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Revealing the Dark Core Behind the Dark Triad

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by

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Abstract

Revealing the Dark Core Behind the Dark Triad

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Dark or malevolent personality traits (e.g., The Dark Triad) have gained increasing attention in recent years which has led researchers to explore the existence of a common factor of dark personality traits (Vize et al., 2020; Moshagen et al., 2018). A Dark Core was extracted from existing Dark Triad measures using principal component analysis and was subsequently analyzed in relation to other personality traits that are commonly studied in conjunction with common cores of maladaptive personality traits (e.g., agreeableness and honesty-humility; Vize et al., 2020; Moshagen et al., 2020b). A General Factor of Personality (GFP) was also extracted for statistical analysis of its relationship to the Dark Core. Additionally, three different sets of items (9, 21, and 50) from the Dark Triad measures were correlated with the extracted Dark Core to develop direct measures. Results of the current study support past research on this topic in that the Dark Core negatively relates to agreeableness, honesty-humility, and the GFP. The results also extend past findings by suggesting that the Dark Core and GFP are not at polar opposite ends of a personality spectrum. The three direct measures of the Dark Core should be used in future research to validate the scale measure to help practitioners understand what types of employee behaviors the measures are capable of predicting (e.g., CWBs).

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Chapter 1: Introduction

It is safe to say that the majority of working adults have encountered an individual who is cold, callous, manipulative, or just overall socially aversive. Many psychologists would describe those types of people as having tendencies related to the Dark Triad. The Dark Triad–composed of narcissism, Machiavellianism, and psychopathy–is a growing interest among psychologists and practitioners. This concept was first introduced by Paulhus and Williams (2002) with their findings that these three traits had moderate intercorrelations with one another but were still conceptually distinct constructs. Narcissism and psychopathy have origins in clinical psychology; however, they have been successfully migrated to subclinical population using adapted personality measures such as the Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979) and the Self-Report Psychopathy Scale (SRP; Hare, 1985). Machiavellianism required no such migration since it was developed using concepts from Niccolo Machiavelli's book, *The Prince* (Machiavelli, 1513/1981).

The Dark Triad has been examined in relation to normal personality traits that aren't necessarily socially aversive, such as those measured by the Big Five (Jakobwitz & Egan, 2006). Additionally, the Dark Triad's relationship to social media and work outcomes has gained popular interest among researchers. Specifically, Geary et al., (2021) examined its relationship to behaviors on Instagram and found connections between narcissism, Machiavellianism, and inauthentic presentation on Instagram. Within the study of workplace behavior, Lyons et al., (2020) discovered an accentuation of Dark Triad behavior through low organizational commitment. Although Paulhus and Williams (2002) reported that they were distinct concepts, there is heavy debate on whether the Dark Triad consists of distinct overlapping concepts or if there is a common underlying element. Disagreeableness, honesty-humility, lack of empathy, and interpersonal antagonism are some of the strongest candidates for this underlying dark core (Paulhus & Williams, 2002; Furnham et al., 2013; Vize et al., 2020).

There are three major purposes of this study. Using an archival dataset (Vize et al., 2020), I will first examine the existence of a Dark Core of personality as past researchers have sought to do (Book et al., 2015; Moshagen et al., 2018; Vize et al., 2020). The second purpose of this study is to examine the extent to which this Dark Core relates to other personality variables such as agreeableness and honesty-humility (Miller & Campbell, 2008; Muris et al., 2017). Past research has found significant negative relationships between the Dark Triad traits and agreeableness and honesty-humility, so this information would build on that line of personality research. Finally, this study aims to answer the question of whether a direct Dark Core measure exists within the current Dark Triad measures. The final goal is to provide practitioners with a useful scale to measure malevolent traits which would provide researchers with another piece of the dark traits puzzle.

Chapter 2: Literature Review

Dark Triad

The Dark Triad has gained increasing popularity since the beginning of the century when Paulhus and Williams (2002) first coined the term. They did so by identifying three conceptually distinct personality concepts that overlap empirically. The three traits of Machiavellianism, narcissism, and psychopathy correlate differentially but all share common aspects such as callousness and interpersonal manipulation (Furnham et al., 2013). This area of research found its origins in the Paulhus and Williams (2002) paper with the objective of identifying socially aversive traits within a normal population. Therefore, narcissism and psychopathy are both of subclinical nature (Furnham & Crump, 2005). Machiavellianism has no ties to clinical populations, but it should be noted that this trait is found within a normal population.

The distinction between clinical and subclinical is necessary for this area of research. Ray and Ray (1982) identify *subclinical* as being inclusive of a wider range of naturally occurring cases within the community at large. Therefore, this term includes those not under current clinical or forensic supervision. Social psychology has contributed a great deal to the advancement of our understanding of the Dark Triad and this distinction between clinical and subclinical is one that has been given a substantial amount of attention. This focus on subclinical features has made the Dark Triad a popular tool within personality psychology and various outcomes, with several meta-analyses focusing on work behavior (O'Boyle et al., 2012), general models of personality (Schreiber & Marcus, 2020), general intelligence (Michels, 2022), and even the COVID-19 pandemic (Ścigała et al., 2021). Gaining a better understanding of these personality traits' commonalities and how they relate to various outcomes would be instrumental to understanding the structure of personality.

Narcissism

A key feature of narcissism includes a "pursuit of gratification from vanity or egotistic admiration of one's own attributes" (Muris et al., 2017). The Narcissistic

Personality Inventory is the most popular assessment used to measure narcissistic tendencies (NPI; Raskin & Hall, 1979). Although the NPI was originally developed based on the narcissistic personality disorder (NPD) from the *DSM-III* (American Psychiatric Association, 1980), it is not intended for use in a clinical population (Paulhus & Williams, 2002). Narcissistic behaviors will often manifest themselves through self-aggrandizing where individuals will promote themselves in a situation that modesty would be more fitting (Morf & Rhodewalt, 2001). Research on the NPI's factor structure has been inconsistent with one study reporting three factors (Kubarych et al., 2004), another reporting seven (Raskin & Terry, 1988), and another study reporting four (Emmons, 1984).

Jones and Paulhus (2014) used a two factor structure in their Short Dark Triad (SD3) scale development study. Those two factors included exploitativeness/entitlement, characterized by interpersonal manipulation, and leadership/authority, defined as the enjoyment of being in positions of power. Their rationale for only using these two factors was that scales with fewer factors are more robust. Other factors of narcissism reported by Emmons (1984) include Superiority/Arrogance, referring to an exaggerated sense of one's own abilities; and Self-Absorption/Self-Admiration, defined as engaging in exhibitionist tendencies. An important distinction to be made is that between grandiose and vulnerable narcissism. Pincus and colleagues (2009) differentiated normal (or subclinical) narcissism from pathological narcissism in their construct validation study of the Pathological Narcissism Inventory (PNI) which measures vulnerable and grandiose narcissistic tendencies. The Dark Triad does not include pathological narcissism measures, but rather focuses solely on the subclinical grandiose type.

Narcissism has been found to positively relate to other personality traits such as extraversion and disagreeableness from the Big Five (Miller & Campbell, 2008; Paulhus & Williams, 2002). These individuals are seen as interacting with others antagonistically and in a cold manner (Miller et al. 2011). Another domain from the Big Five that narcissism relates to is openness/intellect (Zajenkowski et al. 2016), but the consistency of this finding has been debated. From the HEXACO, a negative relationship was found between

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narcissism and honesty-humility (Muris et al. 2017). Although narcissism has been found to be related to these negative traits, studies have shown that these individuals are more capable of being warm and friendly compared to the other two Dark Triad traits, Machiavellianism and psychopathy (Rauthmann & Denissen, 2014). These two traits and how they relate to other personality traits will be discussed in the following sections.

Machiavellianism

Machiavellianism is a construct that has been found to correlate statistically and overlap conceptually with narcissism and psychopathy (Paulhus & Williams, 2002). Machiavellianism originates from *The Prince* by Niccolo Machiavelli (1513/1981), which details methodology for achieving political power. In other words, it is a playbook for how to manipulate people to achieve your goals even if that manipulation is immoral. An individual who is high in Machiavellianism is one that believes the end justifies the means and will often engage in manipulating tactics in order to achieve their desired long-term goals (Paulhus, 2014). These individuals are cynical in their social engagements and use interpersonal manipulation because they believe it is key to success in life (Furnham et al., 2013). Personal gain is one of their main goals, and they often stretch boundaries with others in order to achieve those goals (Muris et al., 2017). A widely used measurement of Machiavelliansim is the MACH-IV (Christie & Geis, 1970) which has a four factor structure including: positive (vs. negative) interpersonal tactics, and positive (vs cynical) view of human nature (Panitz, 1989). Alternatively, Jones and Paulhus's SD3 (2014) includes reputation, cynicism, coalition building, and planning as factors of Machiavellianism. These factors manifest themselves when high-Mach individuals plan ahead, build alliances, and maintain positive reputations.

High-Mach individuals hold a belief that if they do not exploit others first, then that other person will exploit them (Repacholi et al., 2003). Situational factors and the presence of others, areas of study from social psychology (Dovidio et al., 2006; Schroeder et al., 1995), have also been studied in relation to Maciavelliansim. Bereczkei et al., (2010) found that individuals who are high in Machiavellianism tend to disguise their selfishness

when they are being observed by others. Another finding from this study is that they are also more likely to feign altruism in order to give the impression that they are not always acting in their own self-interest. This is another key example of interpersonal manipulation which is used to gain an edge over and exploit others.

Similarly to narcissism, Machiavelliansim also negatively relates to agreeableness from the Big Five and Honesty-Humility from the HEXACO (Muris et al. 2017). The negative relationship between Machiavellianism and agreeableness was found to be stronger compared to that of narcissism suggesting these individuals may be even more untrustworthy, and noncompliant. The third Dark Triad trait and its relationship to other personality variables will be discussed below.

Psychopathy

Individuals high in psychopathy can be characterized by high impulsivity, thrill-seeking, and low empathy and anxiety (Paulhus & Williams, 2002). Although the psychopathy trait within has origins in clinical psychology, scales used to measure the trait only deal with the subclinical population. The Self-Report Psychopathy Scale (SRP; Hare, 1980) and its newest version (SRP-III; Williams & Paulhus, 2003) is a frequently used scale and has four domains including interpersonal manipulation, callous affect, erratic lifestyle, and criminal tendencies. It is important to note that this scale only measures traits that occur within subclinical populations, for the evaluation and measurement of clinical populations would require clinical or forensic supervision and would not be representative of a normal population (Furnham et al., 2013).

Psychopathy has been found to relate to various forms of antisocial or aversive behaviors such as short-term mating strategies (Jonason et al., 2009), preference for explicit or violent media (Williams et al., 2001), academic cheating (Nathanson et al., 2006), and theft-related attitudes (Lyons & Jonason, 2015). Similarly to narcissism and Machiavellianism, psychopathy also negatively relates to agreeableness (Lee & Ashton, 2014), and even more so compared to narcissism (Muris et al., 2017). Another finding specific to psychopathy is a negative relationship with neuroticism (Paulhus & Williams,

2002). Additionally, psychopathy was shown to negatively relate to the honesty-humility facet of the HEXACO and, interestingly, when the facets were analyzed separately it only negatively related to the sincerity and fairness facets of honesty-humility (Muris et al., 2017).

Chapter 3: Dark Triad in the Workplace

Individuals high on the Dark Triad have the potential to impact an organization through outcomes such as job performance, counterproductive work behaviors, and in some cases organizational citizenship behaviors. O'Boyle and colleagues (2012) conducted a meta-analysis on the relationship between the Dark Triad and workplace outcomes. Specifically, the authors were interested in job performance and counterproductive work behaviors (CWBs). They found a significant relationship for Machiavellianism, narcissism, and psychopathy individually with CWBs. The results for job performance were not as strong, with smaller effect sizes and an insignificant r value for narcissism. With these findings, I know that individuals high on any of the dark triad traits may be more prone to CWBs in general (O'Boyle et al., 2012), employee theft (Buss, 1993), leadership derailment (Hogan & Hogan, 2002), excessive organizational politicking (Poon, 2003), and abusive supervision (Tepper, 2007). Interestingly, O'Boyle et al., (2012) found that when collectively examined, Machiavellianism and narcissism predicted more CWBs while psychopathy predicted fewer. The authors' discussion of these results included a statistical (suppressor effect), methodological (psychopathy samples being in higher authority), and theoretical (Dexter effect; DePaulo, 2010; Wilson, 2010) explanation for this unusual finding. Additionally, they do not advise hiring psychopaths based on these findings considering the risk would largely outweigh the benefit.

Although narcissism, Machiavellianism, and psychopathy are conceptually distinct constructs, it is not uncommon to measure them collectively due to their covariance (Paulhus & Williams, 2002). They are all three socially aversive and can be described as having a high degree of selfishness and a willingness to put one's own needs ahead of others. This is likely to cause major issues within the workplace especially considering most employees work as part of a team. Even those who work independently still need some degree of interpersonal communication to be successful within an organization. Past research has found relationships between the Dark Triad traits and negative work

outcomes. For instance, the Dark Triad has been found to positively relate to workplace bullying (Baughman et al., 2012), social loafing (Wilhau, 2021), workplace incivility (Lata & Chaudhary, 2020), and emotional manipulation (Waddell et al., 2020). Most recently, Ellen and colleagues (2021) conducted a meta-analysis to determine if the Dark Triad predicted workplace deviance over and above the Big Five and found support for both interpersonal and organizational deviance.

The traits individually also have relationships to negative work outcomes. Machiavellianism, characterized by cunning and manipulation, leads employees to describe leaders who are high in this trait as is characterized by cunning, manipulation, and the end justifying the means. Leaders high in Machiavellianism are often described as politically oriented, control seeking, and manipulative (McHoskey, 1999; Becker & O'Hair, 2007). Their talent for influencing people (Goldberg, 1999) allows them to convince others to do things for their own personal benefit. Individuals high in Machiavellianism have also been found to engage in organizational theft (Cooper & Peterson, 1980; Fehr et al., 1992), and interpersonal counterproductive work behaviors (DeShong et al., 2015). Maltreatment of colleagues is a specific behavior mentioned in regard to the prevalence of interpersonal counterproductive work behaviors. Narcissism is characterized by self-absorption, entitlement, arrogance, and hostility (Rosenthal & Pittinsky, 2006). Consequently, narcissistic leaders tend to view their subordinates' work with a self-serving bias and make decisions based on how they will reflect their own reputations (Judge et al., 2009). High narcissism also relates to both interpersonal counterproductive work behaviors such as the mistreatment of co-workers and organizational counterproductive work behaviors (e.g., embezzlement; O'Boyle et al., 2012). Employees high in psychopathy may be more inclined to engage in CWBs such as theft (Lyons & Jonason, 2015), abusive supervision, and workplace aggression (O'Boyle et al., 2012). An understanding of the Dark Triad's relationship to work outcomes is important for practitioners to understand and researchers to continue to unpack.

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Chapter 4: General Factors of Personality and the Dark Core

Arguably the most concrete example of a single general factor based on positive intercorrelations is the general factor of intelligence (*g*; Spearman, 1927). G can be measured through cognitive ability tests such as the Stanford-Binet Fifth Edition (SB-5; Roid, 2005). For many of these cognitive ability tests, higher scores on one specific type will often lead to higher scores on other cognitive ability tests. Therefore, the g factor can be characterized as a driving factor of performance on all cognitive ability tests (Jensen, 1998). Personality researchers have tried to recreate this using hierarchical structure models. Musek (2007) provided evidence for a general factor of personality termed "the Big One". In that study, Musek illustrates a structural hierarchy of personality characteristics. Most relevant to the current study are the three higher-order levels of the hierarchy including the Big Five, the Big Two, and the Big One from least to most broad. The Big Five is quite popular and contains extraversion, agreeableness, conscientiousness, neuroticism, and openness. The Big Two is not as well known and includes the constructs of stability and plasticity with the former having linkages to neuroticism, conscientiousness, and agreeableness and the latter being related to extraversion and openness. These two higher-order factors have been linked to neurophysiological functions involving serotonin and dopamine (DeYoung et al., 2001) and are connected by conformity with plasticity showing a negative relationship and stability showing a positive one. The Big One can be characterized by being high versus low on the Big Five: emotional stability, conscientiousness, agreeableness, extraversion, and openness as well as by being high versus low on the two higher-order factors, stability and plasticity (Musek, 2007).

Digman (1997) reviewed 14 studies on the Big Five and found an average correlation of .26. In addition to this finding, Stankov (2005) found convincing evidence for common personality and ability factors with a .28 average correlation among the Big Five and a .23 average correlation for the ability measures. In regard to the two higher-

order factors, DeYoung and colleagues (2001) found positive correlations between stability and plasticity ranging from .18 to .28. More recent studies have been performed to determine the criterion-related validity of a General Factor of Personality (GFP) and provided support for the use of the GFP as an applicant screening tool (Burns et al., 2017). In support of GFP being a social effectiveness factor, van der Linden and colleagues (2017) found a positive relationship between GFP and both trait and ability emotional intelligence. Additionally, the GFP has been found to positively relate to job performance (Sitser et al., 2013), interviewer impressions (Dunkel et al., 2014), and classroom likability (van der Linden et al., 2010). Considering these findings along with Musek's study on "the Big One", there is sufficient rationale to continue exploring the existence of other general factors within personality, namely the Dark Core of Personality (*D*; Moshagen et al., 2018).

Moshagen and colleagues (2018) conceptualize D as "the general tendency to maximize one's individual utility–disregarding, accepting, or malevolently provoking disutility for other–accompanied by beliefs that serve as justifications." Individuals high in this concept are often labeled individualists, competitors, and sadists due to their desire for utility maximization and disregard for how their actions affect others especially if the effect is negative. Furthermore, D is described as encompassing all dark traits rather than being a combination or set of the currently existing. The strong intercorrelations among the Dark Triad which has been found to range from .34 to .58 (Muris et al., 2017) is important to note here, especially considering research on the GFP originated from a weaker correlation of .28 among the Big Five (Stankov, 2005).

Researchers such as Moshagen and colleagues (2018) have used confirmatory factor analysis to examine the bifactor model of D. In their model they took a more broad approach than the current study by including the Dark Triad along with a range of maladaptive behaviors such as egoism, moral disengagement, psychological entitlement, sadism, self-interest, and spitefulness. As a follow-up study, Moshagen and colleagues (2020a) use items from measures of these broad maladaptive behaviors to identify three different psychometrically sound sets of items (70, 35, and 16 items) to measure D. Within

the same research camp, Hilbig and colleagues (2020) used a subset of the original items (Moshagen et al., 2018) based on their factor loadings on D to examine the extent to which D predicts socially aversive psychopathology in comparison to the six HEXACO dimensions. Their findings suggest that the common factor (D) can predict instances of socially aversive psychopathology (i.e., narcissistic, antisocial, paranoid, and borderline tendencies) beyond the HEXACO. Furthermore, Moshagen et al., (2020b) found that the common core of dark traits is functionally different from agreeableness which is contrary to the argument that the common core of dark traits is merely the reverse of agreeableness (i.e., disagreeableness or the low pole of agreeableness). These studies have shown that there is some sort of common core of dark traits in existence and that this common core is conceptually and functionally distinct enough to be considered and used in isolation.

Marcus et al. (2018) conducted a network analysis to determine what is at the core of the Dark Triad. In this study, the authors used subfacets of the individual Dark Triad scales (NPI, SRP-III, and MACH-IV) as the nodes for their network analysis, and found interpersonal manipulation and callousness, component of psychopathy, to be central traits of the Dark Triad. Two years later, Vize and colleagues (2020) conducted a study to determine the extent to which previously considered cores of the Dark Triad accounted for shared variance among the Dark Triad constructs. In their study, they used the Short Dark Triad (SD3) and the Dirty Dozen (DD) for the Dark Triad measures. Honesty-Humility was measured using the HEXACO, agreeableness was measured with the IPIP-NEO, BFI, and BFI 2. Finally, Callousness and Interpersonal Manipulation were measured using the Self-Report Psychopathy Scale. Data collected from these measures were analyzed using structural equation modeling (Vize et al., 2020). Their findings suggest that honesty-humility and agreeableness from the IPIP-NEO are better candidates for a Dark Core of personality compared to callousness and interpersonal manipulation. Although past research has found support for using the Big Five and HEXACO personality structures to reveal a Dark Core, the Dark Triad's consistent intercorrelations and overall connectedness is reason enough to more precisely examine its utility for representing a Dark Core of

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personality especially considering the inconsistent findings in regard to a dark factor of
personality (Marcus et al., 2018; Vize et al., 2020).

Chapter 5: Current Study

Past literature has shown the Dark Triad to be predictive of counterproductive work behaviors (O'Boyle et al., 2012), which is a vital component in the reasoning for studying these maladaptive traits. Those research studies largely examined the Dark Triad as its three interrelated constructs of narcissism, Machiavellianism, and psychopathy. Vize et al. (2020) examined the relationship between a potential "Core of the Dark Triad" and provided inspiration for the current study. There are other examples of broad factors based on positive intercorrelations among intelligence tests (e.g., general factor of intelligence; Spearman, 1927) and broad factors of personality constructs (e.g., the General Factor of Personality; Musek, 2007). Considering the Dark Triad is a collection of intercorrelated personality measures, this study will focus on the connection between the General Factor of Personality (GFP) and a potential Dark Core of personality composed of the Dark Triad components.

The GFP integrates to most general non-cognitive personality dimensions and is associated with well-being, motivation, life satisfaction, social desirability, emotionality, and self-esteem (Musek, 2007). In contrast, the Dark Core of personality may be associated with the opposite of the aforementioned outcomes namely social undesirability, low emotionality, disagreeableness, callousness, and interpersonal manipulation. The purpose of the current study is to determine the existence of a Dark Core of personality, examine how the dark core relates to the Big Five of personality and the Honesty-Humility facet of the HEXACO model, and how the dark core correlates with a General Factor of Personality. Additionally, I will explore the creation of a direct measure of the Dark Core and its construct validity.

Based on the literature reviewed above, I developed the following hypotheses and research questions:

Research Question 1: How much variance does a Dark Core extracted from Dark Triad measures including the SD3, DD, and individual facets of the NPI-40 (Leadership/Authority, Grandiose Exhibitionism, & Entitlement/Exploitativeness), MACH-IV (Views & Tactics), and the SRP-III (Interpersonal Manipulation, Callousness, & Antisocial Behavior) explain within these measures?

All three of the Dark Triad traits narcissism, Machiavellianism, and psychopathy have been shown to negatively correlate with agreeableness and honesty-humility (Miller & Campbell, 2008; Muris et al., 2017). Therefore, I hypothesize that agreeableness and honesty-humility will be negatively related to an extracted Dark Core.

Hypothesis 1: The Dark Core will have a negative relationship with the agreeableness facet of the Big Five.

Hypothesis 2: The Dark Core will have a negative relationship with the honesty-humility facet of the HEXACO.

Given the rationale for Hypothesis 1 and 2 above, this dark core should also be negatively related to a General Factor of Personality created from the Big Five.

Hypothesis 3: The Dark Core will have a negative relationship with the General Factor of personality.

For the purposes of adding value and usability to future practitioners, I am asking a second research question pertaining to whether this research could be used to create a direct Dark Core measure. In the above hypotheses, the focus was on an extracted Dark Core and whether this higher order structure confirmed expectations based on past research (Moshagen et al., 2020a; Vize et al., 2020). However, a direct measure of the Dark Core could serve a similar purpose to a direct measure of *g*. This direct measure could be

examined in a holdout sample to see if it holds the same pattern of relationships with agreeableness and honest-humility as the extracted Dark Core.

> *Research Question 2: Is there a valid Dark Core scale measure that can be extracted using items currently found in measures of the Dark Triad?*

Chapter 6: Methods

Sample and Procedures

The sample used in this study comes from Vize et al., (2020) and was found using Open Science Framework (osf.io). After exclusion criteria was applied, the final sample included 1,255 participants. The sample was predominantly Euro American (79.3%). The average was 38.95 years (SD = 11.88) and the sample was 41% male. A training sample (Sample 1) will consist of a random 1,055 participants and a holdout sample (Sample 2) of 200 participants will be removed from the primary analyses and will be used to check the reliability of the direct measure and its correlations with more traditional personality measures. This hold out sample will only be used for evaluating Research Question 4.

Measures

All data were collected as part of Vize et al. (2020). Reliabilities will be calculated for the training and hold out sample respectively.

Dirty Dozen

The Dirty Dozen (DD; Jonason & Webster, 2010) is a 12-item measure of the Dark Triad which efficiently measures each component of the Dark Triad. Each construct is measured by four-item subscales using a 5-point likert scale (1 = *strongly disagree to* 5 = *strongly agree*).

Short DT

The SD3 (Jones & Paulhus, 2014) is a 27-item self-report measure of the Dark Triad with nine-item subscales assessing each of the Dark Triad constructs. A 5-point likert scale (1 = *strongly disagree to* 5 = *strongly agree*) was used by participants to rate each of the items.

Mach-IV

The MACH-IV (MACH-IV; Christie & Geis, 1970) is a 20-item self-report measure which assesses the core traits related to Machiavellianism. Views and tactics are two of the three subfacets of the MACH-IV that will be used in this study.

Narcissistic Personality Inventory

The NPI-40 (Raskin & Hall, 1979) is a 40-item forced choice self-report assessment that primarily assesses the grandiose variant of narcissism (Miller et al. 2009). Although subscales of the NPI have been empirically identified, we will only use the total score in the current study.

Self-Report Psychopathy Scale

The SRP-III (Williams & Paulhus, 2003) is a 64-item self-report assessment of psychopathy that was developed out of the conceptualization of psychopathy stemming back to the Psychopathy Checklist-Revised (Hare, 2003). It is composed of four subscales: callousness, erratic lifestyle, interpersonal manipulation, and antisocial behavior

HEXACO-100-Honesty Humility

The HEXACO-100 (Lee & Ashton, 2018) is a 100-item self-report instrument that assesses the six domains of the HEXACO model of personality. Only the 16 items assessing the honesty-humility facet were included in the current study. Subfacets of the honesty-humility domain include sincerity, fairness, greed-avoidance, and modesty.

IPIP NEO-120

The Big Five were measured with Johnson's (2014) International Personality Item Pool-NEO-120. Although the IPIP-NEO-120 is a self-report measure assessing the five-factor model of personality, we are only using data from the agreeableness domain in the present study. The six facet scales of the agreeableness domain include trust, straightforwardness, altruism, compliance, modesty, and tendermindedness.

Dark Core Direct Measure

Item-level correlations with the extracted Dark Core will be used to determine if there are items that directly represent the dark core within the individual Dark Triad measures of the data set and if these items can be combined to create a direct measure of the Dark Core. A hold out sample of 200 will be used to check the reliability and construct validity of our results.

Chapter 7: Results

All statistical analyses were conducted using SPSS and item extraction for the direct measure of the Dark Core was completed in Excel. First, the existence of the Dark Core was confirmed. Then, its correlations with individual personality traits were analyzed. Next, the correlation between the Dark Core and GFP were analyzed. Three variations of the direct measure of the Dark Core were then extracted based on item-total correlations in Sample 1 ($n = 1,055$). The resulting item set was then evaluated in Sample 2 ($n = 200$).

Dark Core Extraction

A Principal Component Analysis (PCA) was conducted using the 5 Dark Triad measures (SD3, DD, MACH-IV, NPI-40, AND SRP-III) to examine the existence of a Dark Core. The rationale for using a PCA instead of an Exploratory Factor Analysis (EFA) was to maximize the extracted variance between components since an EFA takes a more conservatory approach. The scree plot indicated a strong single factor (eigenvalue 7.8) explaining 55.6% of the variance. Factor loadings ranged from .57 to .90. Allowing a second factor only explained an additional 12.2% of variance. Factor loadings for the two-factor solution suggested a mix of narcissism measures composed of the second factor, with Machiavellianism and psychopathy making up the first. Thus, it was concluded that focusing on a more parsimonious solution with a 1-factor solution was sufficient. See Table 1 for factor loadings from the 1- and 2-factor solutions.

Correlations with Dark Core

Correlations between the Dark Core, Honesty-Humility, and Agreeableness are shown in Table 2. The Dark Core was highly negatively related to honesty-humility, $r(998) = -.76, p < .001$, and agreeableness, $r(998) = -.85, p < .001$. These findings support Hypotheses 1 and 2. Although not hypothesized, the Dark Core was positively correlated with neuroticism, $r(998) = .27, p < .001$ and extraversion, $r(998) = .19, p < .001$. The Dark

Core was negatively correlated with openness $r(998) = -.12, p < .001$ and conscientiousness $r(998) = -.45, p < .001$.

Dark Core and GFP

A principal component analysis was conducted using factor scores from the IPIP-NEO-120 to examine the existence of a General Factor of Personality. Consistent with past research (e.g., Burns et al., 2017), I extracted a 1-factor GFP structure using all five factors of the Big Five. The eigenvalue of this replicated 1-factor solution was 2.2, explaining 44.2% of the variance. Openness showed the lowest factor loading (.242), while conscientiousness and emotional stability had the highest loadings (.86). The Dark Core negatively correlated with the General Factor of Personality, $r(998) = .46, p < .001$ (see Table 2). These findings support Hypothesis 3.

Direct Measure of Dark Core

Similar to Moshagen et al. (2018), items from the initial pool of 142 items from the five Dark Triad measures were considered for inclusion in the direct measure based on their correlations with the extracted Dark Core in Sample 1. In contrast to Moshagen et al. (2018), these items were only taken from the Dark Triad measures as opposed to the more broad maladaptive personality measures used in their study. Across all scales, a total of 92 item-Dark Core correlations less than or equal to .50 were identified and the corresponding items were excluded from consideration. The modified item pool thus contained 50 items, of which two were reverse coded. Table 3 provides the items and their correlation with the extracted Dark Core. Upon further investigation, three different scale measures consisting of 9, 21, and 50 items were extracted based on substantial differences between item-total correlations (greater than or equal to .012 between items).

9-Item Scale

The 9-item direct measure of the Dark Core consists of four items measuring psychopathy, three items measuring Machiavellianism, and two items measuring narcissism. Two of the psychopathy items were retrieved from the SRP-III and the other

two were retrieved from the SD3 and DD. Two of the Machiavellianism items were retrieved from the DD and the other was retrieved from the SD3. Both of the items measuring narcissism were retrieved from the DD. The item-total correlations of these items range from .67 to .76, and the Cronbach alpha's estimate of reliability for this scale for sample 1 was .92 and .90 for sample 2.

21-Item Scale

The 21-item direct measure of the Dark Core consists of 12 items measuring psychopathy, seven items measuring Machiavellianism, and two items measuring narcissism. Five of the psychopathy items were retrieved from the SRP-III, four from the DD, and three from the SD3. Four of the Machiavellianism items were retrieved from the SD3 and the other three were retrieved from the DD. The two items measuring narcissism are the same as the 9-item scale. The item-total correlations of these items range from .63 to .76, and the Cronbach alpha's estimate of reliability for this scale was .94 for sample 1 and sample 2.

50-Item Scale

The 50-item direct measure of the Dark Core consists of 30 items measuring psychopathy, 14 items measuring Machiavellianism, and six items measuring narcissism. 15 of the psychopathy items were retrieved from the SRP-III, six from the SD3, and four from the DD. Five of the Machiavellianism items were retrieved from the SD3, five from the MACH-IV, and four from the DD. Three of the narcissism items were retrieved from the DD, two from the SD3, and one from the NPI-40. The item-total correlations for these items range from .51 to .76, and the Cronbach alpha's estimate of reliability for this scale was .96 for sample 1 and sample 2.

Direct Measure Correlations

Correlations between the 9, 21, and 50 item measures of the Dark Core and honesty-humility, agreeableness, neuroticism, extraversion, openness, and conscientiousness are shown in Table 4. The 9-item measure of the Dark Core was

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negatively correlated to honesty-humility, $r(197) = -.66$, p $<.001$, agreeableness, $r(197) = -.71$, $p < .001$, openness, $r(197) = -.16$, $p = .027$, and conscientiousness, $r(197) = -.43$, $p < .001$. The 9-item measure of the Dark Core was positively correlated to neuroticism, $r(197) = .28$, $p < .001$ and extraversion, $r(197) = .20$, $p = .004$.

The 21-item measure of the Dark Core was negatively correlated to honesty-humility, $r(194) = -.72$, $p <.001$, agreeableness, $r(194) = -.74$, $p < .001$, openness, $r(194) = -.15$, $p = .038$, and conscientiousness, $r(194) = -.39$, $p < .001$. The 21-item measure was positively correlated to neuroticism, $r(194) = .28$, $p < .001$ and extraversion, $r(194) = .25$, $p < .001$.

The 50-item measure of the Dark Core was negatively correlated to honesty-humility, $r(187) = -.73$, $p <.001$, agreeableness, $r(187) = -.75$, $p < .001$, and conscientiousness, $r(187) = -.39$, $p < .001$. The 50-item measure was positively correlated to neuroticism, $r(187) = .26$, $p < .001$ and extraversion, $r(187) = .29$, $p < .001$. No significant relationship was found between the 50-item measure and openness.

Chapter 8: Discussion

Broadly, my findings suggest that the Dark Core can be extracted from existing measures of the Dark Triad. A single factor explained 55% of the variance amongst 14 popular measures of the Dark Triad, with the strongest loadings coming from the brief scales of the Dirty Dozen and the Short Dark Triad. The relationships between this extracted Dark Core and other personality variables (e.g., agreeableness and honesty-humility) was consistent with past research (e.g., Moshagen et al., 2020b; Vize et al., 2020). Specifically, in that the Dark Core was negatively related to agreeableness and honesty-humility. Additionally, I found that the Dark Core was negatively correlated to an extracted GFP, which is a relationship that has not received a great deal of attention in the extant literature. Therefore, these findings bolster the knowledge surrounding the composition of the Dark Core and enhance researcher's understanding of how the Dark Core relates to a GFP.

The GFP, the common core of personality, can be extracted from the Big Five of personality (Musek, 2007). Most pertinent to the current study, the GFP has been found to be predictive of outcomes such as trait and ability emotional intelligence (van der Linden et al., 2017), interviewer impressions (Dunkel et al., 2014), and job performance (Sitser et al., 2013). These findings beckons the question of whether or not the Dark Core represents the polar opposite of the GFP. At face value, one would speculate that this notion is true especially considering they can be used similarly. However; the findings from the current study do not support this position. The Dark Core and the GFP negatively correlated with each other, but the strength of the relationship ($r = -.46$) does not suggest that the two factors represent opposing personalities. This finding could be due to the origins of the two common factors in that the GFP was extracted from the Big Five and the Dark Core was extracted from the Dark Triad. Since the Big Five is not merely the opposite of the Dark Core, it makes more sense methodologically that the two factors would be negatively related but not at opposing ends of the personality spectrum. Additionally, the top suspects

for analysis in relation to the Dark Core, agreeableness and honesty-humility, were found to negatively correlate with the Dark Core but not to an extent that would suggest the Dark Core is the negative of agreeableness or honesty-humility.

I also explored methods of directly measuring the Dark Core from items without reliance on factor analytic techniques. In order to measure the Dark Core, three different scales (9, 21, and 50-items) with sufficient reliability coefficients were developed using existing items from Dark Triad measures. Although this is a similar approach to Moshagen et al., (2020a), I only used items from existing Dark Triad measures while they used items from a more broad array of maladaptive personality measures. Therefore, my three measures of the Dark Core are different in that they originate from a different initial pool of items and are more applicable to researchers utilizing the Dark Triad. These three measures of the Dark Core were further evaluated using the hold out sample method where 200 participants were extracted from the initial data set in order to perform statistical analyses on at a later time. High reliability was again observed in the holdout sample, suggesting a certain homogeneity amongst the Dark Triad questions. Within this holdout sample, negative relationships were found between all three of the direct measures and agreeableness and honesty-humility. In general, the correlations from the direct measures were weaker than was observed for the extracted Dark Core; however, the magnitude of these correlations tended to increase as additional items were added (i.e., the 21-item measure of the Dark Core correlated more strongly to honesty-humility and agreeableness compared to the 9-item measure). The theoretical and practical implications of these findings will be discussed in the following section.

Theoretical & Practical Implications

As mentioned above, the current study's extraction of a Dark Core from existing Dark Triad measures improves our understanding of the Dark Core's composition. Specifically, this study provides a different lens to use when examining the Dark Core. Moshagen and colleagues (2018; 2020a) took the "wide net" approach by also considering scale items from various maladaptive behavior measures such as egoism, moral

disengagement, psychological entitlement, sadism, self-interest, and spitefulness. Although this approach is empirically sound, it does not provide a direct link to the literature surrounding the Dark Triad as the current study has accomplished. Therefore, not only does the current study provide a different perspective on the Dark Core but it also helps bridge the gap between the Dark Core and the Dark Triad specifically. Additionally, the current study has empirically extracted and constructed three variations of a direct measure of the Dark Core. These measures are a new tool for researchers to consider when attempting to further the Dark Triad and Dark Core literature base.

Practitioners will find value in the current study's findings by experimenting with the use of the three direct measures of the Dark Core. Specifically, the findings relating to other personality traits can help personnel selection professionals design screening tools for their applicants. The negative correlations between the direct measures of the Dark Core and agreeableness, honesty-humility, and conscientiousness suggest that scores on the direct measures can predict those personality traits. Although a validation study is required to imply the Dark Core measures' predictability of work behavior, it is likely that the measures' will be able to provide statistical insight on applicants' likelihood of engaging in CWBs considering the findings of past researchers regarding the predictability of the Dark Triad (O'Boyle et al., 2012). The use of a common core of personality to predict work behaviors is not uncommon, as Burns and colleagues (2017) found support for a measure of GFP to be used as an applicant screening tool. Therefore, it would make sense that a general dark factor of personality could also be used to predict future applicant behavior on the job. This notion may posit a GFP and the Dark Core as being opposites in that they predict opposing behaviors, but the current study suggests that the Dark Core and GFP are not polar opposites. Thus, the Dark Core is mapping a different aspect of personality rather than merely the opposite behaviors of what a GFP is capable of predicting. Visual analysis of the scatter plot confirms this, with several participants being either low or high on both the Dark Core and the GFP. Limitations of the current study and some future directions for this line of research will be outlined in the following section.

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Limitations & Future Directions

The methodology used to extract the Dark Core in the current study is not the only viable option, and other strategies can offer insights conducive to a more comprehensive understanding of the Dark Core. For example, the use of bifactor models similar to Moshagen et al. (2018) might explain more variance but comes at the cost of increasing the complexity of interpretation. Future research should continue to explore the impact of various extraction techniques as ways of representing the Dark Core.

A notable limitation of the current study is in regard to the inter-item correlations of the direct measure of the Dark Core. The items taken from the measures of all three of the Dark Triad traits (i.e., SD3 and DD) were more strongly correlated to the Dark Core compared to the items extracted from the single construct measures (i.e., NPI-40, MACH-IV, and SRP-III). This finding could be due to the fact that the measures of all three traits are designed to tap into the Dark Triad as a whole whereas the individual Dark Triad measures were developed for the purpose of assessing levels of only one of the Dark Triad traits (e.g., narcissism, Machiavellianism, or psychopathy). More research is needed to understand the nuance surrounding how items empirically differ between individual Dark Triad trait measures and comprehensive Dark Triad measures.

Another limitation of the current study applies to the participants. As mentioned previously, this data was retrieved via osf.io from a study conducted by Vize and colleagues (2020). The surveys were all administered together as a part of their study, so there is potential that common methods bias had an impact on the participant's responses. Common methods bias occurs when the variance caused by the instrument itself pollutes the variance that can be seen within the traits being measured (Podsakoff et al., 2012). Thus, it is suggested that a time delay or other common method bias strategy should be implemented in future research examining the Dark Core. Also related to the future direction of this literature base, the relationship between the Dark Core and GFP should be further examined to determine whether or not they are polar opposites or if they represent something else. In other words, the question of whether or not someone could be high in

the GFP and the Dark Core still needs to be answered. Additionally, if someone is high on both what type of personality does that represent.

Future research needs to be conducted in order to validate the three measures of the Dark Core that were extracted in this study. Upon validation, practitioners will be able to use the Dark Core direct measures with the confidence that they have the ability to empirically predict future applicant behavior. Researchers will also benefit from a validated measure in that they will be able to use the measures in future research examining the Dark Core with the confidence that the results of the Dark Core direct measures are repeatable and hold implications for conceptual connections. It is suggested that personnel selection professionals also include a social desirability scale in the battery of screening assessments due to the likelihood of participants faking answers on the direct measures of the Dark Core. Social Desirability can be characterized as an individual's tendency to answer items in a manner that will reflect themselves as more favorable (Paulhus, 1991). Therefore, including a scale designed to measure this concept will allow decision makers to control for social desirability and determine if participants are actually answering the questions based on their true perception of themselves (Christiansen et al., 2010).

Finally, the Dark Core's relationship to other Industrial/Organizational psychology related phenomena should be further explored. Researchers have already found connections between the Dark Triad and work-related outcomes such as social loafing (Wilhau, 2021), workplace incivility (Lata & Chaudhar, 2020), workplace bullying (Baughman et al., 2012), and emotional manipulation (Waddell et al., 2020), so studies should be conducted to better understand the relationship between these outcomes and the Dark Core. Researchers have also found links between the individual Dark Triad traits and work outcomes such as leadership. For instance, in a study conducted by Becker and O'Hair (2007), leaders high in Machiavellianism were described by their subordinates as being politically oriented and manipulative. Similarly, narcissistic leaders make decisions based on how they will reflect their own reputations and often view their subordinates' work with a self-serving bias (Judge et al., 2009). Considering these potentially detrimental

behaviors that are associated with individuals high on the Dark Triad, it would make sense for future researchers to spend resources on uncovering the relationships between leadership and the Dark Core.

Chapter 9: Conclusion

The results of the current study suggest that there is a common core of Dark Personality that can be statistically extracted using existing measures of the Dark Triad. Furthermore, the results suggest that the extracted Dark Core negatively relates to agreeableness, honesty-humility, and a GFP. The latter finding doubles as a bolster to existing literature surrounding the Dark Core and an addition to the gap in knowledge about how the Dark Core relates to the GFP. Finally, it was found that the extracted Dark Core can be measured using items from measures of the Dark Triad (i.e., SD3, DD, NPI-40, MACH-IV, and SRP=III). The 9, 21, and 50-item measures of the Dark Core should be used depending on the number of questions that is deemed appropriate for use.

Table 1: Results From a Principal Component Analysis of the Dark Triad Measures and Their Facets

Dark Triad Facet Measure	1-Factor Solution	2-Factor Solution	
	1	1	2
SD3 – Machiavellianism	.77	.81	.00
SD3 – Narcissism	.64	.10	.83
SD3 – Psychopathy	.84	.78	.14
DD – Machiavellianism	.83	.71	.23
DD – Narcissism	.84	.66	.31
DD – Psychopathy	.84	.73	.21
NPI-40 – Leadership/Authority	.57	.01	.84
NPI-40 – Grandiose Exhibitionism	.62	.06	.85
NPI-40 – Entitlement/Exploitativeness	.68	.44	.38
MACH-IV - Tactics	.70	.93	-.29
MACH-IV - Views	.69	.90	-.26
SRP-III – Callousness	.79	.77	.08
SRP-III – Interpersonal Manipulation	.90	.85	.12
SRP-III – Antisocial Behavior	.66	.57	.18

Note. The extraction method was principal component analysis with an oblimin (Kaiser Normalization) rotation for the 2-factor solution; SD3 = Short Dark Triad 3; DD = Dirty Dozen; NPI-40 = Narcissistic Personality Inventory; MACH-IV = The MACH-IV; SRP-III = Self-Report Psychopathy Scale.

Table 2: Correlations Among the Dark Core, GFP, Honesty-Humility, and the Big Five

	n	1	2	3	4	5	6	7	8
1. The Dark Core	998								
2. GFP	1055	-.46**							
3. Honesty-Humility	1054	-.76**	.36**						
4. Agreeableness	1055	-.85**	.57**	.66**					
5. Neuroticism	1055	.27**	-.86**	-.23**	-.30**				
6. Extraversion	1055	.19**	.60**	-.17**	-.02	-.50**			
7. Openness	1055	-.12**	.24**	.09**	.23**	-.04	.11**		
8. Conscientiousness	1055	-.45**	.86**	.35**	.46**	-.65**	.33**	.08*	

*Note. *p* < .05. **p* < .001

Table 3: Correlations Between the Dark Core Direct Measure Items and the Extracted Dark Core

Dark Core Direct Measure Items	Dark Core
1. I tend to want others to pay attention to me.	.76
2. I tend to manipulate others to get my way.	.76
3. I'll say anything to get what I want.	.74
4. I like to use clever manipulation to get my way.	.74
5. I tend to seek prestige or status.	.72
6. You should take advantage of other people before they do it to you.	.71
7. I purposely flatter people to get them on my side.	.68
8. I tend to not be too concerned with morality.	.68
9. I have used deceit or lied to get my way.	.67
10. I tend to lack remorse.	.65
11. It's wise to keep track of information that you can use against people later.	.65
12. You should wait for the right time to get back at people.	.64
13. I tend to be cynical.	.64
14. Whatever it takes, you must get the important people on your side.	.64
15. It's fun to see how far you can push people before they get upset.	.64
16. Sometimes you have to pretend you like people to get something out of them.	.64
17. People who mess with me always regret it.	.63
18. I like to get revenge on authorities.	.63
19. I tend to be callous or insensitive.	.63
20. I have tricked someone into giving me money.	.63
21. I tend to exploit others towards my own end.	.63

22. Payback needs to be quick and nasty. .61

23. I rarely follow the rules. .61

24. I sometimes dump friends that I don't need any more. .61

25. People often say I'm out of control. .61

26. 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. .61

27. I find it easy to manipulate people .60

28. I think I could "beat" a lie detector. .60

29. I have pretended to be someone else in order to get something. .60

30. I would get a kick out of 'scamming' someone. .59

31. Most people are wimps. .59

32. I can talk people into anything. .58

33. I have threatened people into giving me money, clothes, or makeup. .57

34. I tend to expect special favors from others. .58

35. It's true that I can be mean to others. .57

36. People sometimes say that I'm cold-hearted. .57

37. You can get what you want by telling people what they want to hear. .56

38. It is hard to get ahead without cutting corners here and there. .56

39. A lot of people are "suckers" and can easily be fooled. .55

40. I never feel guilty over hurting others. .55

41. Honesty is the best policy in all cases. .55

42. Most men forget more easily the death of their father than the loss of their property. .54

43. Many group activities tend to be dull without me. .54

44. I have used flattery to get my way. .53

45. I purposely tried to hit someone with the vehicle I was driving. .53

46. Most people who get ahead in the world lead clean, moral lives.	.53
47. Most people can be manipulated.	.52
48. I know that I am special because everyone keeps telling me so.	.52
49. People cry way too much at funerals.	.51
50. I've often done something dangerous just for the thrill of it.	.51

Note. The three variations of the Direct Measure of the Dark Core are separated after 9, 21, and 50 items. Items were extracted from existing Dark Triad measures, SD3, DD, NPI-40, MACH-IV, SRP-III.

Table 4: Correlations Among the Direct Measures of the Dark Core and Normal Personality Traits within the Hold Out Sample

	1	2	3	4	5	6	7	8	9
1. 9-Item Measure									
2. 21-Item Measure	.97**								
3. 50-Item Measure	.94**	.98**							
4. Honesty-Humility	-.66**	-.72**	-.73**						
5. Agreeableness	-.71**	-.74**	-.75**	.53**					
6. Neuroticism	.28**	.28**	.26**	-.20**	-.16*				
7. Extraversion	.20**	.25**	.29**	-.16*	-.12	-.45**			
8. Openness	-.16**	-.15**	-.13	-.05	.18*	.00	.14*		
9. Conscientiousness	-.43**	-.39**	-.39**	.26**	-.36**	-.63**	.34**	.14*	

*Note. N = 200; *p < .05. **p < .001*

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