautious	Reluctant to take risks for fear of being rejected or negatively evaluated
Schizotypal personality disorder: a pattern of extreme discomfort interacting socially, distorted cognitions and perceptions.	The need **to restrict life practices** to within narrow borders; to live as inconspicuous a life as possible	Reserved	Aloof, detached and uncommunicative, lacking interest in or awareness of the feelings of others
		Leisurely	Independent; ignoring people's requests and becoming irritated or argumentative if they persist

DSM	Horney	Hogan (HDS)	
Cluster B (dramatic, emotional or erratic disorders)	**Moving Against People**	**Moving Against People**	
Narcissistic personality disorder: a pervasive pattern of grandiosity, need for admiration and a lack of empathy		Bold	Unusually self-confident; feelings of grandiosity and entitlement; overvaluation of one's capabilities
	The need for **power**, the ability to bend *wills* and achieve control over others - whilst most people seek strength, the neurotic may be desperate for it		
Antisocial personality disorder: a pervasive pattern of disregard for and violation of the rights of others, lack of empathy, bloated self-image, manipulative and impulsive behaviour		Mischievous	Impulsive, non-conforming, manipulative, and exploitative. Like to test the limits and ignore commitments. Take ill-advised risks and resist taking responsibility for mistakes
Borderline personality disorder: a pervasive pattern of instability in relationships, self-image, identity, behaviour and affects often leading to self-harm and impulsivity	The need to exploit others; to get the better of them. To become manipulative, fostering the belief that people are there simply to be used		
		Colorful	Expressive, animated and dramatic; wanting to be noticed and needing to be the centre of attention
Histrionic personality disorder: pervasive pattern of attention-seeking behaviour and excessive emotions	The need for **social recognition**; *prestige* and limelight		
	The need for **personal admiration**; for both inner and outer qualities - to be valued	Imaginative	Acting and thinking in creative and sometimes odd or unusual ways

DSM	Horney	Hogan (HDS)	
Cluster C (anxious or fearful disorders)	**Moving Towards People**	**Moving Towards People**	
Avoidant personality disorder: pervasive feelings of social inhibition and inadequacy, extreme sensitivity to negative evaluation	The need for **affection and approval** pleasing others and being liked by them		
		Dependent	Eager to please and reliant on others for support and guidance: reluctant to take indpendent action or to go against popular opinion
Dependent personality disorder: pervasive psychological need to be cared for by other people	The need for a **partner**; one whom they can *love* and who will solve all problems		
Obsessive-Compulsive personality disorder (not the same as obsessive-compulsive disorder): characterised as rigid conformity to rules, perfectionism and control	The need for **orderliness**, **rules**, **perfectionism and control**	Diligent	Meticulous, precise and perfectionistic, inflexible about rules and procedures; critical of others

Source: Adapted from Furnham (2015: pp.158-60)

The Imaginative scale concerns the tendency to think and act in ways that are unusual, different, striking, and at times decidedly odd (Hogan and Hogan, 2009: p.114).

To summarise this section, the DSM-IV-TR clusters of personality disorders do not align exactly with Hogan and Hogan's (2001) principal components analysis of the HDS scales, which in turn correspond with Horney's (1950) three themes of neurotic needs. There are three principal HDS scale exceptions which need to be considered when comparing all three results as shown in table 2.3.

As Furnham (2015) comments, research suggests that it is cluster B or the Moving Against people theme that is the most problematic. This cluster demonstrates a need for power (Horney, 1950). It is the personality types that comprise this group, who, if they are talented and skilled, are often picked for leadership and often derail (Furnham, 2015: p.157). The previous sections have also highlighted and discussed the antisocial and narcissistic personality disorders and how they relate to Hogan's (2009) scales defined as *Bold* (narcissistic) and *Mischievous* (antisocial). They are the dark side personalities most closely associated with poor leadership performance and failure (Furnham, 2015: p.249). The other personality disorders that comprise the Moving Against theme are the *Histrionic* and the *Schizotypal* disorders which align to the *Colorful* and *Imaginative* scales in the HDS and which are introduced and described below.

The term "histrionic" is derived from the Latin term to mean *actor.* The original term was *hysterical* from the Latin root to mean *uterus* (Furnham, 2015)*.* In clinical settings*,* this disorder is most often diagnosed in women than men and is present in 2-3% of the population (DSM-IV-TR: APA, 2000: p.713). Histrionics are emotionally literate. Highly sociable with intense relationships, they are open with their emotions, which can change very quickly, and they proactively seek the limelight. They are "the drama-queens of the business world" and are uncomfortable in situations where they are not the centre of attention. They are impatient with the routine of administrative work and functions, preferring gossip to analysis, with a tendency not to be good at the detail. In the workplace, they can be persuasive and insightful. They are comfortable in the world of public relations, advertising, selling and marketing but require considerable back-up regarding plans, budgets, and details (Furnham, 2015: p.260).

Hogan and Hogan (2001) refer to this type as *Colorful.* Persons with high scores on this dimension believe that others will find them interesting, engaging, and worth paying attention to. From an observer's perspective, what is most distinctive is their stage presence or persona, as well as their self-conscious and distinctive aura. They perform extremely well in interviews, in assessment centres, and other public settings. They can be entertaining to watch but they are also impulsive and unpredictable; everything that makes them good at sales (and selling themselves) makes them poor managers. They are noisy, distractible, and over-committed. "They are not necessarily extraverts; they are just good at calling attention to themselves. At their best, they are bright, colorful, entertaining, fun, flirtatious, and the life of the party. At their worst, they do not listen, they don't plan, they self-nominate, self-promote, and they ignore negative feedback. These people deal with stress and heavy workloads by becoming busy; they enjoy high pressure and high drama situations because they can then be the star. They confuse activity with productivity and evaluate themselves in

terms of how many meetings they attend rather than how much they actually get done" (p.49). The following paragraph introduces and discusses the *Schizotypal* personality disorder, referred to by Hogan and Hogan (2001) as the *Imaginative* scale.

This disorder is more common in males than females and is estimated to affect approximately 3% of the general population (DSM-IV-TR: APA, 2000: p.699). The Schizotypal individual presents as idiosyncratic and often creatively talented and curious. They often hold what others may consider to be curious or strange beliefs, enjoying the occult. "They have odd habits, eccentric lifestyles and a rich inner life (Furnham, 2015: p.255).

Hogan and Hogan (2001) refer to this type as *Imaginative* and describe them thus:

"They think about the world in unusual and often interesting ways, and they enjoy entertaining others with their unusual perceptions and insights. They are constantly alert to new ways of seeing, thinking, and expressing themselves, and they enjoy the reactions they are able to elicit in other people with their unusual forms of self-expression. From the observer's perspective, these people often seem bright, colorful, insightful, imaginative, playful, and innovative, but also as eccentric, odd, and flighty" (p.49).

At their best, the Imaginative manager can be creative, imaginative, interesting, and insightful. Under heavy workloads, they can become upset, lose focus, lapse into eccentric behaviour, and not communicate effectively. They can also become moody, with a tendency to become excited over success and too despondent over failure. They crave attention, approval and applause and go to great lengths to to attract it. Oldham and Skodol (1991) refer to this type as the *Idiosyncratic* and note that the imaginative, idiosyncratic person is unlikely to reach extremely high positions within organisations though they may be promoted in advertising or academia.

The preceding review of the literature started at section 2.3 with a description of the Hogan Development Survey and the literature associated with its application in dark personality research. Section 2.4 introduced the Horney taxonomy of dysfunctional dispositions with the principal component's analysis of the HDS scales capturing the link between the Horney taxonomy and the Hogan scale of the HDS. The study by Ferrell and Gaddis (2016) shows relationships between the DT, the HDS scales and the Horney taxonomy. Whilst their study examined the positive relationships between variables, the hypotheses to be investigated in this research are:

H3.1 Psychopaths tend to fit the Moving Against others personality type.

H3.2 Narcissists tend to fit the Moving Against others personality type.

H3.3 Machiavellians tend to fit the Moving Away from others personality type.

H3.4 Psychopaths, narcissist and Machiavellians tend not to fit the Moving Toward others personality type.

In concluding this section, it is worth remembering that the DSM-IV-TR is a taxonomy of clinical disorders. Rather than evaluating mental health, the HDS inventory is designed to improve interpersonal relations in the context of everyday work. There is no item overlap among the scales with content themes as descriptors aligned with the PDs in the DSM-IV-TR. These themes were conceptualised as dimensions and not types with individuals able to score high, moderately high, moderately low, or low on any dimension. Within each dimension, Hogan and Hogan (1997) wrote items "at the heart of the construct". Thus, there are no anxiety items on the Skeptical (Paranoid) scale for example, whereas the DSM-IV-TR includes anxiety as part of the paranoid personality disorder. Perhaps more importantly, Hogan and Hogan minimized content overlap between scales in order to:

"Enhance the discriminatory power and independence of each scale" (Hogan and Hogan, 2001 p.41).

With the concept of "construct overlap" in mind, the next section highlights the current debate in the literature between the "lumpers" and the "splitters".

2.6 Lumpers versus Splitters

In their ten-year review of the DT literature, Furnham et al (2013) comment that the temptation to "lump" the DT personalities together as a composite lies partly in the fact that there is an overlap (both conceptually and empirically) that results from their common callousness. They argue that these are moderate-sized intercorrelations among standard measures of the triad which have persuaded some commentators to assume a single concept simply because of this empirical overlap – Machiavellianism with psychopathy (Fehr, Samson and Paulhus, 1992) – narcissism with psychopathy (McHoskey, Worzel and Szyarto, 1998) and Machiavellianism with narcissism (Gustafson and Ritzer; cited in Paulhus and Williams (2002: p.557). The data for these correlations is shown and discussed in section 5.3 in chapter five.

Furnham et al (2013) go on to state that the evidence for the empirical overlap derives from two types of data. The first is several factor analytic studies where subclinical psychopathy and narcissism load on the same factor (Furnham and Crump, 2005; Furnham and Trickey, 2011; Hogan and Hogan, 1997). They point out that in one factor analytic study, using standard DT measures, all three loaded onto the HEXACO Honesty-Humility factor (Lee and Ashton, 2005). To assess psychopathy, Lee and Ashton (2005) used a 16-item

scale that measured primary psychopathy developed by Levenson, Kiehl and Fitzpatrick (cited in Lee and Ashton, 2005: p.1575). This is a self-report measure that measures the first factor of Hare's (1991) PCL-R which comprises the Interpersonal/Affective dimensions of the PCL-R (See Appendix B). They explain that they assessed only primary psychopathy because it represents the constellation of personality traits that are generally viewed as the core of the psychopathy construct (Harpur, Hare and Hakstian; cited in Lee and Ashton, 2005: p.1576). Machiavellianism was measured by applying the 20-item Mach-IV scale (Christie and Geis, 1970) and narcissism was assessed using the 40-item NPI (Raskin and Terry, 1988). Although the instruments used vary and in some cases subscale scores are used instead of the full measure, Furnham et al (2013) draw three key conclusions. The first is that all the correlations are positive and significant. Secondly, nearly a quarter are >.50. Third, the highest mean correlations appear between psychopathy and Machiavellianism. The lowest are between narcissism and Machiavellianism. They pose the question as to the extent to which the correlations are a function of the psychometric properties of the measures, the degree of item overlap, the presence of common components, dissimulation, or some other factors (p.202). They comment further that the moderate but consistent direction of these intercorrelations raises the question as to how to treat the Dark Triad members in research situations: Should they be combined into a composite or evaluated separately as distinct predictors? (p.203).

The key to differentiating the DT, Furnham et al (2013) argue, is in administering measures of all three to the same sample and then applying multiple regression to determine their respective and individual contributions. Only then do the theoretically predicted differences emerge clearly (Paulhus and Williams, 2002). Compared to the other two, Machiavellians are more likely to plagiarize essays (Nathanson, Paulhus and Williams, 2006) and avoid risky bets (Jones and Paulhus, 2011a). More than the other two, narcissists self-enhance (Paulhus and Williams, 2002) and aggress after ego threat (Jones and Paulhus, 2010). Finally, more than the other two, psychopaths bully others (Baughman et al., 2012; Williams, McAndrew, Learn, Harms, and Paulhus, 2001), and carry out their revenge fantasies (DeLongis, Nathanson, and Paulhus; cited in Furnham et al, 2013).

Furnham et al (2013) further comment that a second reason for "lumping" is due to the phenomenon of "construct creep", which, they state, continues unabated. It is the tendency for researchers, focused on a single construct, to continually expand its scope. Each literature, they argue, has grown to include hundreds of published studies with a tendency for each field to gradually colonise more of the dark personality space. This also applies to measures of the DT, which they believe are too broad. An example is The Psychopathic Personality Inventory (PPI: Lilienfeld and Andrews, 1996). The measure

comprises 180 items and eight facets and was purposely designed to be as inclusive as possible and incorporates items measuring Machiavellianism, narcissism, and psychological adjustment, which, in the view of Furnham et al (2013: p.209) went too far in its scope. Similarly, with measures of Machiavellianism, scales devised by Kessler (2010) and Rauthmann and Will (2011) suggest separate scoring of three factors and five factors respectively. By way of contrast, the unidimensional Mach IV inventory (Christie and Geis, 1970) retains its faithfulness to the original elements identified by Machiavelli himself (Furnham et al, 2013: p.209)

The fact that at the subclinical level of functioning the three personalities share a conceptual resemblance and their common measures overlap empirically, one should not be surprised that there is confusion as to the key areas of differentiation between the DT personalities. Paulhus and Williams (2002) initiated research to evaluate the degree of distinctiveness with the DT both conceptually and empirically. The take they view that:

"Comparison of the Dark Triad of personalities does not support the proposition that they are equivalent in normal populations. Even in non-forensic, non-pathological, high-achievement populations, they are distinctive enough to warrant separate measurement" (p.562).

Their research has stimulated many others to start their own research. The contribution made to the debate by O'Boyle et al's (2011) meta-analytic study lies in its ability to identify empirical patterns of association that are unique to each element of the DT, as well associations that are shared across them. Reflecting on the "lumpers" position, O'Boyle and his colleagues' comment that the presence of these commonalities has led some researchers to suggest that their overlap is so substantial that they are indicators of a single latent construct, rather than independent personality traits (p.562).

Given previous research into these traits, O'Boyle et al (2011) predicted that the three will be intercorrelated, as they consider the DT to be a set of *"agentic interpersonal tactics designed to extract resources from conspecifics"* (p.562) – please refer to section 2.6.1 below, the Interpersonal Circumplex for an explanation of agentic and communal behaviour. They found that Machiavellianism and narcissism were correlated positively whilst psychopathy showed positive relations with both Machiavellianism and narcissism.

Commenting on their results, O'Boyle et al (2013) note that the positive relationship between Machiavellianism and narcissism suggests that "narcissists are more likely to use manipulative strategies to receive praise and maintain their inflated sense of self or that narcissistic tendencies are more prevalent among individuals who see themselves as skilled in their control of others through guile and cleverness. Psychopathy showed the strongest

relationship, consistent with the social exchange model, suggesting that antisocial tendencies are an important part of viewing oneself as better than most and being willing to engage in deceitful tactics for one's own gain. Although clearly related, the results suggest that Machiavellianism, narcissism, and psychopathy are distinct constructs and that:

"…the strengths of the correlations did not achieve a magnitude that would suggest that the DT traits are redundant" (p.569).

As Furnham et al (2013) note, given their relevance to normal personality, the Dark Triad should have links to the predominant structural models of personality. The most important of these models are the interpersonal circumplex (Wiggins, 1979), the Five Factor Model (McCrae and Costa 1987; Barrick and Mount, 1991) also known as the Big Five, and the HEXACO model (Lee and Ashton, 2005). The next section focuses specifically on the interpersonal circumplex model.

2.6.1 The interpersonal circumplex

The results of this current research study make the case that the DT is an individual difference construct. Recent research into the Interpersonal Circumplex (IPC), whilst acknowledging that all three members share common correlates, supports these findings.

According to Wiggins (1991), the Interpersonal Circumplex (IPC) model has played a leading role in the way that personality researchers have approached the study of the interpersonal domain, and consequently what is known about this part of the personality world. The IPC is a:

"Two-dimensional representation of a given interpersonal space (of interpersonal needs, values, problems, traits, etc.) in which the set of variables are organized theoretically as a circle – a continuous order with no beginning or end" (Horowitz; Kiesler; Wiggins; cited in Gurtman, 2009).

The two dimensions that define this space are often referred to in terms popularised by Bakan (1966) as *Agency* (Getting Ahead of Others) and *Communion* (Getting Along with Others). The term Interpersonal is defined by the confluence of *agency* and *communion* (Gurtman, 2009). Interpersonally, *agency* connotes ideas of dominance, power, status, and control, whereas *communion* suggests love, affiliation, union, and friendliness (McAdams, Hoffman, Mansfield, and Day; Wiggins; Wiggins and Trapnell; cited in Gurtman, 2009: p.3). Because the circumplex is a circle, it is usual to reference each variable's location simply by its angular coordinates (degrees displacement from an arbitrary point set at 0°), rather than by its dimensional coordinates. Figure 2.1 presents an example of an interpersonal

circumplex, and includes both the dimensional axes as previously discussed, along with the angular coordinates of the eight generic variables depicted.
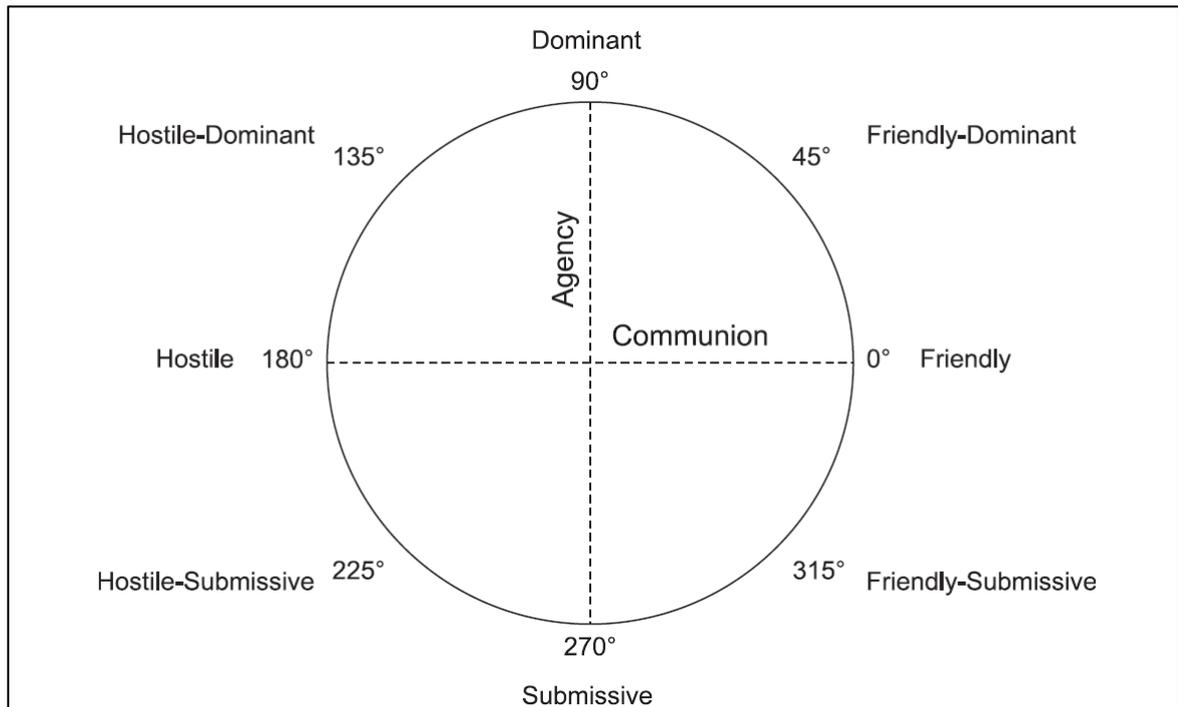
Figure 2.1 - A generic interpersonal circumplex, including dimensions, categories, and polar coordinates. Source: Adapted from Gurtman (2009: p.3).

Alden et al (cited in Gurtman, 2009: p.7) developed eight octant scales designed to meet circumplex criteria for structure. Referring to figure 2.1, Friendly, which starts at the origin is described by the first octant as someone who is Overly Nurturant; Friendly-Dominant at 45 degrees is Intrusive; Dominant at 90 degrees is Domineering; Hostile-Dominant at 135 degrees is Vindictive; Hostile at 180 degrees is Cold; Hostile-Submissive at 225 degrees is Socially Avoidant; Submissive at 270 degrees is Non-assertive and Friendly-Submissive at 315 degrees is Exploitable.

According to Jones and Paulhus (2011b), Dark Triad traits:

"Although conceptually distinct project onto…Quadrant 2 of the interpersonal circumplex" (p. 249), and *"Quadrant 2 of the interpersonal circumplex (i.e., high-agency low communion) is inhabited by individuals variously characterized as arrogant, calculating, callous, and manipulative"* (p.250).

As Paulhus (2001) remarks, not many studies used all three Dark Triad members at once in an interpersonal circumplex study, so most evidence for the positioning of the Dark Triad comes from studies using only one member. Narcissism has been shown to be associated positively with *agency* and either not at all or negatively with *communion* (Bradlee and Emmons; Emmons; Ruiz, Smith, and Rhodewalt; Rhodewalt and Morf; cited in

Rauthmann and Kolar, 2012: p.623), and Machiavellianism (Jones and Paulhus, 2009) and psychopathy (Blackburn and Maybury; Hicklin and Widiger; Salekin, Leistico, Trobst, Schrum, and Lochman; Salekin, Trobst, and Krioukova; cited in Rauthmann and Kolar, 2012: p.623) positively with *agency* and negatively with *communion.* Hence, from the view of the interpersonal circumplex, narcissism, Machiavellianism, and psychopathy seem very similar as:

"their common tendency to be exploitative juxtaposes them in Quadrant 2" (Jones and Paulhus, 2010, p. 261).

Another label that is attached is, *"unmitigated agency"* (Buss; Helgesson and Fritz cited in Paulhus, 2001: p.228) which highlights the emphasis on personal achievement to the neglect of interpersonal connectedness.

However, Jones and Paulhus (2011) argue that because of their overlap, the DT members should and do often show the same correlates. They also make the point that even in the original paper, Paulhus and Williams (2002) provided evidence that the Dark Triad members have distinctive correlates. Correlations between the DT and the Big Five resulted in Agreeableness showing correlations of -.36, -.47 along with -.25 for narcissism, Machiavellianism, and psychopathy, respectively. Narcissists and psychopaths tended to show higher scores on the Extraversion (.41 and .34) and Openness (.38 and .24) scales. Both Machiavellians and psychopaths showed lower scores on Conscientiousness (.34 and .24) with psychopaths showing lower levels of Neuroticism (Paulhus and Williams, 2002: p.599).

Differences in associations with self enhancement were also evident in the original Paulhus and Williams (2002) data. Narcissism was associated with higher scores on two objective measures of self enhancement. A small association was observed with psychopathy, but no association emerged for Machiavellianism. Interestingly, there were differences in cognitive functioning as well. Those high in Machiavellianism and psychopathy had higher than average verbal-nonverbal discrepancy scores, and those high in narcissism scored the highest on global IQ (Paulhus and Williams, 2002). Whereas psychopathy is a robust predictor of delinquency, Machiavellianism and narcissism are not (Williams and Paulhus, 2004). Psychopathy is associated with violent and antisocial entertainment (Williams, McAndrew, Learn, Harms and Paulhus; cited in Furnham et al, 2013: p.203) and in relation to aggression, psychopathy has been established as a consistent predictor across a range of conditions (Blackburn and Maybury; Patrick and Zempolich; Reidy, Zeichner, and Martinez; cited in Jones and Paulhus, 2011: p.250). This indiscriminate aggression contrasts with research on Machiavellianism, which shows no overall association with aggression,

revenge, or violence (Williams and Paulhus, 2004). Narcissists do aggress, but only after provocation (Bettencourt, Talley, Benjanrin, and Valentine; cited in Jones and Paulhus, 2011: p.253).

Research into the Interpersonal Circumplex (IPC) and the DT by Rauthmann and Kolar (2012) investigated across two studies where the DT position themselves and where they are positioned by others into the IPC of *"getting ahead"* (Agency) and *"getting along"* (Communion). Through multiple regression analysis, they found that the DT does not uniformly fall into quadrant II. Narcissism was more communal than Machiavellianism and psychopathy; Machiavellianism and psychopathy converged only in ratings of others; psychopaths were perceived differently to the way in which they perceived themselves. As Rauthmann and Kolar conclude:

"Together the data support a unique position on the Dark Triad ("they are distinct")" (ibid. p.625).

2.7 Summary

The initial research question was originally based on the psychopathy related literature with the intention of researching the relationship between psychopathy and job performance. This literature review has broadened the enquiry and extended the research to include all three aversive personalities that comprise the Dark Triad and its relationship with job performance. Based on this literature review, there are now three new research questions that this research is designed to answer:

RQ1: What are the relationships between scores on the Dark Triad personality measure and job performance?

RQ2: Will age, gender, and tenure act as moderator variables?

RQ3: What are the relationships between scores on the Dark Triad personality measures and the Horney Global factors?

As a result, ten new hypotheses have been formulated for investigation in this research study based on this literature review. The results of this investigation will enable the answers to these three new research questions. The methodology for testing these hypotheses is introduced in the next chapter.

3 Methodology

3.1 Introduction

This chapter starts by introducing the research philosophy and methodology. This research adopts a positivist/normative approach which is defined and discussed before introducing the results of the pilot study. The consensus of those experts interviewed in the pilot study supports the research design and methodology adopted as well as the application of the Hogan Development Survey (HDS) as the primary research instrument. This then leads into the main study design and context where the view of the experts informs an extended research enquiry into all the personalities that comprise the Dark Triad (DT) and their effect on job performance. The data used is based on a secondary sample of managers from a US based retail organisation. The scales that comprise the main study are then introduced. They include the HDS, the Horney (1950) global factor scales and each of the Dark Triad scales (Machiavellianism, psychopathy, and narcissism).

The work of Ferrell and Gaddis (2016), which identified relationships between the DT and the HDS subscales, is then introduced and discussed. The significant correlations results are shown in a final taxonomy mapping that was used in this research study. The remaining sections cover the job performance scale that was used which focused on "core" job performance along with the demographic variables that were used in the study. The research problem and three research questions are then introduced along with the ten hypotheses that were tested in the research study and derived from the research questions. In addition, the descriptive statistics relating to the demographics, job performance, HDS, DT and Horney global factors are also described before proceeding to the test for common method bias (CMB) finishing with a summary and concluding remarks.

As discussed in the previous chapter, my principle area of research was originally focused on the presence of the sub-clinical or corporate psychopath within organisations encouraged by the research presented by Babiak (1995), Babiak and Hare (2006).

At that point, the call was for further research to ascertain the extent of psychopathy in industry and to measure its effects on people and the organisation. A limitation of research in this area continues to be the preponderance of clinical measures (Harms and Spain, 2015) and a discrepancy between popular coverage and empirical evidence. As Gaddis and Foster (2013) make the point that it is the presence of dark traits, those that cause individuals to derail in their daily lives, that are worthy of closer understanding and research.

They add that that future research should also be conducted on the relationships between dark side personality characteristics and job performance. Consequently, the research enquiry was extended to include Machiavellianism and the Narcissism. Taken together with Psychopathy, they are collectively referred as the Dark Triad of personalities (Paulhus and Williams, 2002).

3.2 Research Philosophy and Methodological Considerations

As Easterby Smith et al (2012) note, central to the notion of research design are the researchers own assumptions. Those that relate to the nature of reality and what exists (Ontology) and the general set of assumptions about ways of inquiring into the nature of the world (Epistemology) *"…failure to think through such philosophical issues…can seriously affect the quality of management research…"* (Easterby Smith et al, 2012: p.17). Huff (2009) adds that philosophical foundations are expected in many conversations outside of the United States, especially in Europe. Table 3.1 captures the methodological implications for the researcher of the various ontological and epistemological positions that can be adopted.

Table 3.1 - Methodological implications of different epistemologies

Ontologies	Realism	Internal Realism	Relativism	Nominalism
Epistemology **Methodology**	Strong Positivism	Positivism	Constructionism	Strong Constructionism
Aims	Discovery	Exposure	Convergence	Invention
Starting points	Hypothesis	Propositions	Questions	Critique
Designs	Experiment	Large surveys Multi-cases	Cases and surveys	Engagement and reflexivity
Data types	Numbers and facts	Numbers and words	Words and numbers	Discourse and experiences
Analysis/Interpretations	Verification/ Falsification	Correlation and regression	Triangulation and comparison	Sense making Understanding
Outcomes	Confirmation of theories	Theory testing and generation	Theory generation	New insights and actions

Source: Adapted form Easterby-Smith et al (2012: p.25)

Ontology is the starting point for most debates amongst natural and social scientists (Easterby Smith et al, 2012). The debate, as Easterby Smith et al see it, is between and

within the traditions of the natural and social sciences as to the nature of reality (Ontology). The philosophers of natural science see the debate as being between realism and relativism. The traditional position emphasises that truth exists objectively and independently to be discovered. The point of difference is that internal realism assumes there is a single reality, but it cannot be accessed directly. The realist and internal realist ontologies are linked to the epistemology of *positivism*. The key idea of *positivism* is that the social world exists externally and real knowledge of it should be determined through "observed facts" (Comte, 1853, p.3 in Easterby-Smith, et al 2012).

Knowledge then, is only significant if it is based on observations of this external reality. The relativist and nominalist positions correspond to the epistemology of constructionism. The key idea of constructionism is that reality and truth are socially constructed and given meaning by people through sharing experience via the medium of language (Berger and Luckman, 1966).

There are clear implications for the researcher to consider when developing the research proposal and conducting the research study (see table 3.2). This is because:

"The research design will flow from the personal inclination of the researcher [and] the philosophical assumptions…to the nature of the research problem" (Yin; cited in Remenyi, et al, 2010, p.107).

In response to this, it is perhaps helpful to inform the reader that the personal inclination of this researcher is toward the *constructionist* epistemology. Within the constructionist's view of the world, "facts" depend on the viewpoint of the observer and that there are many "truths" to take into account. However, the predominant epistemology amongst dark trait researchers is positivist. That is, the "truth" is believed to exist objectively, and the "facts" are concrete. Consequently, the data types used are predominantly numbers with analysis and interpretations carried out through the use of correlation and regression techniques. This is an area I reflect on later in section 6.4. Personal Learning. The starting point then was to build and test hypotheses and then to test theory.

The approach taken to the research design in this research is a combination of the *realist* and *internal realist* ontologies. The research aim is to broaden the enquiry to include all of the elements of the "Dark Triad" (Narcissism, Machiavellianism, and psychopathy) and to establish the viability of the HDS as a single research instrument, removing the need for multiple measurement instruments. The aim is to answer the call of many researchers (Wu and Le Breton, 2011, O'Boyle et al, 2012) for improved measurement of the DT. As mentioned earlier in chapter one, one of the consequences of this approach is the shift in the location of the study from that of a single, successful psychopath in an organisation under-

going rapid change (Babiak, 1995) , to the study of dark side personality dimensions amongst managers (Bentz, 1985).

When considering research design, Huff (2009) suggests that the most important question to ask oneself is, *"what qualifies as trustworthy research?"* As Huff points out, there are differing interpretations as to what constitutes "trustworthiness" – see table 3.2.

Table 3.2 - Different Interpretations of Trustworthy Research

Criterion for trustworthiness	*Worldview*		
	Positivist/Normative/ Approaches to Scholarship	*Constructivist/Interpretivist Approaches to Scholarship*	*Critical Approaches to Scholarship*
Truth	Expects internal validity. The key question about empirical research: ***Does the instrument measure what it is supposed to measure?***	Assessment that universal truth is impossible since the world is constructed by each observer, However, credible research seeks multiple, "thick" accounts.	Insists that all knowledge claims are "politically loaded… [an issue that is] often obscured by claims of truth and expertise."[2]
Generalizability	Desires generalizability. An important empirical question: ***What is the probability that patterns observed in a sample will also be present in the wider population from which the sample is drawn?***	Although multiple accounts are often sought, assumes limited generalizability. An important empirical question: ***How likely is it that ideas and theories generated in one setting will also inform observations in other settings?***	Aims for "theoretical rather than empirical generalization."[3]
Consistency	Expects consistency. A key question about empirical research concerns reliability: ***Will the measure yield the same results on different occasions (assuming no real change in what is measured)?***	Hope to discover consistency within a social group. Important questions: ***Would similar observations be made by different researchers? Would similar observations be made on different occasions?***	Claims that measure consistency hide "the social interaction of the research process and the social context of research questions and goals."[4]
Neutrality (Objectivity)	Assumes that neutrality is possible and necessary. Many standard procedures of scholarship (like double-blind reviews of manuscripts) expect neutral objectivity.	Suspects objectivity and neutrality claims. Empirical researchers are expected to reflect on their impact as observers and their potential biases. Interpretations by those in the context studies are also considered legitimate.	Insists that claims of neutrality, objectivity, replicability etc. are rhetorical moves "in a research programme system of justification rather than…useful descriptive label[s].[5]

Source: Huff (2009: p.119)

[2] Alvesson, M., and Deetz, S. (2000). *Doing critical management research (p.47)*. Sage (Cited in Huff, 2009)

[3] Alvesson, M., and Deetz, S. (2000: p.203)

[4] Alvesson, M., and Deetz, S. (2000: p.68)

[5] Alvesson, M., and Deetz, S. (2000: p.66)

Huff (2009) adds that the different interpretations of trustworthy research described in table 3.2 could be expanded by adding columns for other positions (see Huff, 2009 pp: 112-114) and urges the researcher to consider whether ontological or epistemological assumptions that have not been considered raise questions or offer solutions that could inform the current project (p.116).

A clear outcome of my pilot study and the experts' view elicited, is that the predominant worldview in the scholarly community that I wish to join is the positivist/realist/normative approach to research. My research aims and purpose are then to enquire further into the underlying factors driving managerial behaviour, using methods that are valid and consistent and which identify predictive patterns of behaviour that are generalisable. These will be discussed later in this chapter. The outcome of the pilot study that was undertaken in this research is described and discussed in the next section.

3.3 Pilot Study with Experts

3.3.1 Background

Through personal networking, five well known and internationally acclaimed experts in the field of personality and its assessment were interviewed. The schedule of interviews and the reasons as to why each was chosen are set out in table 3.3.

Table 3.3 - Experts interview schedule

Contact	Position	Reason for choice
Professor Adrian Furnham	Professor of Psychology - University College London	Author of over 1100 scientific papers and 75 books in the fields of management science, occupational and personality psychology. A Fellow of the British Psychological Society.
Professor Clive Boddy	Professor of Management – Tasmanian School of Business & Economics – University of Tasmania	Developed the PM-MRV psychopathy measuring instrument. Currently researching the impact of Corporate Psychopaths on business, marketing, employees, corporate ethics and the global financial crisis.
Professor Clive Fletcher	Emeritus Professor of Occupational Psychology - Goldsmith's College, University of London, and Managing Director of Personnel Assessment Ltd.	A Fellow of the British Psychological Society (BPS). Has published extensively on psychological assessment in work settings and has worked in the private and public sector, which included the Cabinet Office. He is author of the standard CIPD text on Performance Appraisal and is co-author of a book relating to Psychological Testing. Referred me to Professor Tomas Chamorro-Premuzic (See below).

Dr Jeff Foster (Referral from Professor Chamorro-Premuzic – CEO Hogan Assessments)	Director Research and Development, Hogan Assessments	Dr Foster specializes in job analysis, performance appraisal, test development and test validation. His research department annually conducts hundreds of personality and job performance client research studies. He is co-author with Blaine Gaddis of a meta-analysis of dark side personality characteristics (2013) and critical work behaviours of leaders across the globe which is cited in this research.
Dr Nigel Guenole	Senior Lecturer in Management - Goldsmiths, University of London.	Dr Guenole suggests that the field of personality at work is now at a point reminiscent of the 1990s, where substantive developments in the field are ready to be integrated to advance understanding of personality at work. Published a focal article in 2014, proposing a new trait model that can be viewed as a maladaptive counterpart to the Big Five Factor Model (FFM - McCrea and Costa, 1997)

Following Huff's (2009) suggestion to test one's plan with a panel of experts, the goal was to discuss alternatives available given the measurement issues and access restrictions to informants highlighted earlier. Guenole recommends replicating the approach of Padilla, Hogan and Kaiser (2005) with their focus on the "toxic triangle" comprising the characteristics of leaders, followers and environmental contexts connected with destructive leadership. However, because the data was not available this approach was not considered for this research study.

Furnham also acknowledges that access is difficult but recommends that the Hogan Development Survey (HDS) be used as the principal measure. Foster explains that as a measure of management derailment, the HDS has been the instrument of choice for some time. He adds that given the litigious nature that prevails, particularly in the US, the development of the HDS has taken into consideration the content of items that could be seen as discriminatory. Foster reinforces this point by reminding us that the HDS was not designed to measure personality disorders. The HDS measures the self-defeating expressions of normal personality. This point also relates to the American's with Disabilities legislation. The "dark side" characteristics measured by the HDS are undesirable in mangers but do not meet the clinical criteria for personality disorders which could trigger litigation under the act. Boddy also advises research into the sub-clinical variant of psychopathy but proposes the use of qualitative rather than quantitative methods affecting entry into organisations via the human resources function. Furnham though advises that larger organisations do make use of the HDS and that one should become familiar in applying the HDS and the literature related to it.

The use of the HDS as the primary research instrument was further endorsed by Fletcher adding that the study of psychopathy as a unitary personality disorder has traditionally presented difficulties for researchers, reinforcing the idea of broadening the

enquiry to include other personalities such as the Machiavellian. Reflecting on the development of political skills and leadership, he adds that the literature of the last twenty years is indicative of the application of Machiavellianism as a by-word for manipulation in the drive to "get ahead" in the workplace through "turf wars" and corporate "back-stabbing". Fletcher also adds that the perspective of what is meant by political skills is changing as Machiavellianism can be viewed positively as part of a continuum of behaviour.

3.4 Main Study Design and Context

The advice given by the experts as described in the preceding section significantly influenced the research design of this study. The consensus view was to extend the research enquiry to include other "toxic" sub-clinical personalities such as the narcissist and the Machiavellian. In addition, the instrument of choice should be the HDS (Hogan and Hogan, 2009), a proven and valid measure of "dark side" personality (Gaddis and Foster, 2013).

Given the difficulties discussed in the previous section associated with gaining direct access to respondents in organisations to gather primary data, secondary data, sourced from Hogan Assessments in the U.S. was analysed. The context for the research is a large US based retail organisation with all respondents from a managerial population. The focus is the relationships between "dark side" personality characteristics and job performance. The initial working hypothesis, identified in the literature and supported by the pilot, is that dark traits cause individuals to derail in their day-to-day lives, and are thus worthy of further research.

The preponderance of clinical instruments used to measure personality disorders were highlighted in the literature as a limiting factor in sub-clinical populations. A major reason is that they lack an appropriate range of scores to allow discrimination between respondents (Furnham et al, 2013). Consequently, the Hogan Development Survey (HDS) has emerged as a viable instrument to measure all three sub-clinical manifestations of the Dark Triad of personalities and its application in this research context is strongly supported by the experts interviewed in the pilot study. It should be noted that the HDS does not measure personality disorders.

This study is designed to test if the independent variables of the DT (Psychopathy, narcissism, and Machiavellianism) predict job performance. It is a response to a call from Gaddis and Foster (2013) to research the relationship between dark side personality characteristics and job performance. It also seeks to extend the meta-analysis conducted by O'Boyle et al (2012) who found that reductions in the quality of job performance were consistently associated with increases in Machiavellianism and psychopathy. The study also tests for the presence of possible moderators of the relationships between each of the DT

variables and job performance in response to calls from O'Boyle et al (2013) and LeBreton et al (2018) to examine the impact of contextual moderators. Driven by the initial research question, *"How do the dysfunctional behaviours of managers affect job performance?"* The subsequent hypotheses, research questions and model devised in the study, will be discussed later in this chapter.

3.5 Scales used in the study

3.5.1 Hogan Development Survey (HDS) scales

Developed by Hogan and Hogan (1997) to measure dark side traits, technically the HDS is not a clinical measure, but rather measures dysfunctional personality in the working population. However, using a similar taxonomy to the classical personality disorders as defined in the DSMs, the HDS assumes a dimensional model, whilst the disorders model is essentially categorical. The HDS measures dysfunctional dispositions, underpinned by DSM-IV, Axis II personality disorders (Furnham, Trickey and Hyde, 2011: p.908). Comprising 11 scales and 154 items in the form of statements to which a respondent indicates a 0 to "disagree" or a 1 to "agree", the HDS also incorporates three subscales and fourteen items that are based on each scale's distinctive syndrome feature. Items are scored so that higher scores represent more dysfunctional tendencies. (Hogan and Hogan, 2009: p.14).

As Gaddis and Foster (2013) point out, leaders can use the HDS to gain strategic self-awareness about how to improve their performance and relationships with others at work. The HDS measures characteristics that leaders often consider strengths. However, a manager may become heavily reliant on these tendencies when under stress, this could lead to detrimental effects on performance (Kaiser and Hogan, 2011). For example, a manager scoring moderately highly on the HDS Bold scale may view themselves as confident, socially skilled, and willing to take a dominant role in team interactions, not being afraid to assert their ideas and opinions. However, an over-reliance on these tendencies may lead to his or her supervisor, co-workers and subordinates to view these behaviours as indicative of someone who is intimidating and insensitive when dealing with peers and subordinates and as someone who may be resistant to negative feedback. Table 3.4 presents the eleven HDS scales and their definitions as described earlier in chapter two. The behavioural descriptions highlight how they might undermine a person's occupational success.

As Furnham et al (2011) note, the Hogan 'dark side' measure is now extensively used in organisational research and practice to measure dysfunctional personality in the 'normal population'. It has the advantage of being psychometrically valid; of measuring all the personality disorder categories in DSM-IV and being appropriate for a "normal" population. It

has been cross validated with the MMPI personality disorder scales. Correlations (n = 140) range from 0.45 for Mischievous to 0.67 for Excitable (Hogan and Hogan, 2001). Fico, Hogan, and Hogan (2000) report coefficient alphas between 0.50 and 0.70 with an average of 0.64 and test–retest reliabilities (n = 60) over a three-month interval ranging from 0.50 to 0.80, with an average of 0.68. There were no mean-level differences between sexes, racial/ethnic groups, or younger versus older persons (Hogan and Hogan, 2001) though Furnham et al (2011) did find evidence of gender differences in ten of the eleven HDS scales.

Table 3.4 - HDS Factors, Scales and Definitions

HDS Factor	HDS Scale	Concerns seeming…
Moving Away	Excitable	Moody and inconsistent, being enthusiastic about new persons or projects and then becoming disappointed with them
	Skeptical	Cynical, distrustful, overly sensitive to criticism, and questioning others' true intentions
	Cautious	Resistant to change and reluctant to take even reasonable chances for fear of being evaluated negatively
	Reserved	Socially withdrawn and lacking interest in or awareness of the feelings of others
	Leisurely	Autonomous, indifferent to other people's requests, and becoming irritable when they persist
Moving Against	Bold	Unusually self-confident and, as a result, unwilling to admit mistakes or listen to advice, and unable to learn from experience.
	Mischievous	To enjoy taking risks and testing the limits
	Colourful	Expressive, dramatic, and wanting to be noticed.
	Imaginative	To act and think in creative and sometimes unusual ways
Moving Toward	Diligent	Careful, precise, and critical of the performance of others
	Dutiful	Eager to please, reliant on others for support, and reluctant to take independent action

Source: Gaddis and Foster (2013: p.8)

Various relatively small-scale studies have used the HDS and have shown it to be a robust, reliable, and valid instrument (De Fruyt et al, 2009; Furnham, 2006; Furnham and Crump, 2005; Rolland and De Fruyt, 2003; Khoo and Burch, 2008).

As Furnham, Trickey and Hyde (2011) point out, various factor analytic studies of the HDS have also yielded three factors. Moving against (Bold, Mischievous, Colourful, Imaginative), Moving toward ((Diligent, Dutiful), and Moving away from (Excitable, Cautious, Skeptical, Reserved, Leisurely) others (Hogan and Hogan, 1997). These factors are discussed in the next section.

3.5.2 Horney Global Scales

The "dark side" of personality comprises certain aspects of personality hidden from consciousness which tend to manifest when we feel threatened, or our guard is down (Hogan and Hogan, 1997). Horney (1950) found that children learn to hide their hostility and anxiety with various defensive behaviours which she termed 'neurotic needs'. These are manifested in flawed personality tendencies in adult relationships (Mansi, 2019: p.228). As cited in chapter two, Horney (1950) classified ten neurotic needs under three factors defined as:

- Moving Away: Managing one's insecurities by avoiding others (A need for self-sufficiency and independence)

- Moving Against: Managing one's self-doubts by dominating and intimidating others (A need for power).

- Moving Toward: Managing one's insecurities by building alliances to minimize the threat of criticism (A need for love).

These definitions were adapted from Hogan and Hogan (2009: p.14). As shown earlier in table 2.2 three clear factors emerge as a result of a factor analysis carried out by Hogan and Hogan (2009) on the eleven HDS scales. This factor analysis captures the link between the HDS and Horney's (1950) taxonomy of flawed personalities.

The first factor, "Moving Away" from others has high loadings with the Excitable, Skeptical, Cautious, Reserved and Leisurely HDS scales. The second factor, "Moving Against" others has high loadings with the Bold, Mischievous, Colorful and Imaginative HDS scales. The third factor, "Moving Towards" others has high loadings with the Diligent and Dutiful HDS scales (Hogan and Hogan, 2001: p.43).

The HDS identifies and defines two of the key personality variables within the DT, Narcissism (Bold scale) and Psychopathy (Mischievous scale) –see table 2.2 for comparisons with the DSM IV Axis 2 scale definitions, themes, and implications. The HDS does not identify and define Machiavellianism specifically. However, there is some item overlap with a Machiavellian scale known as the Mach IV (Christie and Geis, 1970). This will be discussed in the next section on the Dark Triad scales.

3.5.3 Identifying the Dark Triad Scales

Nicolo Machiavelli's *The Prince, The Discourses* (1532) is considered by some researchers as a blueprint or text for those attempting to seize power in interpersonal relationships. Drawing on historical precedent rather than philosophical ideals, Machiavelli suggested that even the morally righteous must make deliberate and calculated use of ruthless, amoral, and deceptive methods when dealing with those of a similar disposition (O'Boyle et al, 2012). In 1970, Christie and Geis published a personality measure, the Mach IV, based on Machiavelli's principles.

The Machiavellian personality is defined by three sets of inter-related values: a belief in the effectiveness of manipulative tactics in dealing with people (e.g., *"Never tell anyone the real reason you did something unless it is useful to do so"*); a cynical view of human nature (e.g., *"It is safest to assume that all people have a vicious streak and it will come out when they are given a chance"*)*;* a moral outlook that places expediency above principle (e.g., *"It is hard to get ahead without cutting corners here and there"*). Those high in Machiavellianism (High Machs) compared to those low in the trait (Low Machs) give high priority to money, power and competition (Stewart and Stewart; cited in Paulhus and Jones, 2009: p.94) and relatively low priority to community building, self-love and family concerns (McHoskey, 1999). The Mach IV scale construction is described in Appendix D.

Psychopathy: Characterised by tendencies to be callous, impulsive, and manipulative, the psychopath is:

"Simply a basically asocial and antisocial individual" (Cleckley, 1976: p.370).

Correlations with other personality measures indicate negative relations with honesty, humility, and agreeableness from the HEXACO Honesty-Humility scales, as well as agreeableness, conscientiousness, and neuroticism from the Five Factor Model (Ferrell and Gaddis, 2016).

Narcissism: Characterised by feelings of entitlement and superiority, the narcissist also desires authority and leadership. This is often accompanied by a proclivity for self-display and a willingness to exploit others (Ferrell and Gaddis, 2016: p.3). Correlations with other personality measures show negative relations with the HEXACO Honesty-Humility scales (Lee and Ashton, 2005), functional impulsivity (Paulhus and Jones, 2009) and aggression, especially after ego threat (Bushman and Baumeister, 1999; Jones and Paulhus, 2010).

It is possible to consider the three dimensions of the Dark Triad as dark side personality constructs, or behavioural characteristics that can degrade job performance and

interfere with an individual's ability to capitalize on his or her strengths (Hogan and Hogan, 2009).

As introduced earlier in chapter two, a study by Ferrell and Gaddis (2016) sought to examine the relationships between Dark Triad measures and the HDS at the subscale level. Their results suggest some overlap between scales across measures but indicate that some DT measures only assess part of the dark side personality space with other dimensions of dark side personality unrelated to Dark Triad dimensions.

Ferrell and Gaddis (2016) proposed three hypotheses:

Hypotheses 1a and 1b:	Machiavellianism (1a) and psychopathy (1b) will be *positively related to* the subscales of the *Excitable, Skeptical, Cautious, Reserved*, *and Leisurely* scales (Moving Away Factor) as well as *the subscales of the Bold, Mischievous, Colorful and Imaginative* scales. (Moving Against factor)
Hypotheses 2:	Narcissism will be *positively related to* the subscales of the *Bold, Mischievous, Colorful, and Imaginative* scales. (Moving Against factor)
Hypotheses 3:	Machiavellianism, narcissism *and* psychopathy will be *unrelated to* the subscales of the *Diligent and Dutiful* scales. (Moving Towards factor)

The results of the Ferrell and Gaddis (2016) analysis were described in chapter two and are shown in table 3.5. Where all three subscales are significantly correlated with a DT scale, they are then included in the final taxonomy of the final scales used in this study. The significant correlations for Machiavellianism are highlighted in blue, psychopathy in red and narcissism in green.

Ferrell & Gaddis's results show that Machiavellianism correlates most significantly with twelve of the fifteen HDS subscales (80%) that make up the higher Moving Away factor and which comprise the Excitable, Skeptical, Reserved and Leisurely scales. It is also significantly related to six of the twelve subscales (50%) that make up the Moving Against Factor and which comprise the Bold and Mischievous scales. There were no significant correlations across all six subscales that comprise the HDS Diligent or Dutiful scales in the Moving Toward factor.

The results also show a predominance on the Moving Away profile factor of the HDS. They typify a person who is prone to mercurial emotional reactions that swing between passionate enthusiasm and intense distaste (Excitable). They also denote an individual keenly alert for signs of betrayal and/or disapproval. On detecting these signs, they may

challenge, accuse, confront or retaliate (Skeptical). Deeply resentful of superiors (Leisurely), they are quiet, withdrawn and prefer to work alone (Reserved). These characteristics maintain distance between an individual and others, preferring to be independent and non-conforming [low Diligent and low Dutiful] (Hogan and Hogan, 2009: p122).

Table 3.5 - Correlations between the HDS and the Dark Triad inventories

	HDS Scale & Subscale	SD3 Mach	SD3 Psych	NPI-40 Narc	SD3 Narc
Moving Away	EXC: Volatile	.44**	.32**	.10	.04
	EXC: Easily Disappointed	.57**	.33**	.17*	.04
	EXC: No direction	.18*	-.04	-.36**	-.31**
	SKE: Cynical	.64**	.35**	.22**	.16*
	SKE: Mistrusting	.58**	.30**	.13	-.01
	SKE: Grudges	.48**	.31**	.09	-.01
	CAU: Avoidant	.19*	-.11	-.31**	-.37**
	CAU: Fearful	.22**	.07	-.30**	-.29**
	CAU: Unassertive	.08	-.09	-.38**	-.24**
	RES: Introverted	.32**	.05	-.27**	-.32**
	RES: Unsocial	.38**	.03	-.23**	-.31**
	RES: Tough	.47**	.27**	.22**	.05
	LEI: Passive Aggressive	.22**	.06	.01	-.05
	LEI: Unappreciated	.40**	.40**	.35**	.27**
	LEI: Irritated	.51**	.28**	.21**	.10
Moving Against	BOL: Entitled	.34**	.37**	.60**	.53**
	BOL: Overconfidence	.22**	.23**	.51**	.45**
	BOL: Fantasised Talent	.17*	.29**	.63**	.56**
	MIS: Risky	.36**	.59**	.42**	.41**
	MIS: Impulsive	.22**	.42**	.49**	.45**
	MIS: Manipulative	.39**	.39**	.50**	.48**
	COL: Public Confidence	.02	.30**	.52**	.59**
	COL: Distractable	.19*	.21**	.15	.13
	COL: Self Display	.24**	.44**	.60**	.63**
	IMA: Eccentric	.19*	.34**	.25**	.29**
	IMA: Special Sensitivity	.11	.27**	.49**	.47**
	IMA: Creative Thinking	.10	.25**	.33**	.38**
Moving Toward	DIL: Standards	.15*	.06	.24**	.20**
	DIL: Perfectionistic	-.07	-.01	.01	.10
	DIL: Organized	.19*	.01	.04	.06
	DUT: Indecisive	-.05	-.11	-.12	-.10
	DUT: Ingratiating	.10	-.08	-.05	.03
	DUT: Conforming	-.02	-.06	-.10	-.00

* p < .05 (two-tailed) ** p < .01 (> 0.19, two-tailed)
SD3 – Short Dark Triad; Mach – Machiavellianism; Psych – Psychopathy;
NPI-40 – Narcissistic Personality Inventory-40; Narc – Narcissism;
 EXC – Excitable; SKE – Skeptical; CAU – Cautious; RES – Reserved;
LEI – Leisurely; BOL – Bold; MIS – Mischievous; COL – Colorful;
IMA – Imaginative; DIL – Diligent; DUT – Dutiful

Data source: Ferrell and Gaddis (2016)

The psychopathy scales of the SD3 (highlighted in red) are significantly related to three of the fifteen subscales that comprise the higher Moving Away factor. All three lie within the Skeptical scale. The predominant correlations are related to all twelve subscales that

make up the Moving Against factor and comprise the Bold, Mischievous, Colorful, and Imaginative scales.

The results are indicative of a person who is self-dramatizing, exuberant and impulsive (Colorful). They seek excitement and like to test the limits whilst also being confident, bright, and charismatic (Bold), creative and innovative (Imaginative). There is also a tendency to distrust others and to feel exploited by them (Skeptical) – Hogan and Hogan (2009: p.124). Neither SD3 scale (For Mach and Psych) correlated with the HDS Cautious scale.

The study also emphasises that Machiavellianism and psychopathy involve two distinct interpersonal styles. One leading to the avoidance or moving away from others and the other to dominate, intimidate or otherwise work and move against others. These styles are generally aligned to the relevant findings in the literature (Ferrell and Gaddis, p.9).

The narcissism scales from the NPI-40 and the SD3 (highlighted in green) are significantly but negatively related to three of the fifteen subscales that make up the Moving Away factor and which comprise the Cautious subscale. The predominance of correlations lies within the subscales that make up the Moving Against factor and which comprise the Bold, Mischievous and Imaginative scales. As Ferrell and Gaddis (2016) point out, the results for narcissism are indicative of two distinct styles. One that involves a willingness to engage with and directly confront others (negative Cautious) and the other to dominate and intimidate, re-inforced by a lack of relationship with the Moving Toward others scale.

There are three important exclusions to be noted. The first is that the Reserved subscales under the NPI-40 narcissism scale show three highly significant correlations. However, two are negative (Introverted and Unsocial) and the third is positive (Tough). Thus, the two subscales are pulling in opposite directions from the third. Because subscale scores were not available for this study, the Reserved scale is excluded. Leisurely has two subscales highly significantly correlated with the SD3 Psych and both narcissist scales. The Passive-Aggressive subscale has very low correlations with both. Colorful shows non-significant correlations with the subscale, Distractable, against the SD3 Psych and both Narcissist scales.

The Ferrell and Gaddis study (2016) focuses particularly at the subscale level when mapping the Dark Triad with the HDS. As stated in the introduction to this section, the current data set to be analysed does not have any subscale data within it. Smith et al. (2017) make the point that:

"Applying a facet-based approach to studying dark personality may effectively address concerns with construct redundancy by narrowing the focus on certain dimensions of bright and dark traits" (p.15).

The results positively rule out the applicability of the Diligent and Dutiful scales and subscales. The near zero correlations suggest that working and building alliances with others are not interpersonal strategies used by those with elevated scores on Dark Triad dimensions (Ferrell and Gaddis, 2016: p.9). The implications are that whilst the HDS Diligent and Dutiful scales and subscales are considered valid and strong indicators of dark side behaviour, given the lack of correlation with the Dark Triad, the Dark Triad model may not comprehensively capture the full range of dark side behaviour (Ferrell and Gaddis, 2016: p.9).

Given the preceding discussion of the results and implications, the final taxonomy applied in this study is shown in table 3.6. The table shows that six HDS scales map onto Machiavellianism, five onto Psychopathy and four onto Narcissism. Two scales, Bold and Mischievous map onto all three DT profiles, whilst two others, Skeptical and Imaginative, map onto two DT profiles.

Table 3.6 - Mapping the Dark Triad and Hogan Development Survey

Dark Triad Scale	HDS Scale	Description
Machiavellianism	Excitable	Moody, hard to please, intense but short-lived enthusiasm for people, projects, or things.
	Skeptical	Cynical, distrustful, and doubting others' intentions.
	Reserved	Aloof, detached, and uncommunicative, lacking interest or awareness of the feelings of others.
	Leisurely	Independent, ignoring people's requests and becoming irritated or argumentative if they persist.
	Bold	Unusually self-confident, feelings of grandiosity or entitlement, over-evaluation of one's capabilities.
	Mischievous	Risk taking and testing the limits, needing excitement, manipulative, deceitful, cunning, and exploitative.
Psychopathy	Skeptical	Cynical, distrustful, and doubting others' intentions.
	Bold	Unusually self-confident, feelings of grandiosity or entitlement, over-evaluation of one's capabilities.
	Mischievous	Risk taking and testing the limits, needing excitement, manipulative, deceitful, cunning, and exploitative.
	Colourful	Expressive, animated, and dramatic, wanting to be noticed and needing to be the centre of attention.
	Imaginative	Acting and thinking in creative and sometimes odd or unusual ways.
Narcissism	Cautious (Reversed)	Reluctant to take risks for fear of being rejected or negatively evaluated.
	Bold	Unusually self-confident, feelings of grandiosity or entitlement, over-evaluation of one's capabilities.
	Mischievous	Risk taking and testing the limits, needing excitement, manipulative, deceitful, cunning, and exploitative.
	Imaginative	Acting and thinking in creative and sometimes odd or unusual ways.
Not relevant	Diligent	Meticulous, precise, perfectionistic, inflexible about rules and procedures, critical of others' performance.
	Dutiful	Eager to please and reliant on others for support and guidance, reluctant to take independent action or go against popular opinion.

To ensure that the items that comprise each of the DT scales are all measuring that particular construct, the Cronbach alpha (Cronbach, 1951 cited in Field, 2013) values were determined as a test of scale *reliability*. The results are shown in table 3.6. Hair et al (2018) state that .6 is acceptable for exploratory research, whilst Nunnally (1978 cited in Field, 2013) suggests that values of .5 will also suffice in the early stages of research. The results of this research show that the Cronbach alpha for Narcissism is .612, Psychopathy is .756 and Machiavellianism is .549. All the DT scale's Cronbach alpha values are within the acceptable range just cited and so are reliable.

3.5.4 Job Performance Scale

Performance is a subjective supervisor rating and was collected using an online performance rating form. A 5-point scale was used as follows:

1=Not Effective

2=Needs Improvement

3=Meets Expectations

4=Highly Effective

5=Exceptional

3.5.5 Demographic items

The following data were collected. Age in years, job tenure in months and sex (male or female).

3.6 Research Problem, Questions and Hypotheses

3.6.1 Research Problem and Questions

Although the possibility of significant relationships between personality disorders and the Dark Triad seems compelling, a problem for research on this issue within normal populations is that measures of the disorders designed for clinical samples may not have an appropriate range of scores to allow discrimination between respondents. A suitable alternative may be the Hogan Development Survey (HDS), which was designed to predict maladaptive symptoms in normal workforce samples, using a continuum of scores rather than cut-off points (Hogan and Hogan, 2009).

There are three research questions (RQ) in this study which are:

RQ1. What are the relationships between scores on the dark triad personality measures and job performance?

RQ2. Will age, tenure, gender act as moderator variables?

RQ3. What are the relationships between scores on the Dark Triad personality measures and the Horney Global factors?

3.6.2 The Hypotheses

The ten hypotheses, derived from the research questions above and based on the literature review, and which were tested in this study, are included in table 3,7 along with the literature citations.

Table 3.7 - Research Hypotheses

H 1.1	There is a statistically significant relationship between the Psychopathy measure and Job Performance. (O'Boyle, 2012; Gaddis and Foster, 2013; Ferrell and Gaddis, 2016)
H 1.2	There is a statistically significant relationship between the Narcissism measure and Job Performance. (O'Boyle, 2012; Gaddis and Foster, 2013; Ferrell and Gaddis, 2016)
H1.3	There is a statistically significant relationship between the Machiavellianism measure and Job Performance. (O'Boyle, 2012; Gaddis and Foster, 2013; Ferrell and Gaddis, 2016)
H2.1	Age, Gender and Tenure will moderate the relationship between Psychopathy and Job Performance. (Harpur and Hare, 1994; Waldmann and Avolio, 1986; Sturman, 2003; Lynam and Widiger, 2007; Ng and Feldman, 2008; Ng and Feldman, 2010; Furnham et al, 2011; Alessandri et al, 2015; Bartlett and Bartlett, 2015; Mackey et al, 2019)
H2.2	Age, Gender and Tenure will moderate the relationship between Narcissism and Job Performance. (Wilson and Sibley, 2011; Waldmann and Avolio, 1986; Sturman, 2003; Lynam and Widiger, 2007; Ng and Feldman, 2008; Ng and Feldman, 2010; Furnham et al, 2011; Alessandri et al, 2015; Bartlett and Bartlett, 2015; Mackey et al, 2019)
H2.3	Age, Gender and Tenure will moderate the relationship between Machiavellianism and Job Performance. (Mudrack, 1992; Waldmann and Avolio, 1986; Sturman, 2003; Lynam and Widiger, 2007; Ng and Feldman, 2008; Ng and Feldman, 2010; Furnham et al, 2011; Alessandri et al, 2015; Bartlett and Bartlett, 2015; Mackey et al, 2019)
H3.1	Psychopaths fit the Moving Against personality type. (Horney, 1950; Ferrell and Gaddis, 2016)
H3.2	Narcissists fit the Moving Against personality type. (Horney, 1950; Ferrell and Gaddis, 2016)
H3.3	Machiavellians fit the Moving Away personality type. (Horney, 1950; Ferrell and Gaddis, 2016)
H3.4	Psychopaths, Narcissists and Machiavellians are unrelated to the Moving Toward personality type. (Horney, 1950; Ferrell and Gaddis, 2016)

3.7 Job Performance Research Model

The research model used in this study is shown in Figure 3.1. This research study investigates the relationship between the Dark Triad variables of psychopathy, narcissism, Machiavellianism, and job performance. They DT variables are identified on the left-hand side in the model as the independent variables. These variables comprise the eleven HDS scales as shown in table 3.4. In this study, it is hypothesised that there are significant, direct relationships between each of the independent DT variables (See hypotheses H1.1 to H1.3 in table 3.7) and which are labelled in the centre of the model, and the dependent variable of job performance, shown on the right-hand side in the model. The model is designed so that the DT independent variables predict and explain the relationship with job performance. In other words, there is an associational relationship so that observation of the DT in the workplace precedes job performance and that job performance will be influenced by the presence of the DT in the workplace. This type of associational relationship between the independent and the dependent variables Dubin (1978) refers to as a "*sequential law*" (As cited in Huff, 2009: p.224).
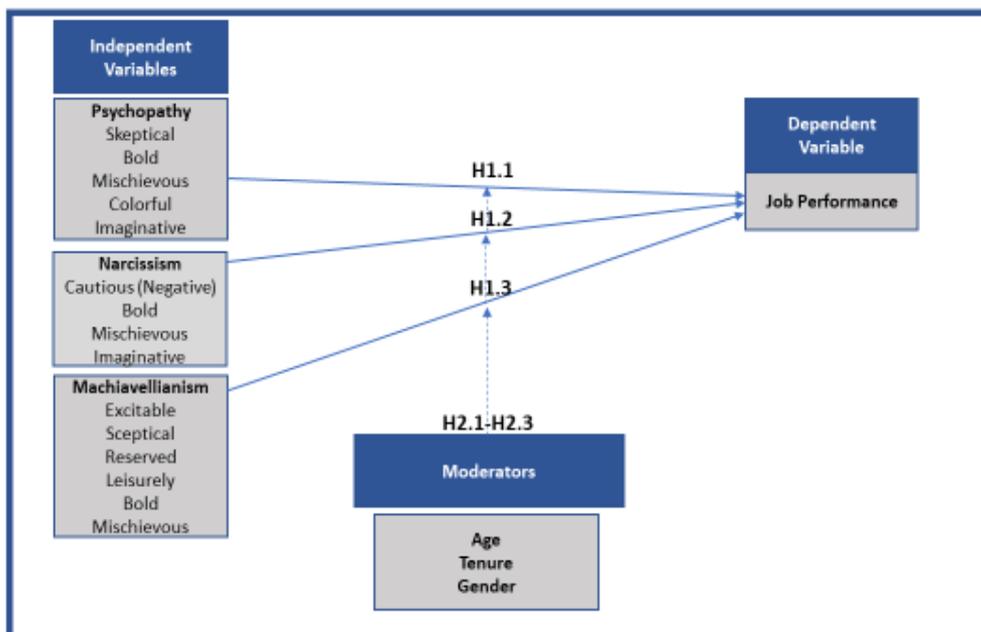
Figure 3.1 - Job Performance Research Model

In addition, the model examines the effect of *age*, *gender* and *tenure* on each of the DT variables. The hypotheses of these relationships are described in table 3.7 as H2.1 to H2.3. They are shown in the model in figure 3.1 as blue dotted lines pointing vertically from the moderator block at the foot of the figure and touching each of the full straight lines that represent the direct relationship between each of the DT variables and the job performance variable.

3.8 Sample

The dataset is from a large American department store chain in the US. All respondents are from a managerial population. Their mean age is 37.83 with a range of 49 years and a standard deviation (SD) of 10.7. Mean job tenure is 23 months with a range of 200 and a SD of 22.2 months. Regarding gender, of those who responded, 73% (649) were male and 27% (240) were female. 29 people did not provide data on their gender.

3.9 Data Preparation and Testing

3.9.1 Descriptive Statistics: Demographics, Job Performance, HDS Scales, Dark Triad Profiles and Horney Global Factors

The full descriptive statistics for the dataset are presented in Table 3.8.

Table 3.8 - Descriptive Statistics for the Dataset

	N	Range	Min	Max	Mean	St. Dev	Skewness	Kurtosis
Age	860	49	19	68	37.830	10.574	0.351	-0.779
Tenure (months)	918	200	9	209	23.050	22.182	0.611	-0.715
Job Performance	918	4	1	5	3.030	0.923	-0.215	-0.315
Excitable	918	82	16	98	34.109	19.355	0.837	-0.044
Skeptical	918	98	2	100	39.815	24.340	0.320	-0.831
Cautious	918	81	10	91	25.692	17.740	0.998	0.280
Reserved	918	95	4	99	38.094	22.845	0.530	-0.436
Leisurely	918	96	3	99	54.016	21.507	-0.273	-0.653
Bold	918	100	0	100	70.055	23.608	-0.838	-0.165
Mischievous	918	99	0	99	46.444	28.440	0.138	-1.181
Colorful	918	99	1	100	67.398	22.069	-0.694	-0.113
Imaginative	918	99	1	100	46.108	28.012	0.183	-1.131
Diligent	918	83	17	100	75.202	16.961	-0.756	0.046
Dutiful	918	98	2	100	67.476	23.681	-0.703	-0.407
Psychopathy	918	438	41	479	269.820	90.404	-0.119	-0.628
Narcissism	918	359	18	377	237.920	67.499	-0.171	-0.520
Mach	918	468	76	544	282.530	78.224	0.123	-0.223
Moving Away	918	82	10	93	38.345	12.530	0.499	0.182
Moving Against	918	95	3	98	57.501	19.485	-0.186	-0.648
Moving Towards	918	75	25	99	71.339	15.249	-0.489	-0.353

Table 3.8 comprises data relating to sample size, range, minimum, maximum, mean, and standard deviation of the variables used in the study. Tests for normality of data are also presented. Skewness refers to clustering at the high end of the distribution (negative value) or at the low end (positive). Kurtosis relates to a peaked distribution with a long tail (positive value) or a relatively flat one (negative). Descriptive Statistics for the dataset were produced and no data outside expected limits were found (see Table 3.8). Tests for skewness and kurtosis were run. All items were below the George and Mallery (2016) limit of +/- 2.0 and so all items are acceptable. Data were found to be within acceptable limits and so no adjustments were required.

3.9.2 Testing for Common Methods Bias

The design of this research study entailed respondent managers supplying all the independent variable data, while the dependent variable, job performance, data was provided by a totally independent source, i.e. supervisors. Nevertheless, checks were made on the possibility of Common Methods Bias (CMB) (Podsakoff et al, 2003). It has been suggested that the Harman one factor test, which entails putting all items into an unrotated factor analysis, can be used to identify the likelihood of the risk of CMB impairing the findings. Podsakoff et al. (2003) state that if this analysis shows that no single factor has emerged explaining the majority of the overall variance, then the risks of CMB are at a relatively low level.

Applying this test to the HDS scales and the demographic data in this study, Table 3.9 shows that the first (highest) factor of the five with Eigenvalues greater than 1 explained 19.64% of the variance. Total variance explained by the five factors was 58.15% and Factor 1 thus explains 33.77% of the total for the five factors. As Factor 1 accounts for much less than 50% of the variance of all factors with eigenvalues greater than 1, the risks of CMB may be considered to be relatively low. This finding in turn suggests there is acceptable discriminant validity between the key variables.

Table 3.9 - Harman Test of Common Method Bias: All HDS scales and Demographic data

Factor	Total	% of Var.	Cumulative %
1	2.75	19.64	19.64
2	1.84	13.17	32.80
3	1.29	9.20	42.00
4	1.22	8.69	50.69
5	1.05	7.46	58.15

Extraction Method: Principal Component Analysis.

Total Variance Explained. Initial Eigenvalues > 1

3.10 Summary

This research study is designed to investigate the relationship between the DT and job performance. Its research design is positivist and is aimed at explaining the relationship between the DT variables and job performance, and to determine the predictability of these relationships. Analysis of the data and the findings will be described in the next chapter.

Figure 3.2 provides an overview of the research process. It covers the moderator, control, independent and dependent variables, and methods of analysis used. It is based on the research hypotheses and the relationships between the variables of relevance as identified and described in table 3.7, along with the statistical techniques that will be applied to analyse these relationships. Analysis of the data and the findings will be described in the next chapter.
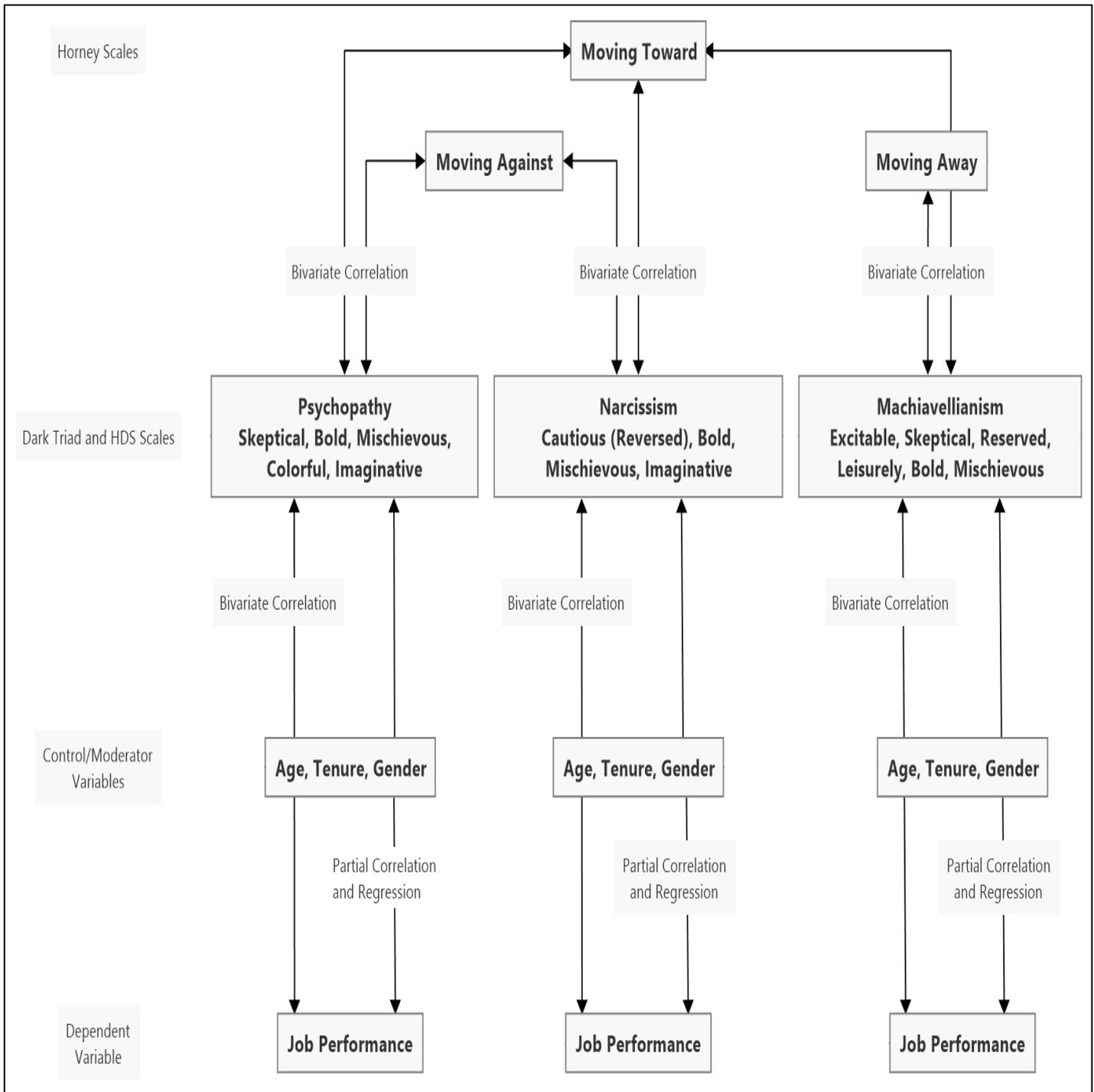
Figure 3.2 – Research Variables and Methods of Analysis

4 Analysis and Results: Hypotheses and Model Testing

4.1 Introduction

This chapter presents analysis and results of a number of statistical tests that have been applied to the data. It starts with an analysis of demographic data using independent samples t-test designed to identify statistically significant differences between demographic groups when looking at the DT and the Hogan Development Survey (HDS) variables.

Correlational analysis is then used to establish statistically significant relationships between each of the DT, HDS variables, job performance, gender, age, and tenure. Partial correlations are then reported to establish the presence of moderating variables between the Dark Triad and job performance. Other correlations between the Dark Triad, demographic variables (Age, tenure, gender), job performance and Horney's (1950) global factor scales are then reported to assess the degree of fit with Horney's personality types.

Hierarchical multiple regressions results, which are aimed at taking a closer look at the relationship between job performance and each member of the DT, and to test the models, are then described. The chapter also includes tests of the ten hypotheses and concludes by summarising the results.

4.2 Results of t-tests and correlations

4.2.1 Demographic data

The independent samples t-test is a parametric test. It is used in normally distributed populations with interval scaled data to compare the mean score on some continuous variables for two different groups of people, such as males and females. An independent samples t-test shows whether there is a statistically significant difference in the mean scores for the two groups. That is, whether males and females differ in terms of dark traits. "In statistical terms, it is a test of the probability that the two sets of scores for males and females came from the same population" (Pallant, 2013: pp.247-248).

An independent-samples t-test was conducted to identify if there is a statistically significant difference between males and females, when measured against each Dark Triad scale and each of the 11 Hogan Development Survey (HDS) scales, at the 95% confidence level. The results are shown in table 4.1.

To interpret the results, if the value in the Sig. (2-tail) column of table 4.1 is equal to or less than .05 (Pallant, 2013), then there is a significant difference in the mean scores on

each of the dependent variables for both males and females (p.250). Table 4.1. shows there is no statistically significant difference in the mean scores for males and females when applied to each of the DT variables.

Table 4.1 - Independent Samples Test: Gender, Dark Triad and HDS Scales

	Gender	N	Mean	Mean Diff	Std. Dev	t	df	Sig. (2-tail)
Psychopathy	Male	649	272.10	5.95	90.49	0.877	887	0.381
	Female	240	266.15	5.95	87.82			
Narcissism	Male	649	239.82	5.09	67.61	1.005	887	0.315
	Female	240	234.73	5.09	65.61			
Mach	Male	649	281.87	-1.93	78.49	-0.327	887	0.743
	Female	240	283.80	-1.93	77.34			
Excitable	Male	649	33.84	-0.14	19.73	-0.096	887	0.924
	Female	240	33.98	-0.14	18.15			
Skeptical	Male	649	38.91	-3.38	23.96	-1.842	887	0.066
	Female	240	42.30	-3.38	25.21			
Cautious	Male	649	25.33	-0.88	17.49	-0.659	887	0.510
	Female	240	26.21	-0.88	18.43			
Reserved	Male	649	37.55	-0.93	22.93	-0.536	887	0.592
	Female	240	38.48	-0.93	22.81			
Leisurely	Male	649	53.79	-0.52	21.72	-0.321	887	0.748
	Female	240	54.31	-0.52	21.03			
Bold	Male	649	69.26	-3.62	23.60	-2.043	887	0.041
	Female	240	72.88	-3.62	23.03			
Mischievous	Male	649	48.51	6.66	28.29	3.129	887	0.002
	Female	240	41.85	6.66	27.81			
Colorful	Male	649	69.03	5.12	21.70	3.114	887	0.002
	Female	240	63.91	5.12	21.94			
Imaginative	Male	649	46.38	1.17	28.04	0.553	887	0.580
	Female	240	45.21	1.17	27.82			
Diligent	Male	649	75.79	1.73	16.64	1.356	887	0.175
	Female	240	74.05	1.73	17.59			
Dutiful	Male	649	68.53	4.12	22.95	2.306	887	0.021
	Female	240	64.40	4.12	25.50			

However, when looking at the HDS scales for Bold (p = .041), Mischievous (p = .002), Colourful (p = .002) and Dutiful (p = .021), there are statistically significant differences in the mean scores between males and females as they all fall below the .05 level for significance.

4.2.2 Correlations between the Dark Triad; HDS Scales, Tenure and Age

Table 4.2 shows that tenure is highly significantly and positively correlated with age (r = .184) which indicates that as job tenure increases so too does age, which is to be expected. However, none of the DT variables is significantly correlated with tenure but they are all significantly and negatively correlated with age (Psychopathy: r = -.166; Narcissism: r = -.128; Machiavellianism: r = -.114). This indicates a tendency for each of the DT to be associated with younger employees.

The data within table 4.2 also shows the Excitable HDS scale is highly significantly and positively correlated with both tenure (r = .087) and age (r = .142) which indicates that the higher the score on the Excitable scale, the more the person will tend to have been employed longer and be older. However, the Diligent HDS scale is significantly and negatively correlated with tenure (r = -.076) but not with age. This indicates that the higher the score, the shorter the tenure, regardless of age.

Of the remaining HDS scales, Skeptical (r = -.188), Bold (r = -.109), Mischievous (r = -.097) and Colorful (r = -.120) are all highly significantly and negatively correlated with age but not with tenure; whilst Leisurely (r = -070) and Imaginative (r = -.086) are significantly and negatively correlated with age but not with tenure. This indicates a tendency for each of the scales to be associated with younger employees, regardless of tenure.

4.2.3 Correlations between the Dark Triad; HDS Scales and Job Performance

Correlation analysis is used to describe the strength and direction of the linear relationship between two variables (Pallant, 2013: pp133). The relationship between job performance, tenure (measured in months) and age on each of the Dark Triad and HDS scales was investigated using the Pearson product-moment correlation co-efficient (r). Pearson correlations (r) can only take on values from -1 to +1. A positive correlation indicates that as one variable increases, so too does the other. A negative correlation indicates that as one variable increases, the other decreases. The size of the absolute value, regardless of whether it is positive or negative, provides an indication as to the strength of the relationship. So, a perfect correlation of +1 or -1 indicates that the value of one variable can be determined by knowing the value on the other variable. However, a correlation of 0 indicates

that there is no relationship between the variables (Pallant, 2013: p.133). The correlations are described as either significant (*) or highly significant (**) where appropriate.

The results for job performance are shown in table 4.2. Looking at the DT variables first, psychopathy and Machiavellianism do not show significant correlations with job performance. However, narcissism does show a significant negative correlation (r = - .067) which indicates a tendency for job performance to decrease as narcissism increases.

Table 4.2 - Correlations between Dark Triad; HDS scales, Age, Job Performance and Tenure

	Tenure Months	Age	Job Performance
Job Performance	0.06	-.158**	1
Tenure Months	1	.184**	0.06
Psychopathy	0.007	-.166**	-0.06
Narcissism	0.016	-.128**	-.067*
Mach	0.015	-.114**	-0.038
Excitable	.087**	.142**	-0.002
Skeptical	-0.032	-.188**	-0.025
Cautious	-0.01	0.049	0.043
Reserved	0.026	-0.013	0.04
Leisurely	-0.015	-.070*	-0.026
Bold	-0.008	-.109**	-0.056
Mischievous	0.006	-.097**	-0.046
Colorful	0.023	-.120**	-0.048
Imaginative	0.033	-.086*	-0.041
Diligent	-.076*	-0.014	-0.048
Dutiful	0.003	-0.011	-0.015
N	918	918	918

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

4.2.4 Partial Correlations between variables

Partial correlation is similar to the Pearson product-moment correlation as described above. The principal difference is that partial correlation allows us to control for additional variables that could be influencing those variables we are interested in. By statistically

removing the influence of these "confounding" variables, one can achieve a clearer and more accurate indication of the relationship between the variables of interest (Pallant, 2013). Partial correlation was used to explore the relationship between the DT personality variables and job performance whilst controlling for age, tenure, and gender. The results are shown in table 4.3.

Table 4.3 - Partial and Bivariate Correlations between the Dark Triad Scales and Job Performance

Correlations:	Partial				
Controlling for Age					
	Performance				
Psychopathy	-0.098	**			
Narcissism	-0.097	**			
Mach	-0.068	*			
Controlling for Gender (M1; F2)					
Psychopathy	-0.061				
Narcissism	-0.065	*			
Mach	-0.039				
Controlling for Tenure					
Psychopathy	-0.061				
Narcissism	-0.068	*			
Mach	-0.039				
Controlling for Age, Gender and Tenure					
			Bivariate		
Psychopathy	-0.099	**	-0.060		
Narcissism	-0.097	**	-0.067	*	
Mach	-0.069	*	-0.038		
df	856		N	918	

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

When controlling for the demographic variables separately, the correlation between job performance and each DT member is significant for each. When controlling for gender and tenure separately, the correlations between narcissism and job performance are significant at the 5% level, but correlations for the other two members of the DT are not significant.

To provide an overview, all three demographic variables were entered together. The left-hand column labelled, Partial Performance, repeats the same set of correlation analyses, this time controlling for the effect of age, tenure and gender. When controlling for age, tenure and gender, there are significant and negative correlations between psychopathy ($r = -.100$) narcissism ($r = -.097$) and Machiavellianism ($r = -.069$) with job performance. This suggests that controlling for age, tenure and gender has a greater and significant effect on the strength of the relationships between the DT and job performance, with psychopathy and narcissism highly significant at the 1% level.

The right-hand column in table 4.3 labelled Bivariate Performance from Table 4.2. is included for ease of comparison and shows Pearson product-moment correlations for each of the DT scales but *not* controlling for age, tenure and gender. The correlations are Psychopathy ($r = -.060$), Narcissism ($r = -.067$) and Machiavellianism ($r = -.038$).

4.2.5 Horney Global Factor Scales correlations with the Dark Triad Scales

As noted in Chapter two, Horney's (1950) three global scale factors are Moving Away, which refers to managing one's insecurities by avoiding others; Moving Against, which refers to managing one's own self-doubts by dominating and intimidating others; and Moving Towards, which refers to managing one's insecurities by building alliances to minimise the threat of criticism.

Table 4.4 shows the correlations between Horney's three global factor scales the Dark Triad, the demographic variables of age, gender, and tenure, and job performance. There is a highly significant correlation between Horney's Moving Away and Moving Against global factors ($r = .139$) whereas there are no significant correlations between Moving Towards and the other two global factors.

Table 4.4 - Correlations: Horney Global Factors v. Dark Triad Profiles and Demographics

	Moving Away	Moving Against	Moving Towards
Moving Away	1	.139**	0.036
Moving Against	.139**	1	0.041
Moving Towards	0.036	0.041	1
Psychopathy	.294**	.969**	0.037
Narcissism	0.051	.956**	0.004
Mach	.781**	.654**	0.024
Age (N=860)	-0.044	-.134**	-0.017
Tenure	0.016	0.018	-0.040
Job Performance	0.007	-0.062	-0.038
N	918	918	918

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Psychopathy is highly significantly and positively corelated with the Horney Moving Away (r = .294) and Moving Against (r = .969) factors, with the latter showing a significantly stronger correlation. Similarly, Narcissism (r = .956) also shows a large, positive and highly significant correlations with Horney's Moving Against factor. In contrast, Machiavellianism is highly significantly and positively correlated with Horney's Moving Away (r = .781) and Moving Against (r = .654) factors, with the former showing a significantly stronger correlation. None of the Dark Triad variables are correlated with the Moving Towards global factor scale.

As for the demographic variables, age has a negative and highly statistically significant correlation with the Moving Against Factor which indicates that there is a tendency for those that prefer to dominate and intimidate others to be younger.

4.3 Testing the Hypotheses

The data used for testing the 10 hypotheses and the results of whether they were supported or not are presented in this section.

H 1.1   There is a statistically significant relationship between the psychopathy measure and job performance.

        The correlation between psychopathy and job performance in table 4.2 is -.060. This is not significant which means the hypothesis is not supported.

H 1.2   There is a statistically significant relationship between the narcissism measure and job performance.

        The correlation between narcissism and job performance in table 4.2 is -.067. This is significant which means the hypothesis is supported.

H1.3   There is a statistically significant relationship between the Machiavellianism measure and job performance.

        The correlation between Machiavellianism and job performance in table 4.2 is -.038. This is not significant which means the hypothesis is not supported.

H2.1   Age, gender and tenure will moderate the relationship between psychopathy and job performance.

        The partial correlation between psychopathy and job performance in table 4.3 is -.100. This is highly significant which means the hypothesis is supported.

H2.2   Age, gender and tenure will moderate the relationship between narcissism and job performance.

        The partial correlation between narcissism and job performance in table 4.3 is -.097. This is highly significant which means the hypothesis is supported.

H2.3   Age, gender and tenure will moderate the relationship between Machiavellianism and job performance.

        The partial correlation between Machiavellianism and job performance in table 4.3 is -.069. This is significant which means the hypothesis is supported.

H3.1   Psychopaths tend to fit the Moving Against personality type.

        The correlation between psychopathy and the Moving Against personality type in table 4.4 is .969. This is highly significant which means the hypothesis is supported.

H3.2   Narcissists tend to fit the Moving Against personality type.

        The correlation between narcissism and the Moving Against personality type in table 4.4 is .956. This is highly significant which means the hypothesis is supported.

H3.3   Machiavellians tend to fit the Moving Away personality type.

The correlation between Machiavellianism and the Moving Against personality type in table 4.4 is .781. This is highly significant which means the hypothesis is supported.

H3.4   Psychopaths, narcissists, and Machiavellians tend not to fit the Moving Toward personality type.

The correlations between psychopathy (.037), narcissism (.004) and Machiavellianism (.024) in table 4.4 are not significant which means the hypothesis is supported.

4.4 Results of Hierarchical Regression for Model Testing

Hierarchical multiple regression is used to explore the relationship between one continuous dependent variable, in this case, job performance and a number of independent variables or predictors. It is based on correlation but allows a more nuanced exploration of the interrelationships among a set of variables (Pallant, 2013: p.155). In hierarchical regression, the independent variables are entered into the IBM Statistical Package for the Social Sciences (SPSS) in steps or blocks, as opposed to standard multiple regression where variables are entered into the equation simultaneously. This means that by using hierarchical regression, each individual variable can be assessed in terms of what it adds to the prediction of the dependent variable after the previously entered variables have been accounted for (Pallant, 2013: p.155).

4.4.1 Hierarchical Regression: Narcissism and Job Performance

Hierarchical regression was used to assess the ability of each of the Dark Triad personalities to predict job performance after controlling for the influence of age, tenure and gender and to test for model fit. The first of these was Narcissism which is based on the HDS scales of Cautious (Reversed), Imaginative, Bold, and Mischievous. The results are shown in table 4.5.

The same approach is followed for Psychopathy (see table 4.6) which is based on the HDS scales of Skeptical, Bold, Mischievous, Colorful and Imaginative and also for Machiavellianism (See table 4.7) which is based on the HDS scales of Excitable, Reserved, Leisurely, Bold, Skeptical and Mischievous. A summary of the key findings will be described after each table.

Table 4.5 - Hierarchical Regression: Narcissism and Job Performance

Model	R	R Square	Std. Error of Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.208	0.043	0.908	0.043	12.782	3	849	0.000
2	.237	0.056	0.904	0.013	2.889	4	845	0.022

1. Predictors: (Constant), Gender, Age, Tenure

2. Predictors: (Constant), Gender, Age, Tenure, Cautious_Rev, Imaginative, Bold, Mischievous

ANOVA	(Test of Model Fit)					
Model		Sum of Sq	df	Mean Sq	F	Sig.
1	Regression	31.646	3	10.549	12.782	.000b
	Residual	700.662	849	0.825		
	Total	732.307	852			
2	Regression	41.099	7	5.871	7.178	.000c
	Residual	691.209	845	0.818		
	Total	732.307	852			

Dependent Variable: Job Performance

1. Predictors: (Constant), Gender, Age, Tenure

2. Predictors: (Constant), Gender, Age, Tenure, Cautious_Rev, Imaginative, Bold, Mischievous

Coefficients

Model		Unstandard. Coeff.		Standardized Coefficients			Collinearity Stats:	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.281	0.147		22.265	0.000		
	Age	-0.016	0.003	-0.178	-5.217	0.000	0.965	1.037
	Tenure	0.004	0.001	0.104	3.038	0.002	0.956	1.046
	Gender	0.199	0.070	0.096	2.841	0.005	0.991	1.009
2	(Constant)	3.778	0.222		16.989	0.000		
	Age	-0.017	0.003	-0.193	-5.630	0.000	0.946	1.057
	Tenure	0.005	0.001	0.108	3.148	0.002	0.955	1.048
	Gender	0.211	0.071	0.101	2.981	0.003	0.964	1.037
	Cautious Rev.	-0.002	0.002	-0.046	-1.374	0.170	0.984	1.016
	Bold	-0.004	0.002	-0.090	-2.370	0.018	0.779	1.284
	Mischievous	0.000	0.001	0.005	0.134	0.894	0.672	1.488
	Imaginative	-0.001	0.001	-0.026	-0.660	0.510	0.693	1.443

To assess the degree of model fit, the first part of the table shows the Model Summary. There are two models identified. Model 1 refers to the first block of predictor variables that were entered (Age, tenure and gender), whilst Model 2 includes all the variables that were entered in *both* blocks which include the Cautious_Rev (Reversed scale), Imaginative, Bold and Mischievous HDS scales and which comprise the narcissism scale.

The R Square value in Model 2 indicates that 5.6% (0.056 x 100) of the variance in job performance is explained by the model. By looking at the column labelled R Square Change and the row marked Model 2, it can be seen that adding in the Cautious (Reversed), Imaginative, Bold and Mischievous HDS scales explains a further 1.3% (0.013 x 100) of the variance in job performance, when controlling for the effects of age, tenure and gender. This is a statistically significant contribution as indicated by the Sig. F Change column for row 2 (.022) which is below the .05 threshold for significance (Pallant, 2013: p.172).

The analysis of variance (Anova) section of the table (second from the top) also indicates that the model (which includes both blocks of variables) as a whole is significant (F (df 7, 845) = 7.178, $p < .001$). This means that the current data fit the model.

The remaining element is the Coefficients table. Looking in the Model 2 row will help understand and establish how much each of the variables contribute to the linear regression. This model summarises the results with *all* the variables entered into the equation. By scanning the Sig. column, we can see four variables that make a unique and statistically significant contribution (The threshold is less than .05). In order of the relative size of their Beta values, they are: Age (-.193), Tenure (.108), Gender (.101) and Bold (-.090). The Beta values represent the unique contribution of each variable when the overlapping effects of other variables are statistically removed. Neither Cautious (Reversed), Imaginative or Mischievous made a unique contribution.

Finally, the Collinearity Statistics column refers to relationships between the independent variables. Two values are given in SPSS: Tolerance and the Variance Inflation Factor (VIF). Tolerance indicates how much of the variability of the specified independent variable is not explained by the other independent variables in the model. According to Pallant (2013), if this tolerance is less than .10 it indicates that the multiple correlation with other variables is high, suggesting the possibility of multicollinearity. None of the tolerances are below .10 and therefore do not indicate the presence of multicollinearity. This is also backed up by the VIF column of data which is related to the tolerance statistic and is its reciprocal (1/ VIF). According to Field (2013) there are no hard and fast rules about what value of the VIF should cause concern, but there are guidelines. If the largest VIF is greater than 10 then there is cause for concern (Bowerman and O'Connell; Myers; cited in Field,

2013: p.325). The VIF column indicates clearly that no value is greater than 10. The second guideline is that if the average VIF is substantially greater than 1 then the regression may be biased (Bowerman and O'Connell; cited in Field, 2013: p.325). The average VIF value is 1.15 which is not substantially greater than 1 and therefore is not indicative of multicollinearity.

4.4.2 Hierarchical Regression: Psychopathy and Job Performance

The results for Psychopathy are presented in table 4.6. As with narcissism, we are assessing the ability of psychopathy to predict job performance after controlling for the influence of age, tenure and gender. Psychopathy comprises the HDS scales of Imaginative, Skeptical, Colorful, Bold and Mischievous.

Table 4.6 - Hierarchical Regression: Psychopathy and Job Performance

Model	R	R Square	Std. Error of Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.208	0.043	0.908	0.043	12.782	3	849	0.000
2	.236	0.056	0.905	0.013	2.265	5	844	0.046

1.Predictors: (Constant), Gender, Age, Tenure

2.Predictors: (Constant), Gender, Age, Tenure, Imaginative, Skeptical, Colorful, Bold, Mischievous

ANOVA (Test of Model Fit)

Model		Sum of Sq	df	Mean Sq	F	Sig.
1	Regression	31.646	3	10.549	12.782	.000b
	Residual	700.662	849	0.825		
	Total	732.307	852			
2	Regression	40.923	8	5.115	6.244	.000c
	Residual	691.384	844	0.819		
	Total	732.307	852			

Dependent Variable: Job Performance

1. Predictors: (Constant), Gender, Age, Tenure

2.Predictors: (Constant), Gender, Age, Tenure, Imaginative, Skeptical, Colorful, Bold, Mischievous

Coefficients

Model	Unstandard. Coeff.	Standardized Coefficients	Collinearity Statistics:

		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.281	0.147		22.265	0.000		
	Age	-0.016	0.003	-0.178	-5.217	0.000	0.965	1.037
	Tenure	0.004	0.001	0.104	3.038	0.002	0.956	1.046
	Gender	0.199	0.070	0.096	2.841	0.005	0.991	1.009
2	(Constant)	3.700	0.201		18.444	0.000		
	Age	-0.017	0.003	-0.199	-5.707	0.000	0.917	1.091
	Tenure	0.005	0.001	0.108	3.164	0.002	0.953	1.049
	Gender	0.210	0.072	0.101	2.929	0.003	0.946	1.057
	Skeptical	-0.002	0.001	-0.040	-1.023	0.307	0.724	1.381
	Bold	-0.003	0.002	-0.069	-1.638	0.102	0.622	1.608
	Mischievous	0.001	0.001	0.020	0.459	0.647	0.616	1.625
	Colorful	-0.002	0.002	-0.041	-0.985	0.325	0.648	1.543
	Imaginative	-0.001	0.001	-0.016	-0.378	0.705	0.663	1.508

Again, as with narcissism, the first part of the table shows the Model Summary where two models are listed. Model 1 refers to the first block of variables that were entered (Age, tenure and gender), whilst Model 2 includes all the variables that were entered in *both* blocks and which include the Imaginative, Skeptical, Colorful. Bold and Mischievous HDS scales.

The R Square value in Model 2 indicates that 5.6% (0.056 x 100) of the variance in job performance is explained by the model. By looking at the column labelled R Square Change and the row marked Model 2, it can be seen that adding in the Imaginative, Skeptical, Colorful, Bold and Mischievous HDS scales explains, a further 1.3% (0.013 x 100) of the variance in job performance, when controlling for the effects of age, tenure and gender. This is a statistically significant contribution as indicated by the Sig. F Change column for row 2 (.046) which is below the .05 threshold for significance. The Anova section of the table also indicates that the model (which includes both blocks) as a whole is significant (F (df 8, 844) = 6.244, p < .001). This means that the current data fit the model.

The final element is the Coefficients table. Looking in the Model 2 row will help understand and establish how well each of the variables contributes. This summarises the results with *all* the variables entered into the equation. By scanning the Sig. column, we can see three variables that make a unique and statistically significant contribution (less than .05). In order of the relative size of their Beta values, they are, age (beta = -.199), tenure (beta = .108), gender (beta = .101). They each made a unique contribution when the effects

of other variables are statistically removed. However, none of the HDS scales were uniquely significant in making a contribution.

As with the procedure for narcissism and job performance in the previous section, the Collinearity Statistics show that none of the data in the Tolerances column is less than .10. The largest VIF data value is not greater than 10 and the average VIF is 1.4 which is still not substantially greater than 1 and therefore these statistics are not indicative of multicollinearity.

4.4.3 Hierarchical Regression: Machiavellianism and Job Performance

As with both the preceding analyses, the same approach was adopted for the final variable in the Dark Triad, Machiavellianism which comprises the HDS scales of Reserved, Leisurely, Mischievous, Excitable, Bold and Skeptical. The aim of the analysis was to assess the ability of Machiavellianism to predict job performance after controlling for the influence of age, tenure and gender, and to test for model fit. The results are shown in table 4.7 and a summary of the key findings appears below the table.

Table 4.7. Hierarchical Regression: Machiavellianism and Job Performance

Model	R	R Square	Std. Error of Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.208a	0.043	0.908	0.043	12.782	3	849	0.000
2	.237b	0.056	0.906	0.013	1.917	6	843	0.075

a Predictors: (Constant), Gender, Age, Tenure

b Predictors: (Constant), Gender, Age, Tenure, Reserved, Leisurely, Mischievous, Excitable, Bold, Skeptical

ANOVA (Test of Model Fit)

Model		Sum of Sq	df	Mean Sq	F	Sig.
1	Regression	31.646	3	10.549	12.782	.000b
	Residual	700.662	849	0.825		
	Total	732.307	852			
2	Regression	41.075	9	4.564	5.566	.000c
	Residual	691.232	843	0.820		
	Total	732.307	852			

Dependent Variable: Job Performance

1.Predictors: (Constant), Gender, Age, Tenure

2.Predictors: (Constant), Gender, Age, Tenure, Reserved, Leisurely, Mischievous, Excitable, Bold, Skeptical

Coefficients

Model		Unstandard. Coeff. B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics: Tolerance	VIF
1	(Constant)	3.281	0.147		22.265	0.000		
	Age	-0.016	0.003	-0.178	-5.217	0.000	0.965	1.037
	Tenure	0.004	0.001	0.104	3.038	0.002	0.956	1.046
	Gender	0.199	0.070	0.096	2.841	0.005	0.991	1.009
2	(Constant)	3.585	0.200		17.894	0.000		
	Age	-0.017	0.003	-0.197	-5.576	0.000	0.899	1.112
	Tenure	0.004	0.001	0.104	3.042	0.002	0.952	1.050
	Gender	0.216	0.071	0.104	3.043	0.002	0.960	1.042
	Excitable	0.000	0.002	0.005	0.146	0.884	0.849	1.177
	Skeptical	-0.002	0.002	-0.043	-1.032	0.302	0.659	1.517
	Reserved	0.002	0.001	0.038	1.080	0.281	0.895	1.118
	Leisurely	-0.001	0.002	-0.020	-0.587	0.557	0.918	1.089
	Bold	-0.003	0.002	-0.080	-1.989	0.047	0.699	1.430
	Mischievous	0.000	0.001	0.002	0.060	0.952	0.774	1.293

Following the same procedure as with narcissism and psychopathy, Model 2 in table 4.7 includes all the variables that were entered in *both* blocks and which include the Reserved, Leisurely, Mischievous, Excitable, Bold and Skeptical scales which contribute to the Machiavellianism scale.

The R Square value in Model 2 indicates that 5.6% (0.056 x 100) of the variance in Job Performance is explained by the model. By looking at the column labelled R Square Change and the row marked Model 2, we can see that adding in Reserved, Leisurely, Mischievous, Excitable, Bold and Skeptical scales, explains a further 1.3% (0.013 x 100) of the variance in Job Performance, when controlling for the effects of Age, Tenure and Gender. There is no statistically significantly contribution made by Model 2 as indicated by the Sig. F Change column which is above the .05 threshold for significance.

However, the Anova section of the table indicates that the model as a whole is significant (F (df 9, 843) = 5.566, p < .001) and thus the current data fit the model.

The Coefficients table shows that four variables make a unique and statistically significant contribution. In order of the relative size of their Beta values, they are, age (beta = -.197), tenure and gender are both the same size (beta = .104) and the Bold HDS scale (beta = -.080). The Reserved, Leisurely, Mischievous, Excitable or Skeptical scales did not make a unique contribution to explaining the variance in job performance.

As with the procedure for both narcissism and psychopathy in the preceding sections, the Collinearity Statistics show that none of the data in the Tolerances column is less than .10. The largest VIF data value is not greater than 10 and the average VIF is 1.4 which is still not substantially greater than 1 and therefore these statistics are not indicative of multicollinearity. The final section, 4.5. presents a summary overview of the relationship between the DT variables, testing of the hypotheses and the regression models.

4.5 Relationships between Dark Triad Variables

The data within table 4.8. shows that the inter-correlations between all three DT variables are all highly significantly and positively correlated with each other. The relationship between Machiavellianism and Narcissism is $r = .624$. This indicates a common variance of 39% and a non-common variance of **61%**. The relationship between Psychopathy and Machiavellianism at $r = .762$ indicates a common variance of 58% and a non-common variance of **42%** with Psychopathy and Narcissism $r = .925$ indicating a common variance of 85% and a non-common variance of **15%**.

Table 4.8 - Correlations between Dark Triad variables

	Psychopathy	Narcissism	Machiavellianism
Psychopathy		.925**	.762**
Narcissism	.925**		.624**
Machiavellianism	.762**	.624**	

** Correlation is significant at the 0.01 level (2-tailed)

4.5.1 Summary: Overview of Hypotheses and Model Testing

Table 4.9 – Overview of hypotheses testing

	Hypothesis	Supported?
H 1.1	There is a statistically significant relationship between the Psychopathy measure and Job Performance.	Yes
H 1.2	There is a statistically significant relationship between the Narcissism measure and Job Performance.	Yes
H1.3	There is a statistically significant relationship between the Machiavellianism measure and Job Performance.	Yes
H2.1	Age, Gender and Tenure will moderate the relationship between Psychopathy and Job Performance.	Yes
H2.2	Age, Gender and Tenure will moderate the relationship between Narcissism and Job Performance.	Yes
H2.3	Age, Gender and Tenure will moderate the relationship between Machiavellianism and Job Performance.	Yes
H3.1	Psychopaths tend to fit the Moving Against personality type.	Yes
H3.2	Narcissists tend to fit the Moving Against personality type.	Yes
H3.3	Machiavellians tend to fit the Moving Away personality type.	Yes
H3.4	Psychopaths, Narcissists and Machiavellians tend not to fit the Moving Toward personality type.	Yes

The summary in table 4.9. shows that all 10 hypotheses were supported by the partial regressions (see table 4.3).

Table 4.10. shows a summary of the hierarchical regression results which, for each Dark triad scale, shows the percentage of the variance explained in the dependent variable, Job Performance, with the percentage excluding the control variables shown in brackets; the statistical significance of augmentation when model 2, the Dark Triad scales are added and the statistical significance of the models in ANOVA.

Table 4.10 - Summary of Results of Hierarchical Regression Analyses

	Dark Triad: Narcissism	Dark Triad: Psychopathy	Dark Triad: Machiavellianism
	Dependent Variable: Job Performance	Dependent Variable: Job Performance	Dependent Variable: Job Performance
DV Variance explained (excl Control)	5.6% (1.3%)	5.6% (1.3%)	5.6% (1.3%)
Sig. of augmentation for Model 2	.022*	.046*	.075, NS
ANOVA (Model sig.)	1. Control Variables	1. Control Variables	1. Control Variables
	2. All Variables	2. All Variables	2. All Variables

The Variance figures are the same for all three Dark Triad scales, both with and without the control variables. These results were checked several times. The addition of the narcissism and psychopathy scales showed statistically significant augmentation whereas this was not the case with Machiavellianism. The ANOVA results show all models are highly significant for the Dark Triad scales, reflecting a good fit for both models. The significant Betas are the same for each Dark Triad scale except for psychopathy, where Bold is not significant. These results and their value for academe and practice will be discussed in the next chapter, which also contains links to the literature and their possible future implications.

5 Findings and Discussion

5.1 Introduction

This chapter discusses the main findings of the research and their links to the extant literature. Its starts by examining the relationship between the independent demographic variables, gender, age, tenure, and the DT. In addition, their relationship with the Hogan Development Survey (HDS) and job performance are also discussed. The findings in this research study assert that there are no differences between males and females in terms of exhibiting DT personality traits. Although the correlation between age and job performance, along with the correlations between age and the DT in this research are highly significant, the results for the HDS scales are mixed. As for tenure, the results in this research shows a strong correlation with age and the HDS Excitable scale but not with any of the DT scales.

The results of the bivariate correlations between the DT, HDS and job performance in relation to specific hypotheses for each dark personality are discussed. The results show that only narcissism is significantly correlated with job performance whilst none of the HDS scales are correlated with job performance. The reasons for these differences are also discussed.

In light of the of the results of the bivariate correlations, the results of the partial correlations between the DT, the HDS scales and job performance that follow, support the case for the moderating effects of each of the demographic variables (gender, age and tenure). They are shown to have a significant effect on the relationship between the DT and job performance.

The regression analyses results follow on from the results of the bivariate correlations. Controlling for the possible effects of gender, age and tenure, the results show that narcissism and psychopathy both significantly predict job performance whilst Machiavellianism does not predict job performance. The reasons for and implications of these results are discussed.

The results are also evaluated in terms of the current debate in the literature between the "lumpers", those researchers that view the DT personalities as indistinguishable and the "splitters", those researchers that point to the evidence for unique variance between them. This research provides evidence of substantial non-common variance to support the "splitters" case for two of the three DT personalities (between Machiavellianism and narcissism and between psychopathy and Machiavellianism).

The results of the four research hypotheses relating to Horney's (1950) global factors are then discussed. The findings show that all four hypotheses are supported by the data. The remaining sections cover the limitations of the current research and suggestions for further research.

5.2 Main findings and links to the literature

5.2.1 Demographic data

This section will focus on gender differences in the DT and the HDS (Hogan and Hogan, 1997, 2009) scales. "Gender", as Jonason and Davis (2018) point out, "is a term used to define sociocultural aspects of being a man (i.e., masculinity) and a woman (i.e., femininity) and is composed of different psychological features that are considered "appropriate" for each sex to enact in a given society (Unger, 1990).

The results of the independent-samples t-test in table 4.1 showed that there are no significant differences in the mean scores for males and females when applied to the DT variables (Psychopathy, narcissism, and Machiavellianism). This research study asserts that there are no personality trait differences within the genders in relation to the DT against a literature that consistently suggests the prevalence of the male gender. As Jonason and Davis (2018) remark:

"The Dark Triad traits are associated with a variety of sex-differentiated and gender-relevant aspects of psychology including limited empathy (Jonason, Lyons, Bethell, and Ross, 2013), *impulsivity* (Jones and Paulhus, 2011) *and seeking dominance and prestige* (Semenyna and Honey, 2015) *and are themselves more common in men than in women"* (p.102).

They found that men scored more highly than women did on the DT traits and that dark traits are associated with limited femininity and enhanced masculinity. They also found what they refer to as "interesting qualifiers". It was narcissism that was the strongest correlate to masculinity (0.51), whereas psychopathy (-0.33) and Machiavellianism (-0.16) were strongly linked to limited femininity.

The finding in this research study that there are no gender differences in personality traits in relation to the DT is not in line with previous research findings. One reason may be because a management population was used. Mackey et al (2019), in their meta-analysis of the nature and magnitude of the relationship between gender and job performance, make the point that some prior meta-analyses of gender effects on performance did not include many (or any) managerial jobs (Sackett et al), whereas others, have shown that job complexity can

affect performance evaluations and rewards (Joshi, Son, & Roh) as cited in Mackey et al, (2019: p.10). Consequently, they explored whether job performance varied with managerial and non-managerial job roles. They found that the results for samples with managerial jobs (mean d = −0.09, corrected d = −0.10, k = 15, N = 39,101) were similar to the results for samples with non-managerial jobs (mean d = −0.09, corrected d = −0.10, k = 143, N = 61,970) which indicates that the finding made in this study may not be due to the sample being extracted from a managerial population.

Hartung et al (in press), researching age and gender differences in "socially aversive", dark personality traits, used a large sample (N = 12,501), to investigate the structure of the D Factor of Personality across age and gender; with the age range of 20-54 years, separately for females and males. The D Factor of Personality questionnaire (Moshagen, Zettler, & Hilbig; cited in Hartung et al, in press) comprises 71 items represented as fives themes: callousness, deceitfulness, narcissistic entitlement, sadism, and vindictiveness. Participants indicate their choice (agree or disagree) using a five-point Likert scale. The D70 Factor of Personality is defined as:

"the general tendency to maximize one's individual utility — disregarding, accepting, or malevolently provoking disutility for others — accompanied by beliefs that serve as justifications" (Moshagen et al, cited in Hartung et al, in press: p.4)

As Hartung et al (in press) point out, from an evolutionary perspective, socially aversive personality dispositions have been associated with sexual strategies, such as lack of concern to abandon a partner and short-term relationships, which are considered to be "masculine" (Jonason et al; cited in Hartung et al, in press: p.31). However, in their study they found that:

"…the measurement model was identical for women and men in the current investigation, indicating that the general tendency towards ethically, morally, and socially questionable behavior neither differs conceptually nor operationally between women and men" (Hartung et al, in press: p.31)

There is previous research which indicates that socially aversive traits operate similarly between adult males and females (Dirty Dozen: Chiorri et al; Machiavellianism: Collison et al; Pathological Narcissism Inventory: Wright et al; all cited in Hartung et al (in press: p.31)). As Hartung et al point out, their own results may be due to measurement invariance, which can be scale and sample specific and which should be a routine part of investigations of group differences. They call for more research focusing on gender differences in socially aversive personality traits across the age range. This is needed to gather evidence as to whether gender differences in these traits obtain across the age range.

As for the HDS, the Mischievous, Colorful, Diligent and Dutiful scales scores show that males score higher than females on average, with the Bold scale score indicating that females tend to score higher on average. These results can be considered new research findings. However, it should be noted, that this is a single study. Although the DSM consists of clinical measures, its manuals (DSM-III-R; DSM-IV-TR; APA: 1994, 2000) do show evidence of gender difference but there are several effect differences when compared with this research. For example, whilst the Anti-Social Personality Disorder (ASPD: sometimes referred to as psychopathy in the literature (Furnham and Crump, 2016, Smith and Lilienfeld, 2013) is more likely to be diagnosed in men (3% in males, 1% women), the Borderline (Excitable HDS scale: (75%), Histrionic (Colorful) and Dependent (Dutiful) personality are more likely to be found in women. Of those diagnosed with Narcissistic Personality Disorder (Bold HDS scale), 50%-75% are male (APA, 2000: Furnham and Trickey, 2011).

Lynam and Widger's (2007) meta-analysis showed that the greatest overall differences between males and females lay with Narcissistic (Bold); Anti-Social (Mischievous); and Paranoid (Skeptical) personality disorders, whilst Furnham and Trickey (2011) found that apart from the Obsessive-Compulsive disorder (Diligent HDS scale), there were gender differences between the remaining ten HDS scales. Men scored higher than females on roughly half the scales and vice-versa with effect sizes (Cohen's *d*) that were relatively small. These results are generally in line with those of Lynam and Widiger (2007) who conclude that gender differences in personality disorders tend to be small but reliably observable in large populations.

What is the reason for these differences? The DSM-IV-TR (APA, 2000) has a section entitled *"Specific culture, age and gender features"* (p.687), however, it is not consistent in how the gender difference data are described and it is not clear what the evidence base for these assertions is or the magnitude of these differences (Furnham and Trickey, 2011). There are also various disputes with respect to the evidence of gender differences; issues related to the nature of the evidence, measurement and diagnostic issues relating to the validity of the tools and measures used (Lynam and Widiger, 2007).

What does this mean for the validity of the HDS? As stated earlier, the HDS was not devised to be a psychiatric diagnostic instrument. It was designed to assess self-defeating expressions of normal personality that are relatively common amongst managers and executives operating in the workplace (Hogan and Hogan, 2009). However, as Furnham and Trickey (2011) assert, the HDS has sufficient psychometric validity to be a useful diagnostic instrument (p.521).

Given that gender differences do occur, the central question is why? Various theoretical frameworks may be used to try and explain these results. Hogan (2007), for example, has favoured evolutionary and biological frameworks. Furnham and Trickey (2011) suggest further research that could deploy social learning or sociological frameworks that see the sexes being socialised into a belief system that manifests itself as dysfunctional personality.

Whilst this research has found that there is no difference between gender and the DT, the HDS scale findings do show some differences. Males tend to score more highly than females on the Mischievous HDS scale, which is consistent with the literature. The Colorful scale score was found to be higher for males than females, whilst the Bold scale score was found to be higher for females than males. The latter two findings run counter to much of the existing research. As such, these research findings could be considered a contribution to our understanding of gender as an indicator of dark side personality. It should be noted that the HDS scales for Diligent and Dutiful are not used in the final taxonomy of DT traits mapped to the HDS by this researcher.

As Mackey et al (2019) note in chapter two, researchers have been interested in the relationship between gender and organisational evaluation of performance for decades. Mackey et al (2019) conducted a meta-analysis to provide more robust quantitative evidence as to the nature and magnitude of the relationship between gender and job performance. The purpose of their study was to provide a meta-analytic test of the "gender token" effect. Critical mass theory and the "tokenism" hypothesis (Kanter, 1977) proposes that females' job performance is adversely affected by perceptions and experiences that stem from females comprising a smaller proportion of organizations than males. "Although belief in the gender token effect appears widely held, empirical evidence of this effect is relatively scarce" (Mackey et al, 2019: p.1). Meta-analytic results based on data from 158 independent studies (N = 101,071) reveal that females tend to demonstrate higher job performance than males (d = -.10) and that this difference does not appear to vary based on the proportion of females in organizations. The authors found similar results for subjective task performance (e.g., supervisory ratings), organizational citizenship behaviours, and objective task performance (e.g., sales). Overall, their results demonstrate almost no support for the gender token effect on job performance, which challenges the prevailing assumptions of critical mass theory and the tokenism hypothesis.

The correlation between age and job performance in this study is negative and highly significant (-.158) as are the correlations between age and the Dark Triad (Psychopathy -.166; Narcissism -128; Machiavellianism - .114). However, the results for the HDS scales are mixed with only the Excitable scale showing a highly significant and positive correlation with

age (.142). Of the remaining ten scales, only six (Skeptical -.188; Leisurely -.070; Bold -.109; Mischievous -.097; Colorful -.120 and Imaginative -.086) show either a highly significant or significant and negative correlation with age. Overall, these findings indicate that age is strongly and negatively related to job performance. The highly significant and positive correlation between age and tenure (0.184) will be discussed in the next section on tenure.

As stated above, the HDS manual (2009) does not include any age or tenure data against which to compare the findings and so the results for the HDS variables in this research study can be considered a contribution to our understanding of age as a predictor of personality and job performance. However, it should be noted that this is a single study in one organisation.

According to Alessandri et al (2015), there have been four major quantitative reviews regarding the relationship between age and job performance. The results were mixed. Waldman and Avolio's (1986) meta-analysis found that the relationship between age and supervisor-rated job performance was negatively related for older employees (-.18). They found that the sign of the relationship between age and performance varies depending on which measure of performance is being utilised, who carries out the performance ratings and the kinds of job workers hold. Their finding (-.18) is almost identical to that found in this research where supervisor ratings were also used. However, one of the drawbacks of their research is the paucity of studies available at the time, which could give rise to second-order sampling errors (Hunter and Schmidt; cited in Ng and Feldman, 2008). Sturman (2003) found that the corrected effect size across 115 empirical studies was .03, whilst Ng and Feldman (2008) found that it was related to supervisor-rated task performance also at .03 (when corrected for inter-rater reliability). Sturman (2003) and Ng and Feldman (2008) both found an inverted-U shape between age and performance. These authors suggested that the "curvilinear" relationship observed may largely reflect age bias against older adults often held by supervisors" (Ng and Feldman, 2008, p. 407). Alessandri and colleagues (2015) in their meta-analysis, found that age was linearly and negatively related to supervisor-rated job performance, confirming the earlier decline in supervisory ratings of job performance with age documented by Waldman and Avolio (1986). The next section focuses on correlations between age and the DT.

The literature as it relates to the individual variables of the Dark Triad does support the research findings. Age has been found to negatively correlate with all three variables of the Dark Triad. Harpur and Hare (1994), found that age was negatively correlated with psychopathy, whilst Wilson and Sibley (2011) found a significant negative relationship between age and narcissism in two samples at -.16 and -.20. These results were similar in size to those reported in this study and consistent with international studies (Foster et al,

2003) which confirmed that decreasing narcissism was associated with increasing age (Wilson and Sibley, 2011: p.92).

Mudrack (1992), in an investigation of 115 adults employed within the same organisation, found a significant negative correlation with age and Machiavellianism (r = -.20). As the author remarks, one can conclude that while older people appear neither more nor less immoral or cynical than their younger peers, their experience appears to enable them to cope and to get what they want without having to resort to Machiavellian tactics such as deception, ingratiation, or flattery.

Reflecting on these earlier findings, Bartlett and Bartlett (2015) posited that emerging adulthood changes contribute to the reason why age and the Dark Triad traits are correlated. In a study of 442 participants between the ages of 18-74 years, they found age was negatively and highly significantly related to Machiavellianism (-.14) and Psychopathy (-.14) but only significantly related to Narcissism (-.10) indicating that older participants showed reducing scores on Dark Triad traits. Older participants were lower on the Dark Triad traits because of the successful transition through what Arnett (2000) terms, "emerging adulthood". Arnett's theory of Emerging Adulthood (2000) refers to the transitional period when individuals leave late adolescence and enter adulthood (ages 18–25). This period has been theoretically partitioned into six factors that are important for life transitions: *identity exploration*, *experimentation*, *negativity/instability*, *feeling in-between* (i.e., no longer an adolescent but not yet an adult), *self-focus* and *other-focus*. Of these six factors, *negativity/instability* was a reliable mediator between age and the Dark Triad traits (Machiavellianism .19; Psychopathy .20; Narcissism .37).

Bartlett and Bartlett (2015) note that several emerging adulthood facets mediated the relation between age and psychopathy. This suggests that psychopathy is better explained using a developmental lens given the large number of emerging adulthood facet mediators compared to narcissism and Machiavellianism when age is the primary focus. Indeed, only *negativity/instability* mediated the relation between age and Narcissism, whilst *negativity/instability* and *other-focused* mediated the relationship between age and Machiavellianism.

The results suggest that the Dark Triad effects on job performance decrease with increasing age because of a reduction in *negativity/instability*. The collected results for seven HDS scales (Excitable, Skeptical, Leisurely, Bold, Mischievous, Colorful and Imaginative) can be considered new findings as the HDS manual does not offer any demographic data with which to compare. The final paragraphs on demographic variables considers the correlations between tenure and job performance.

Ng and Feldman's meta-analyses (2008, 2010) are referenced to help compare and contrast the findings made in this research. The correlation results in table 4.2 showed that tenure is significantly and positively correlated with age (0.184) and the HDS Excitable scale (0.087) at the 1% level. However, it is not correlated with job performance (0.06), nor with any of the DT personality scales. The same is true for nine of the HDS scales (Skeptical, Cautious, Reserved, Leisurely, Bold, Mischievous, Colorful, Imaginative and Dutiful). However, there is a significant and negative correlation with the Diligent scale, but, as noted earlier, the Dutiful and the Diligent scales are not used in the final taxonomy of DT traits mapped to the HDS by this researcher. The positive and significant correlation for the Excitable scale can be considered a new finding given the previously stated lack of demographic data in the HDS manual with which to compare.

Ng and Feldman (2010) found that the overall relationship between tenure and core task performance was positively, although weakly related at .10. Core task performance refers to the basic required duties of a particular job (p.306). Ng and Feldman (2010) observed that age and tenure were correlated at .70 and comment that because age and organisational tenure are positively correlated, it is possible that the effect sizes are due more to age than to tenure. Ng and Feldman's earlier meta-analysis (2008) found that the relationship between age and job performance was stronger for employees with low tenure. They found that in the low age subgroup (age ≤ 37 years old) the correlation between tenure and in-role performance was .13 but only .05 for the higher age subgroup (> 37 years old). A reason for this may be because increases in age that co-occurs with increases in years of service may inhibit job performance and core performance in particular because of cognitive declines that accompany ageing (Avolio and Waldman; cited in Ng and Feldman, 2008).

Ng and Feldman (2010) also found some significant results for gender in the relationship of tenure and in-role performance. The correlation of tenure with in-role performance was .04 when the percentage of women in a sample was 50% or less. However, the correlation between tenure and in-role performance was .11 when the samples had more than 50% of women. One possible reason for the result is that supervisors view retaining talented female employees as especially critical.

Although the relationship of organisational tenure with performance is positive in direction, there is a curvilinear relationship. The strength of the relationship decreases as average organisational tenure of the sample increases. The corrected correlations for tenure-performance show that the relationship is stronger for individuals with less than six years tenure (<3 years = .09; 3-6 years = .17) and weaker for those with more than six years of tenure (7-10 years = .06; 11-14 years = .05; >14 years = .00).

As Ng and Feldman (2010) observe, tenure has positive effects on performance, but at diminishing rates. Consistent with studies by Sturman (2003), it starts to decrease somewhere between year three and year six and drops to near zero by year fourteen of employment. It may take two to three years for employees to learn how to perform effectively in-role. As employees continue to learn and grow in the job, added years of service do contribute to job performance. However, once employees have learned their jobs, the incremental improvement in performance, per year of additional service is smaller.

In summary, the strongly positive relationship between organisational tenure and the HDS Excitable scale can be considered a new finding, although based on a single study. However, there is a variance as to the relationship between organisational tenure and performance. Although remaining positive, where employees are longer-tenured, the incremental improvement in performance per year of additional service is lower.

5.2.2 Bivariate correlations between the Dark Triad, HDS scales and Job Performance

Hypotheses 1.1 to 1.3 as set out in section 4.3. posits that there are significant relationships between the psychopathy, narcissism and Machiavellianism measures that comprise the DT and job performance. The results for the bivariate correlations between the DT and HDS scales with job performance shown in table 4.2 indicate that only narcissism has a significant and negative correlation with job performance at -.067. However, psychopathy (-0.06) and Machiavellianism (-0.038) do not show any significant correlation with job performance. The same is true for all of the HDS scales, the results of which are discussed in the next section followed by a discussion of the DT scales and job performance results.

5.2.2.1 The HDS scales

A meta-analysis conducted by Gaddis and Foster (2013) examined the relationships between HDS scale scores and overall job performance. They found that the Excitable (-.16), Skeptical (-.14), Cautious (-.16), Reserved (.11), Leisurely (-.20) and Imaginative (-08) scales all significantly and negatively predicted job performance. In contrast, the HDS Colorful scale was found to correlate with job performance positively and significantly (.11). The results of this current research, albeit from a single organisation, as presented in table 4.2, show that none of the HDS scale variables is correlated with job performance and can be considered new findings. In addition, the HDS Bold scale, which is identified by Hogan and Hogan (2009) as aligned with the corresponding DSM-IV-TR Narcissistic personality disorder, was not found to correlate with job performance in the Gaddis and Foster (2013) study and supports the same finding made in this research. Looking at possible reasons why there is a

major difference in the results for the HDS correlations with job performance in both studies, Gaddis and Foster do acknowledge that observer ratings of personality may provide better predictions of performance than self-ratings and data on supervisor ratings was included in this study. Although cognisant of the need for supervisor ratings to be incorporated within their meta-analytic design, they add that prior research demonstrates that performance ratings may vary by rater groups such as supervisors, peers, and subordinates and that between source variance may provide a more comprehensive account of the construct of managerial performance (Oh and Berry; 2009 cited in Gaddis and Foster, 2013: p.22).

5.2.2.2 The Dark Triad scales

Psychopathy

This section draws on research carried out by O'Boyle et al (2012) relating to the DT and job performance. They applied social exchange theory (Blau; Thibaut and Kelley; Cropanzano and Mitchell; cited in O'Boyle et al 2012) as a framework for conceptualising the impact of the DT on work behaviours. The basic principles of social exchange theory are reciprocity, trust, co-operation, and resource exchange.

Psychopath's do not respect the rights of others in the workplace and if their performance evaluations depend, at least in part, on their ability to work with others, their overall performance will likely be negative (O'Boyle, et al. 2012: p.560). O'Boyle hypothesized that psychopathy will negatively relate to performance and found their hypothesis to be supported with psychopathy significantly related to job performance ($r = -.08$), corrected for unreliability at $r_c = -.10$ and highly statistically significant. In comparison, an investigation of the relationship between psychopathy and job performance in this study, although negative, found no significant correlation ($r = -.060$).

The result for psychopathy and job performance in this research is a surprise given that the psychopath's actions are, more often than not, inconsistent with the basic principles of social exchange. On the other hand, many of the traits shown by the psychopath are consistent with the role demands of management. Skill in handling people, being politically and organisationally savvy and using detached and objective decision-making based on standards rather than loyalty or trust are often prized by lay-people and experts alike as needed qualities in order to lead effectively (Dorfman, Hanges and Brodbeck, 2004; Offermann, Kennedy and Wirtz, 1994 cited in O'Boyle, 2012). So long as they are sufficiently adept at masking their more socially aversive interpersonal interactions, such as lack of integrity, then their behavioural tendencies may enhance their organisational effectiveness.

Cleckely (1941) refers to this as "the mask of sanity" which is a type of social impression management.

Machiavellianism

O'Boyle et al (2012: p.559) observe that studies of marketing (Crofts, Aziz and Upchurch; Hunt and Chonko), economics (Gunnthorsdottir et al; Sakalaki, Richardson and Thepaut), accounting (Aziz and Vallejo; Wakefield) and applied psychology (Austin, Farrelly, Black and Moore; Ralston) all suggest that Machiavellianism is linked to work behaviour. Social exchange theory predicts that Machiavellianism will be negatively associated with job performance (O'Boyle et al 2012: p.559). This is because a *desire* to manipulate does not necessarily coincide with the *ability* to manipulate (Austin et al., cited in O'Boyle, et al., (2012)). All but a few work situations require the formation of reliable and co-operative alliances with others. A Machiavellian's tendency to violate the principles of social exchange weakens their connection to others. Their pursuit of political machinations rather than attending directly to their work may further degrade their performance.

Elevated scores on Machiavellianism were associated with lower performance, with r = -.06 and the rc = -.07 (O'Boyle et al 2012: p.569). Despite being statistically significant, the Machiavellianism-job performance relationship is a small effect suggesting that the negative relation is not particularly consistent across subpopulations and varies from study to study (O'Boyle et. al 2012: p.564). In comparison, an investigation of the relationship between Machiavellianism and job performance in this study found that there is no significant correlation with r = -0.038.

One reason for the lack of a significant correlation in this bivariate analysis may be because Machiavellianism, paired with a high degree of social effectiveness, could result in a capacity to mask from others the more aversive aspects of the syndrome (Witt and Ferris; cited in O'Boyle, 2012: p.559). However, the partial correlations in table 4.3 do show a significant correlation.

Narcissism

Some researchers suggest that narcissists are not necessarily unproductive workers and may even excel when in positions of authority (Campbell, Hoffman, Campbell, and Marchisio, 2011). However, social exchange theory's emphasis on the importance of resilient relationships linking organisational members suggests an inverse relationship between narcissism and performance (O'Boyle et al 2012: p.560). The narcissist's delusions of grandeur, elitism, competitiveness, and feelings of superiority should result in low performance ratings, being passed over for promotion and ostracism. In support of these

predictions, researchers have linked increases in narcissism to poor task performance (Judge, LePine and Rich, 2006). However, O'Boyle's meta-analysis result show a small but non-significant relationship between narcissism and job performance (r = -.02 and r_c = -.03: p.569 – see table 2). In comparison, an investigation of the relationship between narcissism and job performance in the current study found a statistically significant and negative bivariate correlation (-.067). What could be the reason for the difference in the results? O'Boyle et al (2012) looked at the possible moderating effects of authority on the DT. In particular, they hypothesised that authority would strengthen the negative relationship between narcissism and work behaviours and ultimately job performance. Whilst aspects of narcissistic personality may promote organisational and personal success (Chatterjee and Hambrick, 2007), the performance-enhancing aspects of this trait declines as individuals rise to positions of authority (Brunell et al. 2008).

This research found a significant and negative correlation between narcissism and job performance which means that hypothesis H1.2 as set out in section 4.3 is supported. However, there were no significant bivariate correlations for psychopathy or Machiavellianism with job performance and so hypotheses 1.1 and 1.3 are not supported.

5.2.3 Partial Correlations between the Dark Triad, HDS scales and Job Performance

LeBreton et. al (2018) are of the view that simple bivariate relationships between DT traits and job performance may be an oversimplification and that researchers should consider possible moderators of the relationships between the DT and job performance (p.393). The aim of the partial correlations was to test three hypotheses as set out in section 4.3 and identified as H2.1 to H2.3. These hypotheses posited that the demographic variables of age, gender and tenure will moderate the relationship between each of the DT personality variables and job performance. The partial correlation results overall in this study support the case for moderation. Controlling for age, tenure and gender has a greater and significant effect on the strength of the relationships between the Dark Triad and job performance. Table 4.3 shows that psychopathy and narcissism are both negatively and highly significantly correlated with job performance at the 1% level of confidence with Machiavellianism significantly correlated at the 5% confidence level. Consequently, all three hypotheses are supported by the data.

O'Boyle et al (2012) hypothesised that Machiavellianism, narcissism, and psychopathy will all be negatively related to job performance. They found that in authority roles, narcissism showed a significantly stronger relationship to job performance (-.48) at the .05 confidence level. For individuals in positions of authority, such as managers, the higher

the level of narcissism, the lower the quality of their work product (p.564). The literature indicates that authority acts as a moderator, strengthening the relationship between Narcissism and job performance:

"*Studies of narcissism are consistent in their suggestion that the narcissist's extraversion, need for control, domination and high levels of self-confidence are often viewed positively when displayed by those on their way up in an organisation but that the narcissist will tend to derail once in a position of authority*" (Judge, Piccolo and Kosalka; cited O'Boyle et al, 2012: p.561).

5.2.3.1 Machiavellianism

O'Boyle (2012) found that elevated scores on Machiavellianism were associated with lower performance. The r_c value was -.07 and, although small, is statistically significant and supports the finding in this research (-.069). The authors note that the negative relation may not be particularly consistent across subpopulations.

5.2.3.2 Narcissism

The finding for the r_c value of -.03 for Narcissism by O'Boyle et al (2012) is not significant, indicating that Narcissism has no relationship with job performance. It is also not consistent with the highly significant finding in this research study (-.097) which indicates that the narcissist's inflated view of their own worth in the workplace does not correspond to the measure of job performance applied in the research sample.

5.2.3.3 Psychopathy

O'Boyle et al (2012) found that psychopathy was negatively related to job performance (r_c -.10). Although a small effect size, it is significant and replicates the finding made in this research study at -.10 (See table 4.3)

The findings in the O'Boyle meta-analysis confirmed that psychopathy and Machiavellianism are associated with lower job performance, but narcissism was not, the latter being a finding which is inconsistent with this research study. One of the reasons for the difference could be that the O'Boyle study did take into account the moderating effects of authority and in-group culture. They noted that the negative relation between narcissism and performance was strongest for individuals in a position of authority. Narcissists also performed more poorly in organisations nested in cultures high in IGC (In-group collectivism). Such cultures are less tolerant of social exchange violations and the DT's toxic effects on work behavior would be amplified in these cultures with stronger negative relations to performance. O'Boyle found that narcissism, as opposed to psychopathy and

Machiavellianism, was negatively associated with job performance in cultures that were higher in IGC although the effect size was small.

5.2.4 Regression analyses

As stated in the previous chapter, a hierarchical regression is based upon correlation, but it allows the researcher a more detailed exploration of the variables of interest. By controlling for the possible effects of age, tenure and gender, the hierarchical regression will establish if the DT variables are able to predict a different amount of the variance in job performance.

The hierarchical regression analyses show that the variance explained by the model for all three DT scales is the same (5.6% and 1.3% when excluding age, tenure, and gender - as summarised in table 4.9). The DT variables narcissism and psychopathy are both statistically significant at the .05 level in predicting job performance after controlling for the influence of age, tenure and gender as seen in Model 2 for each of these DT traits (Table 4.5 and 4.6 respectively). However, Machiavellianism is not statistically significant in predicting job performance as seen in the Model 2 in table 4.7. The impact of the regression analyses is discussed below.

The hierarchical regression results for narcissism and job performance show a statistically significant augmentation when adding the HDS Cautious (Reversed), Imaginative, Bold, and Mischievous scales as a block. Pallant (2013: p.172) states that the ANOVA model indicates that the research model as a whole is or is not significant. The ANOVA results confirm that the data for both the demographic and HDS variables statistically and significantly fit the research models in this study.

The hierarchical regression results for psychopathy and job performance also show the same statistically significant augmentation as with narcissism (1.3%) when adding the Imaginative, Skeptical, Colorful, Bold and Mischievous HDS scales. The ANOVA results confirm the HDS variables statistically and significantly fit within the regression model in this study.

Turning to the hierarchical regression results for Machiavellianism and job performance, whilst the R square change column in table 4.7 shows that the demographic variables of age, tenure and gender significantly explain 4.3% of the variance of job performance, model 2 shows a non-significant augmentation in the Sig. F Change column (.075) when adding the Reserved, Leisurely, Mischievous, Excitable, Bold and Skeptical HDS scales.

The ANOVA results do not confirm that the HDS variables statistically fit the research model. The result confirms what was found in the bivariate correlations conducted in this research (See table 4.2) which showed that Machiavellianism was not correlated with job performance (-0.038). However, the finding in the partial correlations (See table 4.3) shows that Machiavellianism is significantly correlated with job performance (-0.069) at the 5% level of confidence when controlling for age, tenure, and gender.

One possible reason for this finding in the Machiavellian regression is that the HDS scales identified above were added to the regression model but could not be added as a block or individually to the partial correlation model. The constructs of narcissism and psychopathy originated in clinical literature and practice (Furnham and Crump, 2005) and both remain as personality disorders in the DSM-IV-TR. The HDS scales too are derived from the DSM-IV-TR personality disorder classifications (Hogan and Hogan, 2009). By contrast, the construct of Machiavellianism had an entirely different aetiology. Rather than a clinical syndrome (i.e., a personality disorder), the concept was named eponymously for the philosophy of Nicolo Machiavelli. Machiavellianism can be seen as more of a manipulative interpersonal strategy where the ends justify the means (Jones and Paulhus, 2009).

There is some support in the literature for the result. O'Boyle (2012) used meta-regression techniques to investigate the extent to which the three DT traits collectively explain variance in performance. They found that the DT traits accounted for 1% of the variance in job performance explained ($R^2corrected$ .011 and statistically significant at the 1% level) but only psychopathy was statistically significant (β corrected = -.105, p < .001; p.569) with both narcissism and Machiavellianism not significantly or negatively correlated with job performance in their regression model.

The reason O'Boyle et al (2012) offers as to why Machiavellianism does not contribute to explaining the variance in job performance in their regression is that it may be due to the moderating effect of general intelligence. The Machiavellian may see themselves as skilful manipulators of others, but their overall intelligence is not as strong as their self-conception suggests (Dahling, Whitaker and Levy, 2009). As for narcissism, they point out that the overall effect size was small, and the overall magnitude of the authority effect was *"slight and of little practical significance"* (p.571). They also point out that the moderators they chose performed *"moderately well"* but a different set of moderators may better explain the variance in effect sizes.

In summary, the hierarchical regression analysis in this research study confirms that when controlling for age, tenure and gender, the DT variables of narcissism and psychopathy are each statistically significant in predicting job performance. However, it was found that

Machiavellianism did not augment and explain the additional variance in job performance in the hierarchical regression but did so significantly (-0.069) in the partial correlations (see table 4.3). The addition of the HDS variables in each model for narcissism and psychopathy show a statistically significant augmentation in the hierarchical regression to the variance explained in job performance for each model at 1.3% with age, tenure and gender acting as strategically significant moderators in the relationships. The moderators, age, gender, and tenure explain more of the variance between the DT variables and job performance at 4.3%, the results of which respond to O'Boyle's call for a different set of moderators to be used.

5.3 Lumpers vs. Splitters

As discussed earlier in chapter two, the DT personalities share a common capacity to be callous and malevolent in their day-to-day dealings with others (Paulhus and Williams, 2002). Because of these features and positive intercorrelations, some authors (McHoskey, Worzel, and Szyarto, 1998) have viewed the DT personalities as indistinguishable in normal samples and have "lumped" them together. The "splitters" argue that they would expect to see some overlap but also some unique variance.

The correlations reported by Paulhus and Williams (2002) amongst measures of narcissism (NPI: Raskin and Hall, 1979), Machiavellianism (Mach IV: Christie and Geis, 1970) and psychopathy (The Self-Report Psychopathy Scale (SRP): Forth, Brown, Hart and Hare, 1996) show fairly moderate results. The correlation between psychopathy and narcissism shows $r = .50$, whilst the correlation between psychopathy and Machiavellianism is $r = .31$, with the correlation between Machiavellianism and narcissism, $r = .25$. Despite their common "core of darkness," Paulhus and Williams (2002) argue that narcissism, Machiavellianism, and psychopathy are distinct traits that warrant separate theorising and measurement.

Comparing their locations in the five-factor personality space, Paulhus and Williams (2002) make the point that:

"…their distinctiveness became most apparent in our examination of the external correlates, including both self-report and performance measures" (p.560).

They found, for example, that both narcissism and psychopathy were also associated negatively with extraversion and openness. Consequently, they fall into the circumplex quadrant labelled "unmitigated agency" thus showing the link with the interpersonal circumplex, which was cited in section 2.6.1 in chapter two. Also, Machiavellianism and psychopathy were negatively associated with conscientiousness, a communal trait. Only

psychopaths were low on neuroticism, which is consistent with their traditional characterisation of lacking anxiety (Hare, 1999).

Jones and Paulhus (2017) make the point that whilst the Dark Triad members are predisposed to engage in exploitative interpersonal behavior, their motivations and tactics vary. All three Dark Triad personalities cheat under low risk. Machiavellianism and psychopathy are associated with intentional lying. Psychopathy and ego-depleted Machiavellianism predict high risk cheating and narcissism is associated with only self-deceptive, but not intentional dishonesty:

"This evidence for distinctive forms of duplicity helps clarify differences among the Dark Triad members as well as different shades of dishonesty" (Jones and Paulhus, 2017: p.2).

The findings from this research (See table 4.8) show that all three DT variables are highly significantly and positively correlated with each other. The relationship between Machiavellianism and narcissism is $r = .624$. This indicates a common variance of 39% (($.624^2$) x 100) and a non-common variance of **61%** (100% - 39%). The relationship between psychopathy and Machiavellianism at $r = .762$ indicates a common variance of 58% and a non-common variance of **42%** with psychopathy and narcissism $r = .925$ indicating a common variance of 85% and a non-common variance of **15%**.

In their meta-analysis, O'Boyle et al (2012) predicted that the traits that make up the DT would be positively interrelated. They found that Machiavellianism and narcissism tended to co-vary at $r_c = .30$ (a non-common variance of 91%; r_c = effect size corrected for unreliability (O'Boyle et al, 2012: p.569)). The relationship between psychopathy and Machiavellianism at $r_c = .59$ (a non-common variance of 65%) along with psychopathy and narcissism at $r_c = .51$ (a non-common variance of 74%).

The O'Boyle findings show high percentage non-common variances for all three DT pairings (Machiavellianism and narcissism; psychopathy and Machiavellianism and psychopathy and narcissism). They support the findings made in this research study for the high percentage of non-common variances between both Machiavellianism and narcissism (91% and 61% respectively) and psychopathy and Machiavellianism (63% and 58% respectively). The exception is the non-common variance between psychopathy and narcissism which is much higher in the O'Boyle study at 74% compared with 15% in this study.

O'Boyle et al (2012) comment that psychopaths showed the strongest relationship with job performance which is consistent with the social exchange model and with the results in this research. It suggests that anti-social tendencies are an important element in viewing

oneself as better than others and being willing to engage in deceit for one's own gain. They conclude that although clearly related, the results suggest that Machiavellianism, narcissism, and psychopathy are distinct constructs and that:

"…the strengths of the corrected correlations in their research did not achieve a magnitude that would suggest that the DT traits are redundant" (p.571).

As such, the O'Boyle et al results, along with the results in this research, support the partitioning or "splitting" of the DT personality variables to treat as distinct constructs for two of the three DT scale pairings (Machiavellianism and narcissism and psychopathy and Machiavellianism).

5.4 Horney Global Factors

This section focuses on the correlations between the three Horney (1950) global scale factors, their relationships with the DT personalities and the demographic variables of age, gender, tenure along with job performance. As noted in chapter two, Horney's (1950) three global scale factors comprise Moving Away, which refers to managing one's own insecurities by avoiding others; Moving Against, which refers to managing one's own self-doubts by dominating and intimidating others; and Moving Towards, which refers to managing one's insecurities by building alliances to minimise the threat of criticism.

Four research hypotheses (H3.1 – H3.4) as set out in section 4.3 were tested. The first three were that Psychopaths and Narcissists tend to fit the Moving Against personality type whilst Machiavellians tend to fit the Moving Away personality type. It was also hypothesised that psychopaths, narcissists, and Machiavellians tend not to fit the Moving Away personality type. All four hypotheses were supported by the data as shown in table 4.4.

The results of the correlations shown in table 4.4 indicate that whilst psychopathy is related to the Horney Moving Away factor (r = .294) the correlation is much stronger for the Moving Against factor (r = .969). Narcissism, on the other hand, is strongly correlated with only the Moving Against factor (r = .956). The correlations for Machiavellianism indicate that whilst there is a strong relationship with Moving Against (r = .654), the relationship with the Moving Away factor (r = .781) is the stronger of the two. None of the Dark Triad variables is related to the Moving Towards global factor scale. This result supports the hypothesis made by Ferrell and Gaddis (2016) that Machiavellianism, narcissism, and psychopathy will be unrelated to [HDS] subscales of the Diligent and Dutiful scales…"which fit a pattern of "moving toward" people or managing insecurities by building alliances to minimise the threat of criticism" (pp.5-6).

The demographic correlations indicate that age is strongly and negatively related to the Moving Against factor ($r = -.134$). Tenure shows no significant correlations with any of the Horney global factors. However, the correlations conducted in this research (See table 4.2) confirmed that age is negatively and highly significantly related to all three variables of the DT and is confirmed in the literature. The strong and negative relationship with the Moving Against global factor, which in turn loads onto both psychopathy and narcissism as shown in table 4.4. shows consistency with the earlier correlations (see table 4.2) that DT scores decline with age. However, the result for Machiavellianism is inconsistent. Whilst it correlates strongly with the Moving Away from others factor in table 4.4, the Moving Away from others factor and age show no correlation. This is inconsistent with the earlier strongly negative correlation between age and Machiavellianism shown in table 4.2.

With regard to job performance, the results of the correlations in table 4.4 show that none of the Horney (1950) global factors is significantly correlated with job performance. This is not fully supported in the literature. Gaddis and Foster (2013) found that the HDS scales of Excitable, Skeptical, Cautious, Reserved and Leisurely scales comprising Horney's Moving Away from Others factor, all negatively predicted job performance, whilst the Bold, Mischievous, Colorful, and Imaginative scales comprising Horney's Moving Against others factor, showed mixed results in predicting job performance. The Bold and Mischievous scales do not correlate with job performance at all, which is consistent with this research, whilst Colorful and Imaginative both strongly correlate, which is not consistent with the findings in this research. Once again, it should be noted that this is based on results from a single organisational study.

The mapping of the HDS and the Dark Triad in chapter three helps in the evaluation of the above correlations. It refers to the research conducted by Ferrell and Gaddis (2016). They sought to examine the relationships between Dark Triad measures and the HDS at the subscale level and hypothesised that Machiavellianism, narcissism, and psychopathy will be unrelated to the subscales of the Diligent and Dutiful HDS scales (The Moving Towards factor). Their results indicate that Machiavellianism correlates most strongly with twelve of the fifteen HDS subscales (80%) that comprise the Excitable, Skeptical, Cautious, Reserved and Leisurely scales and which also make up 80% the higher Moving Away factor. They confirm the findings in this research that Machiavellianism tends to fit the Moving Away global factor ($r = .781$). As for psychopathy, the predominant correlations are related to all twelve subscales that make up the Moving Against factor and comprise the Bold, Mischievous, Colourful, and Imaginative scales. They confirm the findings in this research that psychopathy tends to fit the Moving Against global factor ($r = .969$). The predominant correlations (75%) for narcissism in the Ferrell and Gaddis (2016) study lie within nine of the

twelve subscales that make up the Moving Against factor and which comprise the Bold, Mischievous and Imaginative HDS scales. They confirm the findings in this research that narcissism tends to fit the Moving Against global factor ($r = .956$). Finally, Ferrell and Gaddis found that Machiavellianism, narcissism, and psychopathy are unrelated to the subscales of the Diligent and Dutiful scales (Moving Towards factor). This also confirms the finding in this research that all DT personalities tend not to fit the Moving Towards factor, as mentioned earlier. All four hypotheses relating to each of the DT personality variables and their predicted fit within the three Horney global factors were supported by the data.

5.5 Limitations of the Research

As in every applied research study there are limitations. The limitations in this research study are due, in the main, to its reliance on the application of secondary data from the Hogan Assessments organisation. One of the main reasons for the application of secondary data in this way is because of the difficulties in accessing such sensitive personal data from organisations due mainly to legal and privacy issues. For example, empirical and case studies of psychopathy in the corporate world are limited and largely confined to self-report measures of constructs related to psychopathy such as narcissism and Machiavellianism and aberrant self-promotion (Gustafson, 2000; Gustafson and Ritzer, 1995). Few clinical or forensic psychologists have access to corporate personnel except in limited circumstances (Kets de Vries and Miller, 1984, 1985; Person, 1986; Peterson, Smith, Martorana and Owens, 2003). Organisations are often reluctant to use measures of psychopathology except under special circumstances, such as the hiring of critical public safety staff (e.g., police, fire, nuclear power plant operators: (Lowman, 1989)). The fear of violating privacy and the risk of lawsuits inhibits research in this area. As a result, we know relatively little, directly, about how DT features are associated with corporate status and performance. As mentioned in chapter two, DT members can cause problems for others in organisations (Volmer, Koch and Göritz, 2016). However, due the limitations of the available data, these problems were not measured in this research study. This may represent an opportunity to make a unique and important contribution to our knowledge and understanding of how others deal with these problems and their implications for performance.

Although based on a large sample size (N=918), because of its reliance on secondary data, this research is based on a single case study of managers from a US retail company with the further limitation of only having demographic data on age, gender, and tenure. The sample used in this research study was derived from a large US department store, and which is based on a western culture. As Gaddis & Foster (2013) point out, country or culture may serve as potential moderators. Western conceptions of personality are rooted in the model of

the independent self, whereas Asian culture values interdependence. Although the general structure of personality remains intact across cultures, the scores on personality dimensions can vary (Gaddis and Foster, 2013: p.6). This study did not have access to data relating to culture with which to make comparisons.

The lack of HDS sub-scale data, which was requested but was not available, ruled out a more rigorous analysis which would have been beneficial in more closely identifying the sub-scale facets that differentiate the DT behaviours. Smith et al (2017) make the point that:

"…applying a facet-based approach to studying dark personality may effectively address concerns with construct redundancy by narrowing the focus on certain dimensions of bright and dark traits" (p.15).

5.6 Suggestions for Further Research

Given the limitations, further research would be beneficial to extend the application of the new DT scales into the areas of identification, selection and development within organisations to broaden their validity and generalisability. Access to and the application of sub-scale data would further validate and possibly broaden the application of the new and extended DT scales within the workplace.

The potential moderator/mediator effects of additional demographic data such as authority and in-group collectivism (IGC) on the new DT scales should also be researched further. Culture has been shown to moderate a variety of workplace relations and one dimension of culture that has been shown to be particularly important in the study of the DT and work behaviours is IGC (O'Boyle et al, 2012). Collectivist cultures place great emphasis on norms of reciprocity (Van Dyne, Vandewalle, Kostova, Latham, and Cummings; cited in O'Boyle et al, 2012) and are less likely to tolerate the social exchange violations of the DT. As Gaddis and Foster (2013) note:

"Given the cultural differences in mean personality scores and conceptualisations of effective leadership, these additional non-Western samples would further strengthen this line of research" (p.22)

In the case of Machiavellianism this study found a negative correlation between Machiavellianism and job performance. It is possible that a moderator of this relationship is general intelligence (O'Boyle et al, 2012). By incorporating a measure of intelligence, together with the new DT scales, those who not only possess the desire but also have the ability to manipulate others may, in fact, achieve high levels of performance.

Other moderating variables that could impact job performance and may be of interest for future research are authority and counter-productive work behaviours (CWBs). Examples include absenteeism, theft, and safety violations (Gaddis and Foster, 2013). The negative effects of the DT on performance and the presence of counter-productive work behaviours could be due, in part, to their position in the organisational hierarchy. For example, those behavioural tendencies that are viewed as *"relationally deviant"* (O'Boyle et al, 2012) when displayed by a co-worker or subordinate may be considered appropriate or even admirable when enacted by someone in a position of authority.

Many of the qualities of the Machiavellian or the psychopath, as well as some aspects of narcissism, are consistent with the role demands of leadership or management and are associated with career success. They encompass skill in handling people, political and organizational savvy, detachment, and the capacity to make decisions on the basis of objective standards rather than loyalty, trust, or emotions. In addition, the need for control and dominance underpinned by high levels of self-confidence, are frequently mentioned in laypersons' and experts' accounts of leadership effectiveness (Dorfman, Hanges, and Brodbeck; Offermann, Kennedy, and Wirtz; cited in O'Boyle et al, 2012). As Ray and Ray (1982) observe, so long as those in authority are able to mask their negative qualities, such as the lack of integrity, then this may enhance their organisational effectiveness and obviate the need for CWBs as followers or subordinates may perceive their behaviour as conforming to the expected norms of leadership. With these points in mind, further research looking at honesty, trustworthiness and integrity may also be beneficial. The final chapter summarises the main research findings, principal contributions to knowledge, theory and practice and answers the three research questions.

The finding that psychopaths are the most strongly associated with the Moving Against others' factor, suggests that it could be their effects on their colleagues which are of more importance than their individual performance. Boddy (2014) found significant levels of counterproductive work behaviour such as sabotage and the deliberate slowing of productivity, among employees who worked under psychopathic managers. It was speculated that this behaviour may be a manifestation of employee anger, anxiety, depression, and discontent due to the presence of corporate psychopaths creating a toxic work environment as evidenced by a culture of conflict and bullying.

This may equally apply to employees working under narcissistic and Machiavellian managers, as they share with the psychopath a core characteristic of self-oriented disagreeableness. In other words, psychopaths, as well as narcissists and Machiavellians, may not just 'de-rail' their own careers but they may well 'de-rail' the whole organisation.

In this research study, the performance of employees was rated by supervisors. Psychopaths are known to be particularly adept at upward "impression management" (Boddy et al, 2015; Babiak, 1995; Babiak & Hare, 2006), consequently, some of these ratings may not have been entirely accurate. Future research may take this factor into account and consider more objective, or alternative, measures of job performance, to address this issue. Gathering the ratings of subordinates below the psychopath could be one way of achieving this.

Finally, it may be that future research would benefit from looking at what is happening around those with dark personalities rather than looking at just those aversive personalities exclusively. Referring to what they term the toxic triangle, Padilla et al (2007: p.176) contend that:

> *"destructive leadership entails the negative consequences that result from a confluence of destructive leaders, susceptible followers, and conducive environments".*

6 Summary and Conclusions

6.1 Introduction

This chapter summarises the main research findings and the principal contributions to knowledge, theory, and practice. It then proceeds to a summary of my personal learning throughout the research process before concluding with answers to the research questions posed in chapter one.

6.2 Contribution to knowledge and theory

One aim of this research is to assess the viability of the Hogan Development Survey (HDS) as a single, valid, and reliable test to measure the three Dark Triad personality scales. It answers the call from other researchers (Rauthmann, 2012, Wu and LeBreton, 2011) for improved measurement of the DT as current measures appear *"inadequate"*, relying almost entirely on the use of clinical instruments (O'Boyle et al, 2012).

Two key concerns in any research are those of scale *validity* and *reliability*. This research was designed to determine if there is a statistically significant relationship between the DT personalities of narcissism, psychopathy and Machiavellianism and job performance, the criterion variable. *Criterion validity* was established by applying the three new DT scales derived from the HDS against objective measures of job performance. By controlling for the effects of age, gender and tenure, the partial correlations (see table 4.3) show that all three DT variables significantly and negatively predict job performance. The regression model results in this study significantly predicted more of the variance in job performance consistently across each of the three regression equations with a greater percentage of the variance in job performance explained, at 4.3%, than the O'Boyle et al (2012) study. The data also supports two of the three ANOVA model results for narcissism and psychopathy showing a statistically significant augmentation to the variance explained in job performance in each model at 1.3%. This research also found that the demographic variables of age, gender and tenure are significant moderators in predicting the relationship between the DT and job performance. The results answer the call from O'Boyle et al (2012) for a different set of moderators that better explain the variance in effect sizes. These results are based on data from a single organisational study and further research is recommended.

Content validity refers to the adequacy with which a measure or scale has sampled from the intended universe or domain of content (Pallant, 2013). Pallant adds that there is no one clear-cut indicator of a scale's validity and that the validation of a scale involves the collection of empirical evidence regarding its use. This research is extending the application

of the HDS. Harms, Spain and Hannah (2011a) note that dark side personality dimensions measured by the HDS explain incremental variance in job performance beyond that explained by the Five Factor Model (McCrea and Costa, 1987) personality measure, the trait structure of which, was considered to represent a *"human universal"*. Studies that have used the HDS have shown it to be a robust, reliable, and valid instrument (De Fruyt et al., 2009; Furnham, 2006; Furnham and Crump, 2005; Rolland and De Fruyt, 2003). It is also validated as predicting success as well as failure in work outcomes (Furnham et al, 2012; 2014). The *content validity* of the new Machiavellian scale and for each of the items that comprise the new taxonomy was verified in a scale mapping conducted earlier in this research and which is discussed in chapter three.

As cited in chapters two and three, Ferrell and Gaddis sought to examine the relationships between Dark Triad measures and the HDS at the subscale level. In addition to the HDS, Ferrell and Gaddis applied the Short Dark Triad (SD3: Jones and Paulhus, 2014) a proxy measure for Machiavellianism, psychopathy, and narcissism as well as the Narcissistic Personality Inventory (NPI-40, Raskin and Terry, 1988) each a validated instrument in its own right. The results show that Machiavellianism correlates most significantly with twelve of the fifteen HDS subscales (80%) that comprise the higher Moving Away from others factor. It also confirmed the mapping of the Excitable, Skeptical, Reserved and Leisurely scales but ruled out the Cautious scale. This mapping exercise supports content validity because it is verified against validated measures. The new Machiavellian scale is also significantly related to six of the twelve subscales (50%) which comprise the Bold and Mischievous scales which comprise six of the twelve HDS subscales that comprise the Moving Against others global factor. Combining the results of the Ferrell and Gaddis (2016) reveals a taxonomy that identifies a new Machiavellian scale in the HDS comprising the Excitable, Skeptical, Reserved and Leisurely HDS scales in the Moving Away from others factor along with the Mischievous and Bold HDS scales in the Moving Against factor.

The Bold HDS scale, which Hogan, and Hogan (2009) claim approximates to the narcissistic personality, was also extended to include the Cautious (Reversed), Imaginative and Mischievous HDS scales to extend the definition of narcissism. This second mapping exercise showed that the narcissism scales employed in the Ferrell and Gaddis study (NPI-40 and SD3) were significantly but negatively related to three of the fifteen subscales which comprise the Cautious subscale. The predominance of correlations lies within nine of the twelve subscales which comprise the Bold, Mischievous and Imaginative scales (75%). The results for narcissism are indicative of two distinct styles. One involves a willingness to engage with and directly confront others (negative Cautious) and the other to dominate and

intimidate, re-inforced by a lack of relationship with the Moving Toward others scale (Ferrell and Gaddis, 2016).

The Mischievous scale approximates to the psychopathy scale (Hogan and Hogan, 2009). The Imaginative, Skeptical, Colorful and Bold HDS scales were added to extend the definition of psychopathy. This supports content validity because the psychopathy scale applied by Ferrell and Gaddis (2016), the SD3, is significantly related to three of the fifteen subscales that comprise the HDS Skeptical scale. In addition, content validity is also supported due to the predominant correlations related to all twelve subscales that comprise the Bold, Mischievous, Colourful, and Imaginative scales.

As a test of scale *reliability,* Cronbach's alpha (Cronbach, 1951 cited in Field, 2013) measures the degree to which the items that comprise the scale are all measuring the same construct. Hair et al (2018) state that .6 is acceptable for exploratory research, whilst Nunnally (1978 cited in Field, 2013) suggests that values of .5 will also suffice in the early stages of research. As presented earlier in chapter three, the results in this research, show the Cronbach alpha's for narcissism at .612, psychopathy .756 and Machiavellianism at .549. As previously stated, the DT scale's Cronbach alpha values are within the acceptable cited ranges.

As a viable single measure, the HDS Bold scale approximates to the narcissistic personality and the Mischievous scale approximates the Antisocial or psychopathic personality (Hogan and Hogan, 2009). Based on the second mapping exercise conducted in this research and described earlier in chapter three, both scales have been extended to incorporate other HDS scales. A new scale that measures *Machiavellianism* is also introduced, as discussed. In addition to the Bold scale, narcissism is now broadened to incorporate three additional HDS scales; Cautious (Reversed), Mischievous and Imaginative scales. At the core of most models of the narcissistic personality are those individuals with elevated scores who are likely to harbour feelings of superiority driven by an inflated sense of self; have a dysfunctional need for excessive attention and admiration; a propensity for engaging in the exploitation of others in the workplace and a lack of empathy tending towards callousness (Morf and Rhodewalt, 2001, Paulhus and Williams, 2002, Raskin and Hall, 1979, Raskin and Terry, 1998, Rhodewalt and Morf, 1995, Wright et al, 2012, Wu and LeBreton as cited in LeBreton et al, 2018). These traits approximate to those with elevated scores on the HDS Bold scale. In addition to the HDS scales of Mischievous, Bold, and Imaginative, the psychopathy scale also comprises the HDS scales of Skeptical and Colorful which are both warranted as correlates of psychopathy given their highly significant correlations shown in the second mapping exercise.

As mentioned, the correlations conducted in this research have identified a new scale for Machiavellianism. In addition to the HDS Bold and Mischievous scales already discussed, are the Reserved, Leisurely and Excitable scales along with the Skeptical scale which is also featured in the psychopathy scale. There is a general acceptance that the core defining feature of Machiavellianism is a strategy of social conduct that involves manipulating others for personal gain (Wilson et al, 1996; Kessler et al, 2010; Paulhus, 2014). Elevated scores on the HDS Reserved, Leisurely and Excitable scales point to the general lack of empathy, a general lack of affect in interpersonal relationships and a focus on achieving one's own goals at the expense of others. In addition, the Machiavellian tends to hold an aberrant view of morality which points to an acceptance of behaviours otherwise described as immoral or unethical, such as lying, manipulating, or exploiting others (Christie and Geis, 1970, Dahling et al. 2009, Kessler et al. 2010, Paulhus and Williams, 2002, Rauthmann and Will, 2011, Spain et al. 2014, Wu and LeBreton, 2011).

The research findings from this study support two of the three Horney (1950) global scale personality types as used by Hogan and Hogan (2009) in the HDS scales. The Machiavellian tends to fit global factor 1 – The Moving Away from others personality type. The highly significant correlations indicate those who tend to use intimidation in interpersonal relationships and have a need for independence. The psychopath and the narcissist both tend to fit global factor 2 - The Moving Against others personality type. The correlations indicate those who tend to use seduction to charm their way into positions of power. None of the DT personalities fit global factor 3 - The Moving Toward others personality. Ferrell and Gaddis (2016) found support for their hypothesis that Machiavellianism, narcissism, and psychopathy will be unrelated to the subscales of the Diligent and Dutiful HDS scales. Their results support the findings in this research study. These individuals tend to compliance in the workplace in order to manage their insecurities by building alliances with others to minimise the threat of criticism (Hogan and Hogan, 2009, Ferrell and Gaddis, 2016).

Finally, one of the contributions to knowledge from this research is related to the "lumpers" vs "splitters" debate. Whilst there is evidence of expected overlap, the findings in this research show that for two out of the three DT personality pairings, the percentages of non-common variance support the "splitters" case. Although there is some overlap in the HDS scales contributing to the three new DT scales, the relationship between Machiavellianism and narcissism shows a non-common variance of 61%, whilst the relationship between psychopathy and Machiavellianism shows a non-common variance of 42%. As for the relationship between psychopathy and narcissism, the non-common variance is only 15%. The overall findings therefore provide evidence to support the "splitters" case in two out of the three DT scales.

6.3 Contribution to practice

As the DT becomes more integrated within the spheres of applied psychology and organisational behaviour, its application to employee selection (and by implication, identification of potential), becomes one of the most important criteria in judging worth (O'Boyle et al, 2012).

One of the main contributions of this research to the domain of employment selection is the application of the HDS incorporating a broader measurement of all the DT personalities in a normal population. As LeBreton et al (2018) point out:

"One of the principal advantages of using the HDS is that it provides information about not only the DT traits, but also other maladaptive or problematic tendencies that may be particularly disruptive in organisational contexts" (p.405).

Organisations could apply the HDS as a single instrument to measure all three DT personality scores. The DT scores would be valuable in complementing the job interview, which is the single most common method applied in vetting external candidates joining organisations, but which lacks the predictive power of a state-of-the-art, reliable and valid measure of personality (Leutner and Chamorro-Premuzic, 2018). The behaviours associated with the dysfunctional dispositions assessed by the broader application of the HDS can be enhanced by viewing high scores on the individual scale scores in the context of the other scales (Hogan and Hogan, 2009).

In the case of the Machiavellian candidate for example, who is predominantly defined by the Moving Away from others global factor (Horney, 1950) comprising the Excitable, Skeptical, Reserved and Leisurely HDS scales, they feel and exhibit moodiness, distrust, hostility, and social withdrawal. These behaviours resemble what others refer to as *"negative affectivity"* (Tellegen; Watson and Clark; cited in Hogan and Hogan, 2009).

Greater interpretive power can be gained when HDS data is examined in the context of a broader assessment battery. One example of this is the Hogan Personality Inventory (HPI), a measure of normal personality. The HPI concerns the "bright side" of personality, the characteristics of which emerge when people are at their best. Each is able to amplify the power of the other assessment as they tap different aspects of personality and behaviour. "Evaluating the individual from both perspectives offers greater precision in interpretation" (Hogan and Hogan, 2009: p.120).

From a coaching perspective, those leaders or managers that show a tendency to move away from others when stressed could benefit from coaching in "strategic self-awareness" (Gaddis and Foster, 2013). Through the application of the broader HDS, dark

side personality characteristics could be targeted for developmental interventions that meet the specific needs and characteristics of executive clients and can help mitigate the negative impact of dark side personality attributes on critical leader performance. Those that show a high score on the Colorful scale, for example, are more likely to be seen by others as charismatic but are less likely to be seen as trustworthy. Rather than coach this individual to be less of an attention-seeker, it may be more effective to focus attention on concerns about trustworthiness with attention brought to those behaviours that build trust with others; this relates to the intrapersonal skill domain (Warrenfeltz et al; cited in Hogan and Hogan, 2009). Core-self-esteem, or resilience, underlies the domain of intrapersonal skill. Its presence is indicative of someone who is self-confident, even-tempered, emotionally stable, and positive (Erez and Judge; Judge and Bono; cited in Hogan and Hogan, 2009). Those lacking in core self-esteem are self-critical, moody, unhappy, easily frustrated and need frequent reassurance. Measures of core self-esteem, such as the HDS Excitable scale, are predictive of job performance evaluations (Hogan and Hogan, 2009).

Given the prevalence and cost of failed leaders, organisations could also use the scale scores to deliver developmental feedback to existing managers and employees and as a means of identifying future management potential which could be nurtured through focused coaching and development courses. Development and training courses can also be designed to retain those with "moderately low" percentile ranges of DT scores (40%-69%), as suggested by Hogan and Hogan (2009), but who are open to personal change and are responsive to coaching. Whilst those with raised or elevated DT scores (in the 90%-100% range – Hogan and Hogan, 2009) that organisations do not wish to retain at higher managerial or leadership levels can be identified and then screened out.

Applied psychologists commonly use personality tests in employee selection systems because of their advantages regarding incremental criterion-related validity and less adverse impact relative to cognitive ability tests (Melson-Silimon et al, 2018). From an international perspective, there may well be an advantage in applying the findings made in this research in countries such as the US where the use of personality tests may see increased challenges in the law courts under the Americans with Disabilities Act (ADA), 1990 (Melson-Silimon et al, 2018). This is particularly the case regarding the use of dark trait measurement tools in selection systems. It is suggested (Melson-Silimon et al, 2018) that measures which are closely related to personality disorders (PD), particularly those that assess known PD's and "dark-side" traits, are often subclinical measures of PD's. The ADA requires employers to accommodate disabled workers and prohibits discrimination against the disabled in hiring, firing and pay (Acemoglu and Angrist, 1998). Consequently, they could be seen by the courts

as evaluations of mental disabilities which are prohibited for pre-offer employment enquiries under the act. Steverson (2020) examines the relationship between the ADA and the diagnosis of psychopathy. Steverson puts forward the view that, apart from its legal status, employment screening for psychopathy in most cases would be unethical. Issues relating to job applicant and employee rights to privacy form the basis for the argument. Sheehy et al (2020), researching the link between corporate psychopathy and corporate law, argue that the presence psychopathy in the workplace, "carries with it a powerful incentive to restrict or exclude the corporate psychopath from executive leadership" (pp 48-49) emphasising that the organisation has a duty of care towards its employees to protect them from the negative effects of the corporate psychopath manager/leader. Sheehy et al (2020) propose several strategies to counter the active recruitment of the psychopath in the first place, one of which involves the use of the Hogan Development Survey (Hogan and Hogan, 1997, 2009) in conjunction with the Hogan Personality Inventory (HPI: 1995, 2007) as easily administered and cost-effective options "when weighed against the potential significant losses and organisational dysfunction where a corporate psychopath is engaged" (p.44).

Machiavellianism is often considered in conjunction with psychopathy and narcissism as part of the dark triad (LeBreton, Shiverdecker and Grimaldi, 2018) and thus shares similar traits with psychopathy and narcissism (Reichin et al, 2019). However, there is no clinical diagnosis of "Machiavellian personality disorder" and so would not be applicable under the ADA. Focusing on the two remaining members of the dark triad, the HDS identifies the PD of psychopathy as a dysfunctional personality referred to as Mischievous and the PD of narcissism as a dysfunctional personality referred to as Bold (Hogan and Hogan, 2009). Cognisant of the implications of the ADA, Hogan and Hogan (2009) saw the need for a non-clinical inventory to assess interpersonal behaviours that adversely affect the performance or reputations of people at work. Designed to be used on adults in normal, not clinical populations and administered by suitably trained managers, not clinicians, the HDS comprises items with work-related and interpersonal content, avoiding items referring to mental disabilities, clinical themes, religious beliefs, or sexual preferences (Hogan and Hogan, 2009: p.9).

Research indicates that coaching efforts that are aimed at reducing the effects of DT personality characteristics on critical leader behaviours may show positive results around the world. Despite mean score differences across cultures, the overall structure of personality generalises across languages and countries. As a result, professional coaches can "export these lessons learned to their work with incumbent managers and executives across continents" (Gaddis and Foster, 2013: p.21).

6.4 Personal Learning

"The overall aim of the DBA programme is to develop high levels of competence in academic research, management consulting and personal development" (Henley DBA Handbook, 2018: p.9).

To best understand what has been learned over the course of the MSc and DBA, it may prove useful to the reader to understand my motivations and aspirations in starting down the route of pursuing the Henley DBA. I enrolled on the MSc/DBA programme to research the phenomenon of the business-related or "successful"[6] psychopath which was then later extended to include other so-called aversive personalities (Machiavellians and narcissists) commonly referred to as the "dark triad" (Paulhus and Williams, 2002). I experienced first-hand what I came to later recognise as a psychopathic leader. What emerged from early research into how and why these personality types are able to flourish in organisations motivated me to learn more about how best to locate and measure their presence. My goal is to prepare for a second career in consulting within organisations to advise them as to how to identify these aversive personalities using the Dark Triad scales.

A competency-based assessment completed during the MSc Business and Management Research element of my studies revealed the clear need to be able to understand and effectively apply quantitative based data analysis techniques and model building proceeding into the DBA phase. This was a challenge for someone that had a preference for qualitative research techniques having applied the Repertory Grid approach, which involved capturing and interpreting interview data over time, in earlier MBA studies.

Moving into the DBA phase, the requirement was to identify and select two competency targets, one personal and one consultancy-based target. The first of these was to become more Learning Oriented (Personal Competence). Two core sub-goals were identified. The first to improve my use of time. The second, to become more competent in the use and application of statistical methods and techniques. The consultancy target was to develop more Flexibility when interacting with others and which became a key theme in my personal development planning.

Having decided to apply the Hogan Development Survey (HDS) in my research, I enrolled on and completed an advanced course earlier in 2018 at Psychological Consultancy Limited (PCL), a major distributor of Hogan inventories in the UK. Hogan Assessments advise the use of the Hogan Personality Inventory (HPI) with the HDS to achieve a

multidimensional view of personality. During the course I had the opportunity to be profiled using these inventories and to profile others. By attending the course, I became qualified to apply the HDS and HPI in the future.

My own results show a high score (79th percentile) on the Skeptical scale of the HDS indicating that whilst being effective at evaluating the talents and motives of others, which may be viewed as a valuable leadership skill, scepticism regarding others' intentions may inhibit building and maintaining relationships. The result on the HPI scale was a high score (74th percentile) on the Prudence scale which indicates a solid organisational citizen concerned about rules, procedures, and task clarity but who may come across to others as inflexible.

The developmental recommendations from both outcomes identified the need to be more *flexible*. In working with others, to be more objective and collaborative and cognisant of alternative ideas. For task completion, the recommendation was to try not to complete every task equally well but to set priorities around the work to be completed. These outcomes and recommendations were consistent with the earlier theme of *flexibility* identified in the consultancy target.

Under the Learning competency related to time management, I developed my own time use log to identify principal activities, assign time to them and measure the results in terms of percentage time allocated. This method imposed a discipline to record and measure the use of time use and identify areas of imbalance. As Pedlar et al (2013: pp.67) advise, use the three job areas of *Must Do*, *Should Do* and *Would like to Do*, as a way of deciding what to do more and less of and making sure that the *Must Do's* are done! The commitments I am making to myself are: To continue to apply the time use log and analysis in both my personal and professional work to check how I am functioning and make the necessary decisions as to what I should *cut out*, *cut down*, *delegate* and *do more* of.

There was a second sub-goal under the Learning Oriented competency which was to improve my use of statistical techniques. This was identified as a key area of focus as my research is quantitative methods based against my experience which was then primarily qualitative in nature, a point raised earlier in chapter three. I attended the Henley Quantitative Skills course three times. The classroom-based learning was delivered by three world experts in the fields of applying statistical analysis in the disciplines of Organisational Behaviour. There was also an opportunity to apply these techniques using case study materials and run analyses particularly using the Statistical Package for the Social Sciences (SPSS). I have found these courses to be particularly helpful in understanding how to apply and interpret the statistical techniques and methods used in this research study.

The consultancy competence emerged as an area of attention after completion of both Hogan personality measurement inventories (HDS and HPI). This is defined within the Henley Business School inventory of competencies as*, "adopting a flexible but not compliant style when interacting with others. Takes their views into account and changes position when appropriate"* (p.6). This competence is nested within the Interpersonal Sensitivity supra-competency set which requires sensitivity to events around us, especially those that can give rise to inter-personal conflict.

I completed the Pedler et al (2013) paired-comparison questionnaire designed to help identify one's preferred style of conflict handling. I found that my preferred style is to compromise. I tend to compromise more than I avoid and avoid more than I collaborate. I also found that I favoured the less flexible option which is to distrust others and impose my own view on the situation. How best to become more flexible and assertive? By applying the principle of negotiation (Fisher and Ury, 2011) in a conflict situation in the then work environment where both parties had equal power and shared interests, time was allocated to listen to other views and brainstorm options for mutual gain which were incorporated in a revised overall approach. This helped to develop a sense of belonging and unity amongst the team which ultimately led to a change in the interpersonal relationships and in the approach to the customer. This change was adopted across the sales teams involved and became permanent based on a successful customer outcome.

I have found that the identification of the core competencies required to be effective, as well as their subsequent development, imposes a discipline and a rigour on the researcher which results in more effective learning and advancement. The development of these competencies forms the basis of my decision to move into a second career as an organisational consultant, a critical element of which will be to become an accredited British Psychological Society (BPS) psychometric tester.

6.5 Final conclusions and answers to the research questions

The initial research question posed at the pilot stage of my study was, *"How do the dysfunctional behaviours of managers affect job performance?"* This question arose after a gap in the current research had been identified by Gaddis and Foster (2013). Using the Hogan archive of job analytic data, they identified a key area for future research - the relationship between dark side personality characteristics and job performance. In addition, O'Boyle et al, (2012) and LeBreton et al (2018) assert the need to test the effects of moderators on the relationship between the dark triad and job performance. My research question therefore was later broadened to specifically incorporate the dark triad. It also encompassed three research questions:

RQ1: What are the relationships between scores on the Dark Triad (DT) personality measures and job performance?

RQ2: Will age, tenure, and gender act as moderator variables?

RQ3: What are the relationships between scores on the Dark Triad personality measures and the Horney Global factors?

In answer to the first research question, the partial correlations conducted in this research (see table 4.3) show that all three DT variables (Psychopathy, narcissism, and Machiavellianism) significantly and negatively predict job performance. Partial correlations allow the researcher to explore the relationship between two variables, whilst statistically controlling for the effect of another variable that may be influencing, or moderating, the relationship. The results showed strong and significant negative correlations between all three DT variables and job performance. The partial correlation result for Machiavellianism, although significant, was not as strong as those for psychopathy and narcissism.

To assess what each independent variable of the DT adds in terms of each one's power to predict the job performance outcome variable, hierarchal regression was used. The regression analysis conducted in this research study confirms that when controlling for age, tenure and gender, the DT variables of narcissism and psychopathy are each statistically significant in predicting job performance (see table 4.10). However, it was found that Machiavellianism did not augment and explain the additional variance in job performance but did so significantly in the partial correlations at the 5% level (see table 4.3).

In answer to the second research question, age, tenure, and gender do act as moderating variables. The addition of the HDS variables in each model for narcissism and psychopathy show a statistically significant augmentation to the variance explained in job performance for each model, with age, tenure and gender acting as statistically significant

moderators in the relationship (see table 4.9). The three moderator variables explain more of the variance between the DT variables and job performance and respond to O'Boyle's call for a different set of moderators to be used when researching the DT.

Finally, the relationship between scores on the DT personality measures and the Horney global factors (see table 4.9) indicate that both the psychopath and the narcissist have a strong and statistically significant preference to Move Against others. They manage their self-doubts through dominating and intimidating others. This contrasts with the Machiavellian personality score which indicates a strong preference to manage feelings of inadequacy by avoiding any real connection or attachment by moving away from others.

In conclusion, it is the contention of this research study, that the DT is comprised of distinct but overlapping individual difference variables. All three variables that comprise the DT are significantly related to job performance.

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Appendix A: Cleckley's checklist of psychopathy items

Cleckley (1941/1976) developed a checklist of 16 items to help diagnose and differentiate psychopathy from other personality disorders.

1. Charm and intellect – The typical psychopath will seem particularly agreeable and make a distinctly positive first impression.

2. Lack of delusions, rational – Not only is the psychopath rational and free of delusions, but he or she also appears to react with normal emotions.

3. No nervousness – There are usually no symptoms to suggest psychoneurosis in the clinical sense. He or she appears almost as incapable of anxiety as of profound remorse.

4. Unreliable – The psychopath's unreliability and his or her disregard for obligations and consequences are manifested in both trivial and serious matters, are masked by demonstrations of conforming behavior, and cannot be accounted for by ordinary motives or incentives.

5. Untruthful and insincere – The psychopath shows a remarkable disregard for truth and is to be trusted no more in accounts of the past than in his or her promises for the future or his or her statement of present intentions.

6. Lack of remorse – The psychopath cannot accept blame; rather, he or she shows almost no sense of shame.

7. Antisocial behavior – Not only is the psychopath undependable but also in more active ways, he or she cheats, deserts, annoys, brawls, fails, and lies without any apparent compunction. He or she will commit theft, forgery, adultery, fraud, and other deeds for astonishingly small stakes.

8. Poor judgment – Despite his or her excellent rational powers, the psychopath continues to show the most execrable judgment. He or she throws away excellent opportunities. Nevertheless, the psychopath characteristically demonstrates unimpaired (sometimes excellent) judgement in appraising theoretical situations.

9. Egocentric and incapable of love – The psychopath is always distinguished by egocentricity. His or her absolute indifference to the financial, social, emotional, and physical as well as other hardships which he or she brings upon those for whom he or she professes love confirms the appraisal.

10. Poverty in major affective reactions – The psychopath always shows general poverty of affect. Although it is true that he or she sometimes becomes or weeps in what

appear to be bitter tears, those who observe him or her carefully know that it is a readiness of expression rather than a strength of feeling.

11. Loss of insight – The psychopath has absolutely no capacity to see himself or herself as others do. The psychopath's lack of insight shows up frequently in his or her apparent assumption that the legal penalties for a crime committed do not or should not apply to him or her.

12. Unresponsive in interpersonal relations – The psychopath often is attentive in small courtesies and favours, perhaps even habitually generous or quasi-generous when the cost is not decisive. However, these appearances are deceiving. The psychopath who causes his or her family hardship and anguish may gain a considerable reputation in the community. Outward social graces come easy to most psychopaths to gain admiration and gratitude.

13. Fantastic and uninviting behavior – Although some psychopaths do not drink at all and others drink rarely, considerable overindulgence in alcohol is often prominent. His or her exploits seem directly calculated to place him or her in a disgraceful or ignominious position.

14. Suicide is rare – Since suicidal threats, like promises and well-formulated plans to adopt a new course, are so frequently offered, there is good reason to keep in mind that they are nearly always empty.

15. Sex life is impersonal – The psychopath's sex life invariably shows peculiarities. In view of his or her incapacity for object love, the sexual aims of psychopaths do not seem to include any important relationships.

16. Failure to follow a life plan – The psychopath eventually cuts short any activity in which he or she is succeeding. His or her behavior gives such an impression of gratuitous folly that it is hard to avoid the conclusion that here is the product of true madness. Madness in excelsis, despite the absence of all those symptoms that enable us, in some degree, to account for irrational conduct in the psychotic.

Appendix B: Hare's Psychopathy Checklist-Revised (PCL-R)

In clinical settings and many research studies, a score of 75 per cent and above (e.g. 30 out of 40 points on the PCL-R) is used to define psychopaths (Herve, Hayes and Hare, 2001) and a score of below 50 per cent (e.g. <20 out of 40 on the PCL-R) is used to define non-psychopaths (Blair et al. 1995; Richell et al. 2003). These cut scores vary. With a defining score of 30 to 40 points applying in North America, but a score of 25 points and above is the case in the UK (Hare, 2003; Skeem, 2011 cited in Brooks and Fritzon, 2020: p.109). Most people in the general population would score less than 5 on the PCL-R, whereas the average score for male and female criminals is about 22 and 19, respectively (Babiak and Hare, 2006, p.27). A low psychopathy score is deemed to be one in the range 0-19 and a moderate score one in the range 20-29, using the full version of the PCL-R (Boddy, 2011b, p.10).
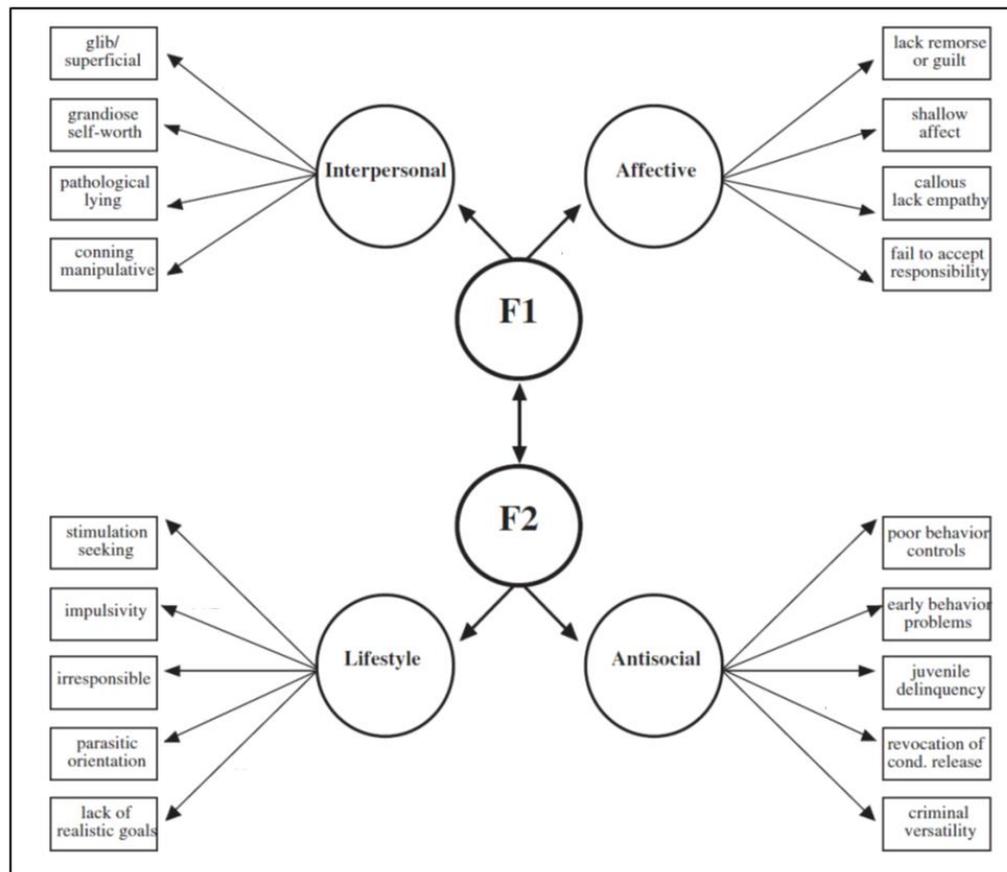

Figure B2.1 - Two-factor PCL-R higher order representation of the four correlated factors model (N = 6929). Source: Adapted from Hare and Neumann (2008).

Appendix C: Seminal studies of psychopaths in the workplace

Title	When Psychopaths go to Work: A Case Study of an Industrial Psychopath	Disordered Personalities at Work	Corporate Psychopathy: Talking the Walk.	The Influence of Corporate Psychopaths on Corporate Social Responsibility	Corporate Psychopathy and the Full-Range Leadership Model
Publication date	1995	2005	2010	2010	2015
Author/s	Babiak, P.	Board, B.J., and Fritzon, K.	Babiak, P., Neumann, C. S., Hare, R. D.	Clive R. Boddy, Richard K. Ladyshewsky and Peter Galvin	Cynthia Mathieu, Craig Neumann, Paul Babiak and Robert D. Hare
Journal	*Applied Psychology: An International Review, 1995, 44* (2), 171-188	*Psychology, Crime and Law. March 2005,* Vol.11(1), pp. 17-32	*Behavioural Sciences and the Law 28*(2) 174-193.	*Journal of Business Ethics,* 97: 1-19.	*Assessment* Vol.22(3) 267-278
Research Aims	Hypothesis that presence of psychopaths in industry could be measured.	Test hypothesis that There would be quantitative differences between the PD profile of the senior business manager sample and the PD profiles of MI, PPD and Psychiatric patient samples.	To establish an empirical base of research into the phenomenon of "corporate psychopathy" by examining psychopathy and its correlates in a sample of corporate professionals selected for management development programmes.	To investigate whether employee perceptions of corporate social responsibility (CSR) were associated with the presence of Corporate Psychopaths in corporations.	The research had two main goals. The primary goal was to measure the relationship between employees' perception of psychopathic features of their supervisor and their rating of their supervisor on the Full-Range Model of Leadership (Developed by Avolio and Bass (2004)). The second goal was to test the B-Scan 360's factor structure and test its interrater reliability in an organisational sample (p.267).
Methodology/ methods	Case study and interviews along with Psychopathy Checklist Screening Version (PCL-SV)	The Minnesota Multiphasic Personality Inventory (Hathaway and McKinley, 1951). Informal and business networks to make initial contact. Subjects briefed as to purpose. Mixed direct interview or postal contact.	Psychopathy Checklist – Revised (PCL-R) was administered. Scores were converted to PCL-SV (Screening Version of the PCL) equivalents to compare corporate and community samples. Babiak consulted with all organisations in the study.	The Psychopathy Measure – Management Research Version (PM-MR V; Boddy et al. 2010).	Mathieu et al had access to two different samples (see below) in which participants rated their immediate supervisor on the B-Scan 360 and the Multi-Factor Leadership Questionnaire (MLQ) which measures three major leadership constructs (Transformational, Transactional and Laissez-Faire Leadership – for a description please see Mathieu et.al. p268). The project was part of a larger study on well-being in the workplace for which ethics approval was received.
Sample size	Single subject observed in depth over time.	Data from a sample of 39 UK based business managers and CEO's (100% male)	A sample of 203 corporate managers and executives from seven organisations.	Data were collected from 346 white collar corporate employees in Australia.	491 civic employees and 116 employees from a branch of a large financial company
Epistemology	Positivist/Constructionist/Relativist	Strong Positivist/Realism	Positivist/Realism	Positivist/Internal Realism	Strong Positivist/Realism

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Appendix D: Mach IV scale construction

A pool of 71 items believed to be theoretically congruent with statements based on Niccolo Machiavelli's, *The Prince. The Discourses* (1532) was derived. After taking into account counterbalancing of wording placed, variety of content and discriminatory power, a 20-item Likert format scale was named Mach IV (Christie and Geis, 1970) – see table D1.

Table D1 - 20 Most Discriminating Mach Items

Mach IV scale

Ident	Item
Tactics +	The best way to handle people is to tell them what they want to
Tactics -	When you ask someone to do something for you, it is best to give the real reasons for wanting it rather than giving reasons which might carry more weight.
Tactics +	Anyone who completely trusts anyone else is asking for trouble.
Views +	It is hard to get ahead without cutting corners here and there.
Tactics -	Honesty is the best policy in all cases.
Views +	It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
Tactics +	Never tell anyone the real reason you did something unless it is useful to do so.
Tactics -	One should take action only when sure it is morally right.
Tactics +	It is wise to flatter important people.
Morality -	All in all, it is better to be humble and honest than important and dishonest.
Views -	Barnum was very wrong when he said there's a sucker born every minute.
Morality +	People suffering from incurable diseases should have the choice of being put painlessly to death.
Tactics -	It is possible to be good in all respects.
Views -	Most people are basically good and kind.
Tactics -	There is no excuse for lying to someone else.
Views +	Most men forget easily the death of their father than the loss of their property.
Views -	Most people who get ahead in the world lead clean, moral lives.
Views +	Generally speaking, men won't work hard unless they're forced to do so.
Views +	The biggest difference between most criminals and other people is that criminals are stupid enough to get caught.
Views -	Most men are brave.

Adapted from Christie and Geis (1970: p.17)

Nine items were classified *a priori* as being concerned with the nature of an individual's interpersonal tactics, e.g. "The best way to handle people is to tell them what

they want to hear" or a reversal, "One should take action only when you are sure it is morally right." In a second classification were nine items which deal with views on human nature, e.g., "Most men forget more easily the death of their father than the loss of their property" or a reversal, "Most people are basically good and kind." Finally, two statements deal with what might be called abstract or generalised morality, e.g., "People suffering from incurable diseases should have the choice of being put painlessly to death" and a reversal, "The world would be in much better shape than it is if people acted upon basic ethical principles." The fewest items appear in this last category because the construction of items tended to follow Machiavelli's writings closely. He was less concerned with abstractions and ethical judgements than with pragmatic advice (Christie and Geis, 1970: p.14).