

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF PSYCHOLOGY

WHAT LIES BENEATH? A FIRST LOOK BEYOND GLOBAL TRAITS AND SHEDDING
LIGHT ON THE DIFFERENTIAL INTERCORRELATIONS BETWEEN DARK TRIAD SUB-
FACTORS AND VARIOUS INTIMATE RELATIONSHIP VARIABLES.

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SPRING 2020

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree
with honors in Psychology

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ABSTRACT

The Dark Triad (DT) of personality, as defined by Paulhus and Williams (2002), consists of three distinct but overlapping non-pathological traits; subclinical Narcissism, Machiavellianism and subclinical Psychopathy. The DT traits are thought to be underpinned by a common core of aggression, or ‘disagreeableness’ as measured by the Big Five Inventory (BFI) (Paulhus & Williams, 2002). As socially maladaptive inheritable traits, their robust persistence in society runs counterintuitively to evolutionary psychology theories stating modern humans have long since transitioned to long-term mating strategies (Buss, 2007; Eastwick, 2009). Due to their offensive nature, individuals who possess DT personalities struggle maintaining long-term relationships. Instead, these traits are thought to continue within the population by exploiting short-term mating strategies. A greater understanding of the connection between these maladaptive personality traits and sexuality/intimate relationships is necessary to advance insights into the persistence of such maladaptive traits. The current research aims to accomplish this by exploring beyond the associations between each of the global DT traits with specific aspects of sexually intimate relationships by examining the intercorrelations among relationship quality, sexuality, and the sub-factors underlying each of the three traits and across various personality inventories measuring these traits.

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ACKNOWLEDGEMENTS

First, I would like to thank my honors advisor Dr. Greg Loviscky for inspiring me through is PSYCH 100 honors course to major in psychology. Second, I would like to thank Dr. James LeBreton for allowing me to complete this thesis under his supervision. Third, I would like to thank Levi Shiverdecker, my PSYCH 301W TA who became a close friend, mentor and advisor throughout the thesis writing process. I could not have done this without you. I'd like to thank my family for their continued support throughout my life and offering me the opportunity to receive a college education. Lastly, I'd like to thank every single student, faculty, staff and alumni I met, as well as the many I didn't, while at Penn State. Although it was cut short due to the Covid-19 pandemic, every one of you played a role in making Penn State a truly invaluable experience.

Chapter 1 Introduction

The Dark Triad (DT) is a cluster of three relatively associated maladaptive personality traits consisting of narcissism, Machiavellianism, and psychopathy (Paulhus & Williams, 2002). The DT personality traits are thought to be characterized by an underlying core component of aggression. However, research by Paulhus and Williams suggests aggressive behavior is manifested differently between the three traits (2002). Theory and initial empirical evidence suggest the three traits are distinct enough to be considered independent constructs. However, Jonason (2009) suggests the traits overlap to such an extent that they should be conceptualized and studied as a single construct. Finding meaningful ways to theoretically and empirically identify the distinctions between the three constructs, via discriminant and predictive validity, is currently a valuable focal area of research for studying DT traits. The following sections; (a) provide the conceptual and empirical background necessary to begin exploring DT traits and associated nomological network, (b) discuss existing empirical evidence linking global DT traits to intimate relationship outcomes, and (c) build on past investigations by proposing hypotheses describing differential bivariate correlations linking various sub-factors of the three global DT to various scales assessing intimate relationships and sexuality.

The Dark Triad

The term Dark Triad was coined by Paulhus and Williams (2002). They recognized the prevalence of three relatively maladaptive traits within the non-clinical population, and that the

implications of these traits transcend many life domains. Additionally, placing narcissism, Machiavellianism, and psychopathy under a single umbrella term highlights the shared characteristics among the three. Although all three DT personality traits have a relatively long history of theory and empirical investigation in the non-clinical literature, it is important to state that narcissism and psychopathy also have a rich history in the clinical literature. This being said, the focus and approach used for the current investigation is strictly within the non-clinical domain. Thus, for the purpose of this research, each DT trait will be conceptualized as a personality trait that every individual possesses to a varying degree along a continuum from low to high. This research also assumes that the three DT traits are each distinct constructs, which nevertheless, share communalities with each other. Thus, the umbrella term of DT will only be used when referring to all three distinct traits but never to refer to an individual global personality trait.

The DT traits are considered overlapping because they share a common core of disagreeableness (i.e., aggression) as measured by the Big Five personality inventory (John & Srivastava, 1999; Paulhus & Williams, 2002). The purpose of the current research is to identify if there are additional common characteristics among the traits or whether greater distinctions can be made by empirically evaluating potential differential relationships linking narcissism, Machiavellianism, and psychopathy to various intimate relationship and sexuality variables. A brief overview of each of the three DT traits and relevant empirical literature will be provided next to ensure a solid foundation of how these traits are related but also differ.

Narcissism

The earliest literary account of narcissism is the Ancient Greek myth of Narcissus and Echo, the former being from whom the term narcissism is derived. Having scorned the nymph Echo, the Goddess Nemesis lured Narcissus to a clear reflective pool, tricking him to fall heart-wrenchingly in love with his reflection as a punishment - ultimately leading to his demise. Fast-forward a few thousand years, out of the realm of myth and into that of empirical science, narcissism has been inversely related to agreeableness, empathy, gratitude, affiliation, and need for intimacy, while simultaneously positively related to competitiveness, exploitativeness, anger, hostility, and cynical mistrust of others (Sedikides et al., 2004). Narcissism is associated with glorification of the self as well as comparatively heightened enthusiasm for direct competition against others and a convenient disregard for the possibility they might slight others in their effort to promote themselves (Sedikides et al., 2004). Although a clinically diagnosable personality disorder in Diagnostics and Statistical Manual 5th edition (American Psychiatric Association, 2013), Narcissism as a construct, is not limited to the clinical realm. Narcissism is normal and exists throughout the human population to varying degrees where it is referred to as normal or subclinical narcissism. This is the realm of narcissism relevant to the current research, and - unless necessary - will be referred to simply as narcissism henceforth.

As a dimensional trait, every human exists somewhere on the spectrum of low to high narcissism. By and large, the various views of narcissism presented in the literature are complementary to one another. The first view represents narcissists' through the Big Five personality traits and Timothy Leary's (1957) interpersonal circumplex, the latter of which charts the structure of interpersonal traits along the axes of agency and communion. Leary's circumplex, elaborated upon by Wiggins (1979), locates Narcissism as a vector, which crosses

the axes at high agency and low communion. This vector is labeled ‘unmitigated agency’ (Spence, 1984; Paulhus, 2001) in the literature. With this finding confirmed through subsequent research (Campbell, Rudich, & Sedikides, 2002; Paulhus & John, 1998), Costa Jr and McCrae subsequently relate the interpersonal circumplex axes - agency and communion - to the Big Five personality traits extraversion and agreeableness respectively (1995). Paulhus finalized this first view of narcissism, aptly labeling high narcissism ‘disagreeable extraversion’ (2001).

A second view of narcissism is derived from Griffin and Bartholomew’s attachment theory and their working model hypothesis (1994). The attachment styles are based upon a four-factor taxonomy of one’s perception of self and others, each as either positive or negative (Griffin & Bartholomew, 1994). High narcissists hold a positive regard for themselves and a negative regard for others equating their attachment style as ‘dismissive’ (Paulhus 2001). A dismissive individual is hostile, hypercritical and more likely to abandon relationships because of a perceived inferiority of their partner (Pistole, 1995). This view suggests that narcissists will enter relationships predisposed with an asymmetric self-other liking which, according to the Heiderian balance theory, renders their current and future relationships significantly less sustainable (Heider, 1958).

Even among close others, narcissists go to great lengths to maintain their overvalued self-perception. In their research, Sedikides and colleagues (2004) suggests the claim that narcissists’ excessive love of self far outweighs their love of even close others is empirically supported. Findings from Sedikides and Campbell (1999) as well as Sedikides and Gregg’s (2003) research on the self-serving bias (SSB) provides evidence further illustrating how, among narcissists, entitlement behavior is manifested even at the direct expense of close others. The SSB is the robust phenomenal tendency for people to take credit for success but deflect blame for

failure (Miller & Ross, 1975). Interestingly, SSB dissipates when participants collaborate with close others on joint outcomes tasks. Narcissists, on the other hand, demonstrate SSB regardless of the relational proximity of others on interdependent tasks (Sedikides et al., 2004). Further, Morf and Rhodewalt were able to show that narcissists denigrate close others who outperform them, suggesting narcissists are willing to pay an interpersonal price to self-enhance (1993). Another paper from Sedikides et al. found that narcissists knowingly take advantage of close others as means for self-enhancement; a tactic labeled “the Others exist for me” illusion (2002). Thus, high narcissists are attracted to partners who will admire them but are averse to those who provide intimacy. With little effort narcissists are able to rapidly initiate seemingly close relationships with others and thus are comfortable abandoning relationships when admiration wanes towards insufficiency. In sum, narcissists seem well adapted to exploit short-term mating strategies but, due to distractions and commitment remorse opened by their innate abilities to exploit alternative options, may have difficulty maintaining those relationships.

Machiavellianism

The famous phrase ‘the ends justify the means’ derived from interpretations of Niccolo Machiavelli’s book *The Prince*, captures the essence of Machiavellianism as it is understood today (1532). Niccolo Machiavelli was a chief political advisor for the ruling Medici family of the renaissance era Florentine Republic in Italy. He wrote *The Prince* to pander to the newly incoming ruler Lorenzo II de’ Medici. While not particularly Machiavellian himself, the book is essentially a manual bountiful in evil recommendations promoting strategies to acquire and maintain political power through any means necessary, indiscriminate of the human toll it may

have on others. The late Dr. Richard Christie was the first psychologist to observe reflections of Machiavelli's political strategies in peoples' general social behavior (Wilson, Near, & Miller, 1996). Christie and Geis proceeded to identify a corresponding personality syndrome, for which they coin the term Machiavellianism and develop a series of Mach tests in their book *Studies in Machiavellianism* (1970). In their synthesis of evolutionary and psychological literature Wilson, Near, and Miller (1996) consider Machiavellianism as a strategy for social interactions centered on exploiting others for personal gain. They argue Machiavellianism should be considered a dimensional trait because all people - to varying degrees - are capable of and thus willing to coldly manipulate others to an extent (Wilson, Near & Miller, 1996). Similar to Narcissists, High Machs display characteristic charm and social attractiveness to people they've just met (Wilson et al., 1996), despite their generally cold disregard for the wellbeing of others (Christie & Geis, 1970). Different from narcissists, however, High Machs' innate social charm confers a strategy to disguise their malicious intentions (Wilson et al., 1996), rather than to bolster others' perception of them in an attempt to quell deeply held feelings of worthlessness and inferiority. Machiavellians' charm also builds social capital. By using their surface-level charm alone, Machiavellians' are able to exploit newly met others for self-gain when they would otherwise be met with resistance as they are characteristically unwilling to help others, or grant and return any favors bestowed upon them unless doing so directly benefits them (Wolfson, 1981). Without their charm, others would quickly recognize Machiavellians' lack of empathy (Barnett & Thompson, 1985), and socially distance themselves. In light of this evidence, it appears those possessing high levels of Machiavellianism will likely find it difficult to maintain intimate relationships due to the exploitative manifestations of the trait.

Psychopathy

Subclinical psychopathy is the most extreme of the DT traits. Like Narcissism, Psychopathy is conceptualized and measured as a type of clinically diagnosable personality disorder (Hare, Hart, & Harpur, 1991). However, psychopathy as a construct is not limited solely to the clinical realm. Psychopathy is characterized by highly impulsive and thrill-seeking behavior. Subclinical psychopaths are exploitative by nature (Mealey, 1995), and exhibit low or no; empathy, shame and guilt (Larson & Buss, 2006). Subclinical psychopaths are highly egocentric and irresponsible too (Larson & Buss, 2006). The general association of subclinical psychopathy with a lack of neuroticism and anxiety, may confer an advantageous adaptation by facilitating continued goal pursuit in the face of adversity (Taylor & Armor, 1996). The characteristic features of subclinical psychopathy, when high, are thought to permeate relationships and interactions with others. Therefore, it is expected that those individuals possessing high levels of psychopathy will have greater difficulty than those high in narcissism or Machiavellianism within intimate relationships.

Investigating the interrelationships and differences between the three individual DT traits, other Big Five correlations within the DT show; narcissism and psychopathy share increased levels of extraversion and openness, Machiavellianism and psychopathy are both associated with low conscientiousness and psychopathy alone is associated with low levels of neuroticism. Machiavellianism, also known as the manipulative personality, is characterized by cold behavior towards others in interpersonal interactions - most of which are typically self-promoting. Machiavellians also are very much grounded in reality, showing no self-enhancement. Subclinical narcissism is characterized by very low self-esteem and insight expressed through continuous self-enhancement motivations to combat their overriding insecurities. Narcissists act

superior and overly confident to seem as though they are indeed better than others when in reality, they have little regard for actually aspiring to and achieving goals. Thus, Narcissism is perhaps best thought of as the reciprocal or inverse of Machiavellianism with disagreeableness as their shared inflection point. Psychopathy is characterized by impulsivity, thrill-seeking behavior, low empathy and is best distinguished from the other two DT traits by low anxiety.

The current investigation looks to further clarify the distinguishable characteristics of these three intercorrelated dark personality traits by using an evolutionary framework to gain insight into the differential relationships linking the three DT traits to various aspects of sexual activity and relationship quality. The development of specific personality traits is thought to be a product of biological, psychological and social factors. This paper aims to reveal the role of biological and social factors that contribute to the persistence of the different DT traits within a population by evaluating their associations with sexuality and quality of intimate relationships.

For obvious reasons, DT traits are considered highly undesirable both within society and as long-term romantic partners. Unsurprisingly, narcissists, Machiavellians, and psychopaths characteristically struggle with relationship formation and maintenance. Thus, one would expect these traits to have been negatively selected for and quickly removed from the population due to sexual selection pressures. Nevertheless, DT personality types persist to the point of near ubiquity in our society. A paper produced by Vater et al. (2018) provides empirical evidence to suggest that the prevalence of these traits is actually increasing at a societal level, highlighting the importance and relevance of this and other research in the field of dark psychology and personalities in particular. Horton (2011) states the tendency for those possessing DT traits to pursue short-term mating strategies is likely the ecological niche filled by these individuals, and thus explains their persistence in the human population. If true, perhaps the behavioral

distinctions between the DT traits would be reflected in their mating strategies supporting the phylogenetic distinction between the traits. Differences in pair-bonding (i.e., intimate relationship) behaviors corresponding to each DT trait would suggest narcissism, psychopathy, and Machiavellianism are evolved to exploit specific niches available to individuals with aggressive personalities.

This paper uses archival data gathered from college students in sexually active relationships at the University of South Alabama. It contains measures of relationship quality (RQ), behavior tendencies, and numerous inventories measuring narcissism, Machiavellianism and psychopathy. The RQ and some of the DT trait inventories consist of component 'subfactors' measuring specific aspects contributing to RQ and distinct characteristics of the DT traits. These sub-measures are of great interest for this paper as they may reveal how distinct component characteristics underlying the global scores of traits or RQ measures affect a particular aspect of intimate relationships and are related to sexual behavior. Perhaps patterns emerge regarding the specific psycho-ecological niches exploited by each trait. By deconstructing RQ and DT inventories and exploring the data this paper aims to identify the short-term mating strategies associated with each DT trait and show the extent to which these strategies are distinct for each trait. We hypothesize that novel interactions will emerge from these sub measures highlighting; distinct patterns of sexuality and intimate relationship behaviors for each trait and what subfactors of global traits are associated with various aspects of relationship quality and sexuality. Additionally, the study will identify and investigate any substantive differences found when different validated measurements of the various personality and relationship constructs are used.

Chapter 2 Methodology

The data used for all analyses conducted in the current study are archival data collected as part of a three-week longitudinal study conducted for a Master's thesis project. A correlational design with three waves of data collected across the three-week period was used. Surveys containing self-report measurements on various personality, sexuality, and intimate relationship constructs were sent via email once per week to the study participants to be filled out in an isolated environment. All personality and trait sexuality measures were collected during the first wave of data and not assessed in any subsequent waves. Weekly sexual activity and intimate relationship measures were administered at all three time points of data collection.

Participants

To be included in the sample for this data, participants were required to be sexually active and currently able to self-identify a consistent sexual partner. To gather a full range of relationship forms (i.e., married, regular hook-up) participants did not need to identify the nature of their relationship with their sexual partner. Participants were asked to identify whether they had a current regular sexual partner at the first data collection session to ensure participants met the criteria to be included. In the second and third survey sessions participants were required to state whether they were still with the same sexually intimate partner as they were in the initial survey period. Individuals not meeting these criteria were omitted from the data collection sample at the point when they were no longer able to confirm the continuation of their relationship with the initial consistent sexual partner they identified in the first session. Complete

data were obtained from a sample of 207 (M age = 19.95) participants. The full final sample was made up of 157 (76%) females and 50 (24%) males of whom White (58%), Black (34%), Asian (5%), and other (3%) demographic populations were represented. This is the sample data used for this exploration.

Measurements

When analyzing relationships between personality inventories and sexuality/intimate relationship quality indices the focus was narrowed to the measurements of individual factors, components and dimensions of the scales. The reasoning for this is that the definition for personality traits are broad, encompassing multiple, occasionally overlapping, distinct characteristics. Moreover, there isn't total agreement between scales as to what factors do and don't contribute to particular DT traits. The range of qualities, attitudes and behavior patterns that contribute to pair-bonding and relationship quality is similarly broad and diverse both between and within the scales used in this paper. Given the nature of the project this data was originally collected for, this paper contains data from three measures of narcissism, followed by two measures of psychopathy and one measure of Machiavellianism.

Narcissism

The three measures for narcissism are; The Grandiose Narcissism Scale (GNS; Foster, McCain, Hibberts, Brunell, & Johnson, in press), the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988), and the narcissism component of the Dirty Dozen Inventory (DDI; Jonason & Webster, 2010). Descriptions of each of these three measures are provided.

Narcissistic Personality Inventory (Raskin & Terry, 1988). The NPI is a forced-choice scale containing forty items. Each item consists of two statements (e.g., “I am no better or worse than most people” versus “I think I am a special person”). For each item participants select the statement they identify as best describing them and receive one point for each narcissistic statement they choose. The statements are subdivided into seven component characteristics contributing to narcissism; *authority, exhibitionism, superiority, entitlement, exploitativeness, vanity* and *self-sufficiency*. The higher the sum of scores for a participant the higher their level of narcissism. NPI global scores range from zero to 40.

The Grandiose Narcissism Scale (Foster et. al., in press). The GNS is a 33-item scale also made up of measurements for the same seven characteristics as in the NPI, however the questions are not identical for the corresponding characteristics between the two seven-factor narcissism scales. The two scales also differ in response choice. In the GNS participants respond to each item (e.g., “I deserve to get what I want”) using a six-point scale (1 = strongly disagree, 6 = strongly agree). The higher the sum of scores for a participant the higher their level of narcissism. Global scores for the GNS range from 33 to 198.

Narcissism subscale of the Dirty Dozen Inventory (Jonason & Webster, 2010). The DDI is a scale measuring “Dark Triad” personality traits. Machiavellianism, psychopathy, and narcissism are each measured through four items. Participants respond to each item on a nine-point scale (1 = strongly disagree, 9 = strongly agree). Scores from the four narcissism items (e.g., “I tend to seek prestige or status” are summed such that higher scores reflect higher levels of narcissism; total scores can range from four to 36. This scale generates a single global score and does not consist of identifiable subfactors.

Machiavellianism

Machiavellianism was, unfortunately, only measured using one scale. The Machiavellianism subscale of the Dirty Dozen Inventory (Jonason & Webster, 2010). It is described below.

Machiavellianism subscale of the Dirty Dozen Inventory (Jonason & Webster, 2010). The DDI is an inventory that measures the “Dark Triad” personality traits of Machiavellianism, psychopathy, and narcissism. The Machiavellianism subscale consists of four items (e.g., “I tend not to be too concerned with morality or the morality of my actions”) that participants respond to using a nine-point scale (1 = strongly disagree, 9 = strongly agree). Scores are summed such that higher scores reflect higher levels of Machiavellianism; total scores can range from four to 36. Once again, this scale generates a single global score and does not consist of discernable subfactors.

Psychopathy

Two measures of psychopathy were used in this research. The four-item, single score subscale of the Dirty Dozen Inventory (Jonason & Webster, 2010) provides a global view of psychopathy. The Levenson Self-Report Psychopathy Scale provides a more in depth two-factored view of psychopath producing a score for both factor 1 and 2 of psychopathy as well as a global psychopathy score. Both scales are described below.

Psychopathy subscale of the Dirty Dozen Inventory (Jonason & Webster, 2010). The DDI is an inventory that measures the “Dark Triad” personality traits of Machiavellianism,

psychopathy, and narcissism. The psychopathy subscale consists of four items (e.g., “I tend to lack remorse”) that are responded to using a nine-point scale (1 = strongly disagree, 9 = strongly agree). Scores are summed such that higher scores reflect higher levels of psychopathy; total scores can range from four to 36.

Levenson Self-Report Psychopathy Scale (Levenson et al., 1995). The LSRPS is a psychopathy measure used for psychological research. It measures two factors; primary psychopathy or psychopathic emotional affect (factor 1) and secondary psychopathy or psychopathic lifestyle (factor 2). Primary psychopathy is understood to relate to the psychopathic interpersonal philosophy characterized by manipulative social conduct, selfishness and lack of empathy while secondary psychopathy refers to antisocial behavior mediated by emotional disorder(s) such as extreme impulsivity. Factors 1 and 2 are strongly correlated with one another in the literature, however there are key distinctions. Both are positively correlated with Levinson et al.’s measure of trait anxiety, however secondary psychopathy is much stronger so (1995). Secondary psychopathy is also significantly negatively correlated with Levinson et al.’s Harm Avoidance measure while primary psychopathy is not. The test consists of 26 statements which participants respond to on a five-point scale (1 = strongly disagree, 5 = strongly agree). Scores are averaged on a five-point Likert scale for each factor such that a higher score indicates a higher level of psychopathic emotional affect and more psychopathic lifestyle for factors 1 and 2 respectively. Factors one and two can be combined to give a total psychopathy score.

Sexuality

Four free response questions were used to measure the general forms of sexual activity (SA). They are; (1) How many times in the past week did you and your partner engage in intimate behavior of any kind that led to sexual *arousal* in you?, (2) How many times in the past week did you and your partner engage in intimate behavior of any kind that led to sexual *orgasm* in you?, (3) How many times in the past week did you and your partner engage in sexual intercourse (i.e., penetrative sex)?, and (4) How many times in the past week did you and your partner engage non-penetrative sexual activity (e.g., heavy petting, oral sex, mutual masturbation)?

Sociosexual Inventory (Penke & Asendorpf, 2008). This nine-item instrument assesses sociosexual orientation on the basis of three dimensions; attitude (“I can imagine myself being comfortable and enjoying ‘casual’ sex with different partners”), behavior (“With how many partners have you had sex within the past 12 months”) and desire (“In everyday life, how often do you have spontaneous fantasies about having sex with someone you have just met”). The items are based on a nine-point scale from 1(0) to 9(20 or more) for the Behavioral dimension, 1(strongly disagree) to 9(strongly agree) for the Attitudinal dimension and 1(never) to 9(at least once a day) for the Desired dimension.

Relationship Quality

Six scales were used to measure the quality of participants’ intimate relationships: the Inclusion of Others in the Self Scale (IOS; Aron, Aron, & Smollan, 1992), the Investment Model Scale (IMS; Rusbult, Martz, & Agnew, 1998), the Partner Bonding Scale (PBS; Walum et al.,

2008), the Perceived Relationship Quality Component (Fletcher, Simpson, & Thomas, 2000), and the Revised Dyadic Adjustment Scale (RDAS; Spanier, 1976).

Inclusion of Others in the Self (Aron et al., 1992). The IOS is a single-item measure of the extent to which respondents perceive a designated other as close to or included within their concept of self. The IOS presents an interactive display of two circles labeled as “me” and “other” which respondents can manipulate to overlap by varying amounts. The amount of overlap between the two circles metaphorically simulates the respondents perceived closeness between his or herself and that of their significant other in their sexually intimate relationship. The more overlap the higher the IOS score.

Investment Model Scale (Rusbult et al., 1998). The IMS is a twenty-nine-item scale that measures commitment level and three components of dependence; *investment*, *quality of alternatives (QoA)*, and *satisfaction* level in sexually intimate relationships. Participants respond to items on a nine-point scale from zero to eight (0 = do not agree at all, 8 = agree completely) and scores for each of the four components are averaged. Seeing as the commitment component is the only component used in all analyses it is therefore used as the global score for the measure in this paper.

Partner Bonding Scale (Walum et al., 2008). The PBS is a thirteen-item questionnaire developed specifically to measure pair-bonding in humans. The items are intended to correspond with features and behavioral patterns of pair-bond formation in non-human primates. Depending on the question (e.g., How often do you kiss your mate?), the scale’s items are variably measured by five or seven-point scales. Summed together the PBS produces a range of scores from five and sixty-six.

Perceived Relationship Quality Component (Fletcher et al., 2000). The PRQC is an eighteen-item questionnaire that measures different aspects of relationship quality through six, three-item subscales. The components of relationship quality covered by the PRQC are; *satisfaction, commitment, intimacy, trust, passion, and love*. Responses to questions (e.g., How satisfied are you with your relationship) are measured on a seven-point range on a Likert-like scale (from 1 = not at all, to 7 = extremely). The summation of scores produces a global relationship quality score ranging from 18 to 126.

Revised Dyadic Adjustment Scale (Busby, Christensen, Crane, & Larson, 1995). The RDAS is a fourteen-item measure where participants rate, on five- or six-point scale, the extent to which items are representative of their relationship (e.g., sex relations). Together these items measure three dimensions of a couple's relationships; *consensus, satisfaction, and cohesion*. Scores are summated, ranging from zero to sixty-nine, with higher scores indicating higher participant agreement and satisfaction within their sexually intimate relationship.

Chapter 3 Results

The results of the study provided evidence that supports the notion that DT personality traits manifest in distinct but sometimes similar ways through sexuality and intimate relationships. Significant relationships within the data are unveiled through a three-step telescoped approach however all correlations can be viewed in Tables 1 – 7. First, the total scores for relationship quality and the various DT personality scales (i.e., global traits), show increasingly negative correlations from narcissism, to Machiavellianism and then psychopathy. Alone, however, total scores do little to characterize and explain why the correlations seem to have subtle variability across the traits. Thus, relationships will be explored one-level deeper, presenting the links between sub-factors of the DT personality traits, sexuality, and relationship quality. Finally, relationships emerging from the DT personality trait subfactors and scale scores from sexually/intimate relationships measures will be expanded upon further by breaking down sexuality and relationship quality scales into their respective subfactors.

Table 1.

Dark Triad Trait Correlation with Investment Model Scale.

Measure	Investment Model Scale			
	Satisfaction	Commitment	Quality of Alternatives	Investment
NPI				
Overall	-0.072	-0.122	0.171*	-0.04
Authority	0.006	-0.068	0.086	-0.039
Self-sufficiency	0.049	-0.043	0.117	0.001
Superiority	-0.075	-0.072	0.134	-0.016
Vanity	-0.074	0.027	0.11	0.004
Exhibitionism	-0.147*	-0.143*	0.139(-0.106
Entitlement	-0.023	-0.082	0.112	0.074
Exploitativeness	-0.058	-0.119	0.045	-0.066
GNS				
Overall	-0.059	-0.054	0.171*	-0.005
Authority	0.028	-0.028	0.006	0.055
Self-sufficiency	0.079	0.082	0.035	-0.013
Superiority	-0.065	-0.072	0.134	-0.016
Vanity	-0.047	0.097	0.065	0.06
Exhibitionism	-0.103	-0.11	0.195**	-0.042
Entitlement	-0.064	-0.059	0.131	0.03
Exploitativeness	-0.08	-0.182**	0.184**	-0.096
DDI-N	-0.114	-0.131	0.24**	-0.031
LSRP	-0.189**	-0.222**	0.237**	-0.137*
Factor 1	-0.104	-0.138*	0.226**	-0.107
Factor 2	-0.266**	-0.284**	0.177*	-0.141*
DDI-P	-0.081	-0.198**	0.184**	-0.155*
DDI-M	-0.057	-0.106	0.208**	-0.033

Note. * = $p < .05$, ** = $p < .01$

Table 2.

Dark Triad Trait Correlation with Revised-Dyadic Adjustment Scale.

Measure	RDAS			
	Overall	Cohesiveness	Satisfaction	Consensus
NPI				
Overall	-0.009	0.056	-0.102	0.026
Authority	0.077	0.061	0.019	0.082
Self-sufficiency	0.037	-0.009	0.006	0.071
Superiority	-0.008	-0.024	-0.09	0.079
Vanity	-0.075	0.015	-0.113	-0.057
Exhibitionism	-0.015	0.091	-0.1	-0.015
Entitlement	-0.092	-0.017	-0.134	-0.049
Exploitativeness	-0.013	0.094	-0.073	-0.035
GNS				
Overall	-0.002	0.037	-0.113	0.063
Authority	0.109	0.041	0.026	0.152*
Self-sufficiency	0.105	0.005	0.052	0.149*
Superiority	-0.003	-0.025	-0.048	0.052
Vanity	0.06	0.054	-0.066	0.126
Exhibitionism	-0.078	0.088	-0.153*	-0.087
Entitlement	-0.002	-0.019	-0.138*	0.126
Exploitativeness	-0.175*	0.011	-0.16*	-0.187**
LSRP				
Factor 1	-0.206**	-0.105	-0.142*	-0.188**
Factor 2	-0.28**	-0.158*	-0.216**	-0.225**
DDI-P				
DDI-P	-0.114	-0.07	-0.085	-0.09
DDI-M				
DDI-M	-0.188**	-0.01	-0.156*	-0.216**

Note. * = $p < .05$, ** = $p < .01$

Table 3.

Dark Triad Trait Correlation with Perceived Relationship Quality Component.

Measure	Perceived Relationship Quality Component						
	Overall	Satisfaction	Commitment	Intimacy	Trust	Passion	Love
NPI							
Overall	-0.128	-0.105	-0.107	-0.112	-0.13	-0.092	-0.081
Authority	-0.057	-0.036	-0.059	-0.038	-0.054	-0.062	-0.029
Self-sufficiency	0.014	0.047	0.034	0.004	-0.012	0.004	-0.018
Superiority	-0.09	-0.088	-0.032	-0.087	-0.115	-0.075	-0.046
Vanity	-0.079	-0.098	-0.004	-0.044	-0.116	-0.113	-0.017
Exhibitionism	-0.152*	-0.115	-0.148*	-0.163*	-0.184**	-0.02	-0.106
Entitlement	-0.124	-0.091	-0.126	-0.114	-0.085	-0.119	-0.08
	-0.058	-0.082	-0.097	-0.033	0.01	0.022	-0.046
GNS							
Overall	-0.13	-0.127	-0.087	-0.127	-0.173*	-0.055	-0.064
Authority	-0.003	0.004	0.009	0.011	-0.05	-0.012	0.026
Self-sufficiency	0.047	-0.003	0.062	0.062	0.035	0.045	0.037
Superiority	-0.136	-0.109	-0.094	-0.141*	-0.171*	-0.08	-0.072
Vanity	0.016	-0.069	0.065	0.018	-0.075	0.051	0.101
Exhibitionism	-0.194**	-0.166*	-0.141*	-0.192**	-0.182**	-0.129	-0.14*
Entitlement	-0.09	-0.088	-0.092	0.075	-0.113	-0.036	-0.024
	-0.197**	-0.122	-0.18**	-0.218**	-0.188**	-0.071	-0.2**
DDI-N	-0.192**	-0.169*	-0.164*	-0.173*	-0.197**	-0.067	-0.16*
LSRP	-0.253**	-0.193**	-0.211**	-0.259**	-0.259**	-0.112	-0.2**
Factor 1	-0.161*	-0.09	-0.117	-0.175*	-0.201**	-0.08	-0.113
Factor 2	-0.32**	-0.297**	-0.293**	-0.309**	-0.27**	-0.128	-0.3**
DDI-P	-0.187**	-0.111	-0.194**	-0.165*	-0.184**	-0.045	-0.2**
DDI-M	-0.144*	-0.081	-0.114	-0.165*	-0.146*	-0.101	-0.107

Note. * = $p < .05$, ** = $p < .01$

Table 4.

Dark triad trait: Narcissism. IOS.

	IOS	PBS
Measure	Overall	Overall
NPI		
Overall	-0.051	-0.025
Authority	0.061	0.044
Self-sufficiency	-0.039	-0.046
Superiority	-0.054	-0.003
Vanity	-0.038	0.005
Exhibitionism	-0.091	-0.01
Entitlement	-0.003	-0.071
Exploitativeness	-0.098	-0.055
GNS		
Overall	-0.029	-0.089
Authority	0.013	0.077
Self-sufficiency	0.086	-0.053
Superiority	-0.053	-0.032
Vanity	0.096	-0.018
Exhibitionism	-0.12	-0.101
Entitlement	0.003	-0.092
Exploitativeness	-0.123	-0.176
DDI-N	-0.157*	-0.082
LSRP	-0.178*	-0.271**
Factor 1	-0.095	-0.168
Factor 2	-0.253**	-0.349**
DDI-P	-0.145*	-0.264**
DDI-M	-0.139*	-0.149*

Note. * = $p < .05$, ** = $p < .01$

Table 5.

Dark Triad Trait Correlation with Sociosexual Inventory

Measure	SOI			
	Overall	Behavior	Attitude	Desire
NPI				
Overall	0.271**	0.283**	0.197**	0.227**
Authority	0.146*	0.169*	0.082	0.14*
Self-sufficiency	0.026	0.052	0.081	-0.071
Superiority	0.026	0.12	-0.037	0.029
Vanity	0.113	0.155*	0.102	0.044
Exhibitionism	0.29**	0.229**	0.217**	0.284**
Entitlement	0.216**	0.259**	0.142*	0.177*
Exploitativeness	0.325**	0.229**	0.255**	0.321**
GNS				
Overall	0.263**	0.241**	0.162*	0.277**
Authority	0.115	0.102	0.088	0.102
Self-sufficiency	-0.047	-0.053	-0.047	-0.021
Superiority	0.204**	0.187**	0.144*	0.193**
Vanity	0.007	0.087	-0.08	0.058
Exhibitionism	0.331**	0.256**	0.232**	0.345**
Entitlement	0.12	0.171*	0.053	0.111
Exploitativeness	0.363**	0.275**	0.271**	0.362**
DDI-N	0.285**	0.238**	0.202**	0.283**
LSRP				
Factor 1	0.191**	0.163*	0.139*	0.182**
Factor 2	0.314**	0.259**	0.23**	0.306**
DDI-P	0.295**	0.236**	0.244**	0.257**
DDI-M	0.318**	0.256**	0.242**	0.302**

Note. * = $p < .05$, ** = $p < .01$

Table 6.

Dark triad Trait Correlation with Sexual Activity

Measure	Sexual Activity			
	Arousal	Orgasm	Penetrative	Non-penetrative
NPI				
Overall	0.039	0.128	0.104	0.027
Authority	0.001	0.056	0.026	-0.012
Self-sufficiency	0.003	0.098	0.068	0.006
Superiority	-0.145**	-0.09	-0.093	-0.162**
Vanity	0.066	0.052	0.067	0.06
Exhibitionism	0.061	0.128	0.13	0.098
Entitlement	0.014	0.12	0.104	0.012
Exploitativeness	0.175*	0.179*	0.146*	0.113
GNS				
Overall	0.098	0.099	0.091	0.063
Authority	-0.027	-0.013	-0.036	-0.051
Self-sufficiency	0.031	-0.023	-0.052	-0.048
Superiority	0.071	0.072	0.111	0.082
Vanity	-0.021	-0.047	-0.041	-0.036
Exhibitionism	0.103	0.099	0.082	0.092
Entitlement	0.031	0.106	0.122	0.035
Exploitativeness	0.225**	0.232**	0.218**	0.189**
DDI-N	0.137*	0.102	0.145*	0.136
LSRP	0.184**	0.16*	0.253**	0.144*
Factor 1	0.19**	0.183**	0.264**	0.134
Factor 2	0.116	0.073	0.154*	0.113
DDI-P	0.155*	0.181**	0.195**	0.135
DDI-M	0.237**	0.254**	0.23**	0.26

Note. * = $p < .05$, ** = $p < .01$

Table 7.

Dark Triad Trait Correlation with Mating Strategy and Length of Relationship.

Measure	Mating Strategy		Length of relationship
	Short-term	Long-term	
NPI			
Overall	0.08	0.057	-0.025
Authority	0.037	-0.003	0.068
Self-sufficiency	-0.05	-0.004	-0.022
Superiority	-0.004	0.114	0.05
Vanity	0.076	0.054	-0.104
Exhibitionism	0.078	0.004	-0.091
Entitlement	0.009	0.074	0.02
Exploitativeness	0.204**	0.042	-0.075
GNS			
Overall	0.02	0.058	-0.101
Authority	0.026	0.044	0.084
Self-sufficiency	-0.057	-0.007	-0.081
Superiority	-0.029	0.059	-0.052
Vanity	-0.016	-0.027	-0.11
Exhibitionism	0.051	0.06	-0.055
Entitlement	-0.027	0.088	-0.106
Exploitativeness	0.1	0.045	-0.142
DDI-N	0.071	0.102	-0.201**
LSRP	0.034	-0.014	-0.247**
Factor 1	0.002	-0.022	-0.186**
Factor 2	0.073	0.003	-0.267**
DDI-P	0.067	-0.085	-0.268**
DDI-M	0.012	0.031	-0.225**

Note. * = $p < .05$, ** = $p < .01$

Global Personality Scales

Narcissism

The DDI-N scale shows significant positive correlations with the SOI total ($r = 0.285, p < 0.01$) and the *arousal* ($r = 0.137, p = 0.049$) and *penetrative* ($r = 0.145, p = 0.037$) measures of SA as well as significantly negative correlations with the PRQC ($r = -0.192, p = 0.006$), IOS ($r = -0.157, p = 0.024$) and the length of current intimate relationships ($r = -0.201, p = 0.04$). The total scores of both the NPI and GNS, however, only show significant relationships with the overall SOI score ($r = 0.271, p < 0.01$) and ($r = 0.263, p < 0.01$) respectively.

Machiavellianism

Unfortunately for this study, Machiavellianism is underrepresented by the measures used when data collection occurred. Nonetheless, the DDI-M scale shows strong significant positive correlations with the SOI ($r = 0.318, p < 0.01$) and all four tenets of SA; *arousal* ($r = 0.237, p = 0.001$), *orgasm* ($r = 0.254, p < 0.01$), *penetrative* ($r = 0.230, p = 0.001$), and *non-penetrative* ($r = 0.260, p < 0.01$) sex. Additionally, the DDI-M shows significantly negative relationships with the total scores for R-DAS ($r = -0.188, p = 0.007$) and PRQC ($r = -0.144, p = 0.049$) as well as with the IOS ($r = -0.139, p = 0.045$), PBS ($r = -0.149, p = 0.032$) and length of current intimate relationships ($r = -0.225, p = 0.01$).

Psychopathy

The DDI-P shows significant positive correlations with the SOI ($r = 0.295, p < 0.01$) and SA as measure by *arousal* ($r = 0.155, p = 0.026$), *orgasm* ($r = 0.181, p = 0.009$) and *penetrative sex* ($r = 0.195, p = 0.005$). Additionally the DDI-P shows significant negative correlation with; the PRQC ($r = -0.187, p = 0.007$), IOS ($r = -0.145, p = 0.037$), the PBS ($r = -0.264, p < 0.01$), *commitment* - functionally the 'total' score for the IMS - of the IMS and length of current intimate relationship ($r = -0.268, p < 0.01$). The LSRP, meanwhile, shows positive relationships with SOI ($r = 0.272, p < 0.01$) and all four tenets of SA; *arousal* ($r = 0.184, p = 0.008$), *orgasm* ($r = 0.160, p < 0.021$), *penetrative* ($r = 0.253, p = 0.01$), and *non-penetrative* ($r = 0.144, p = 0.039$) sex. The LSRP also shows negative relationships with the IOS ($r = -0.178, p = 0.01$), length of relationship ($r = -0.247, p < 0.01$), R-DAS ($r = -0.267, p < 0.01$), PRQC ($r = -0.253, p < 0.01$), and PBS ($r = -0.264, p < 0.01$). No significant relationships emerged or the declared mating strategy.

These global personality measures, however, do not tell the complete story. Subfactors significantly contribute to the characterization of the global trait scores and their subsequent relationships with various sexuality and relationship quality correlates. Thus, some subfactors may disproportionately influence whether associations between overall personality scores and sexuality or relationship quality emerge, while other associations are only found by inspecting the subfactors themselves.

Personality Subscales by Global Relationship Quality Measure

NPI Subscales

Within the NPI, *exhibitionism* shows a significantly negative relationship with both IMS *commitment* ($r = -0.143, p = 0.04$) and the PRQC ($r = -0.152, p = 0.029$). Interestingly, *superiority* (NPI) shows a significantly negative correlation with SA as measured by both *arousal* ($r = -0.145, p = 0.036$) and *non-penetrative* ($r = -0.162, p = 0.02$) sex whereas *exploitativeness* (NPI) shows significantly positive correlations with SA measures *arousal* ($r = 0.175, p = 0.012$), *orgasm* ($r = 0.179, p = 0.01$) and *penetrative* sex ($r = 0.146, p = 0.036$). Additionally, *exploitativeness* shows the *only* significant relationship of any measure and sub-factor with mating strategy showing a significantly positive correlation with explicitly seeking short-term relationships ($r = 0.204, p = 0.003$). Finally, within the NPI; *exhibitionism*, *exploitativeness*, *entitlement* and *authority* all show significant positive correlation with overall SOI scores ($r = 0.287, p < 0.01$; $r = 0.325, p < 0.01$; $r = 0.216, p = 0.002$; $r = 0.146, p = 0.036$).

GNS Subscales

The GNS, which - albeit through distinct items and response forms - shares subfactor labels with the NPI, paints a similar picture of the associations between narcissism and relationship quality and sexuality with some key differences. A significant negative correlation emerges between *exploitativeness* (GNS) and IMS *commitment* ($r = -0.182, p = 0.009$), R-DAS ($r = -0.175, p = 0.012$), PRQC ($r = -0.197, p = 0.004$) and PBS ($r = -0.176, p = 0.011$), while *exhibitionism* (GNS) shows a significant negative correlation only with PRQC ($r = -0.194, p$

= 0.005). *Exploitativeness* (GNS) shows significantly positive correlations between all four components of SA - *arousal* ($r = 0.225, p = 0.001$), *orgasm* ($r = 0.232, p = 0.001$), *penetrative* ($r = 0.218, p = 0.002$), and *non-penetrative* ($r = 0.189, p = 0.006$) - and, along with *exhibitionism* and *superiority*, also shows a significant positive correlation with SOI overall ($r = 0.363, p < 0.01$; $r = 0.331, p < 0.01$; $r = 0.204, p = 0.003$).

LSRP Subscales

The LSRP measures two factors of subclinical psychopathy; primary psychopathy or factor 1 (F1-LSRP) and secondary psychopathy or factor 2 (F2-LSRP). The F1-LSRP shows significantly negative relationships with; IMS *commitment* ($r = -0.138, p = 0.047$), R-DAS ($r = -0.206, p = 0.003$), PRQC ($r = -0.161, p = 0.021$), PBS ($r = -0.168, p = 0.015$) and length of current relationship ($r = -0.186, p = 0.007$) and significantly positive relationships with the overall SOI score ($r = 0.191, p = 0.006$), as well as the *arousal* ($r = 0.190, p = 0.006$), *orgasm* ($r = 0.183, p = 0.008$) and *penetrative* ($r = 0.264, p < 0.01$) SA measures. F2-LSRP shows a significant negative relationship with IOS ($r = -0.253, p < 0.01$) as well as with IMS *commitment* ($r = -0.284, p < 0.01$), R-DAS ($r = -0.280, p < 0.01$), PRQC ($r = -0.320, p < 0.01$), PBS ($r = -0.349, p < 0.01$) and length of current relationship ($r = -0.267, p < 0.01$). F2-LSRP shows significantly positive relationships with the overall SOI score ($r = 0.314, p < 0.01$) and the *penetrative* ($r = 0.154, p = 0.026$) SA measure.

Narcissism Subscales with Sexuality/Relationship Quality Subscales

DDI-N

The last step in illustrating the psycho-ecological niches exploited by DT personalities is measuring relationships between personality scales and their subfactors with relationship and sexuality scale subfactors. In order, the DDI-N - although not significantly associated with the IMS *commitment* shows a firmly significant positive correlation with IMS *quality of alternatives (QoA)* ($r = 0.240, p \ll 0.01$). Within the PQRC, significantly negative correlations emerge between the DDI-N and *satisfaction* ($r = -0.169, p = 0.015$), *commitment* ($r = -0.164, p = 0.018$), *intimacy* ($r = -0.173, p = 0.013$), *trust* ($r = -0.197, p = 0.004$) and *love* ($r = -0.16, p = 0.023$). The DDI-N is positively correlated with all three components of the SOI; *behavior* ($r = 0.238, p = 0.001$), *attitude* ($r = 0.202, p = 0.004$), and *desire* ($r = 0.283, p < 0.01$).

NPI

The global NPI score did not show a significant relationship with IMS *commitment*, however, was positively associated with IMS *QoA* ($r = 0.171, p = 0.014$). Within the NPI however, *exhibitionism* also shows a significantly positive correlation with IMS *QoA* ($r = 0.139, p = 0.045$) as well as a negative correlation with IMS *satisfaction* ($r = -0.147, p = 0.035$). Having shown a significant relationship with the PQRC total, the *exhibitionism* subfactor of NPI shows further negative correlations with *commitment* ($r = -0.148, p = 0.033$), *intimacy* ($r = -0.163, p = 0.019$) and *trust* ($r = -0.184, p = 0.008$) subfactors within the PQRC scale. The global NPI, as well as the *exhibitionism*, *entitlement* and *exploitativeness* within the NPI all show

positive correlations with all three component measures of SOI; *behavior* ($r = 0.283, p < 0.01$; $r = 0.229, p = 0.001$; $r = 0.259, p < 0.01$; $r = 0.229, p = 0.001$), *attitude* ($r = 0.197, p = 0.004$; $r = 0.217, p = 0.002$; $r = 0.142, p = 0.042$; $r = 0.255, p < 0.01$), and *desire* ($r = 0.227, p = 0.001$; $r = 0.284, p < 0.01$; $r = 0.177, p = 0.011$; $r = 0.321, p < 0.036$). NPI *vanity* is positively related with SOI *behavior* ($r = 0.155, p = 0.025$) and NPI *authority* is positively correlated with the global SOI ($r = 0.146, p = 0.036$) and *behavior* ($r = 0.169, p = 0.015$) and *desire* ($r = 0.140, p = 0.045$) subcomponents. No relationships are shown for either NPI *self-sufficiency* or *authority* with any SOI components.

GNS

The overall GNS did not show a significant relationship with IMS *commitment*, however, was positively associated with IMS *QoA* ($r = 0.171, p = 0.014$). GNS *exhibitionism* and GNS *exploitativeness* both positively correlate with IMS *QoA* ($r = 0.195, p = 0.005$; $r = 0.184, p = 0.008$) GNS *exploitativeness* also correlates negatively with the global IMS *commitment* ($r = -0.182, p = 0.009$) score and with *satisfaction* ($r = -0.160, p = 0.021$) and *consensus* ($r = -0.187, p = 0.007$) R-DAS subfactors also. Other significant subfactor relationships between GNS and R-DAS include the negative relationships of GNS *exhibitionism* and *entitlement* with R-DAS *satisfaction* ($r = -0.153, p = 0.028$; $r = -0.138, p = 0.047$) and especially the positive correlations for GNS *authority* and *self-sufficiency* with R-DAS *consensus* ($r = 0.152, p = 0.028$; $r = 0.149, p = 0.032$). The latter two are of particular interest as they are pro-social interactions and would be considered beneficial to pair-bonding. The global GNS score is not significantly associated with the total PRQC scores, however it does show a

significant negative relationship with the *trust* ($r = -0.173, p = 0.013$) component of the PRQC. Other associations observed between GNS and PRQC subfactors include the negative relationship emerging from GNS *exhibitionism* with PRQC subfactor *satisfaction* ($r = -0.166, p = 0.017$), and those from GNS *exhibitionism* and *exploitativeness* with PRQC subfactors; *commitment* ($r = -0.141, p = 0.043; r = -0.180, p = 0.009$), *intimacy* ($r = -0.192, p = 0.005; r = -0.218, p = 0.002$), *trust* ($r = -0.182, p = 0.009; r = -0.188, p = 0.007$), and *love* ($r = -0.140, p = 0.044; r = -0.2, p = 0.008$) as well GNS *superiority* with PRQC *intimacy* ($r = -0.141, p = 0.043$) and *trust* ($r = -0.171, p = 0.014$). In addition to their significant positive relationships with the global SOI, the global GNS score, as well as GNS components; *superiority*, *exhibitionism* and *exploitativeness*, each show positive correlations with all three SOI subfactors; *behavior* ($r = 0.241, p < 0.01; r = 0.187, p = 0.007; r = 0.256, p < 0.01; r = 0.275, p = 0.001$), *attitude* ($r = 0.162, p = 0.02; r = 0.144, p = 0.038; r = 0.232, p = 0.001; r = 0.271, p < 0.01$) and *desire* ($r = 0.277, p < 0.01; r = 0.193, p = 0.005; r = 0.345, p < 0.01; r = 0.362, p < 0.01$). GNS *entitlement* shows an additional positive relationship with SOI *behavior* ($r = 0.171, p = 0.014$).

Machiavellianism with Sexuality/Relationship Quality Subscales

DDI-M

The DDI-M, while not showing significant relationships with IMS *commitment* was significantly positively correlated with IMS *QoA* ($r = 0.208, p = 0.003$). Looking at the details of other associations arising from DDI-M scores shows that within R-DAS, DDI-M was significantly negatively correlated with *satisfaction* ($r = -0.156, p = 0.025$) and *consensus* ($r = -$

0.216, $p = 0.002$). Within the PQRC, the significantly negative correlations of DDI-M are with *intimacy* ($r = -0.165$, $p = 0.017$) and *trust* ($r = -0.146$, $p = 0.036$) but not the other four subfactors. The DDI-M shows significantly positive correlations for all three SOI components; *behavior* ($r = 0.256$, $p < 0.01$), *attitude* ($r = 0.242$, $p < 0.01$), and *desire* ($r = 0.302$, $p < 0.01$).

Psychopathy Subscales with Sexuality/Relationship Quality Subscales

DDI-P

The DDI-P, in addition to its negative correlations with the global IMS *commitment*, shows a positive relationship with IMS (*QoA*) ($r = 0.184$, $p = 0.008$) and a negative relationship with IMS *investment* ($r = -0.155$, $p = 0.026$). The DDI-P shows no association with the R-DAS or its subfactors. Within the PRQC however, the DDI-P correlates negatively with *commitment* ($r = -0.194$, $p = 0.005$), *intimacy* ($r = -0.165$, $p = 0.018$), *trust* ($r = -0.184$, $p = 0.008$) and *love* ($r = -0.204$, $p = 0.003$). Finally, in addition to the significant relationship with the global SOI score, the DDI-P also shows significantly positive relationships with all three of its subfactors; *behavior* ($r = 0.236$, $p = 0.001$), *attitude* ($r = 0.244$, $p < 0.01$) and *desire* ($r = 0.257$, $p < 0.01$).

LSRP

The combined LSRP shows negative relationships with IMS *satisfaction* ($r = -0.189$, $p = 0.006$) and *investment* ($r = -0.137$, $p = 0.049$) as well as a highly significant positive relationship with *QoA* ($r = 0.237$, $p = 0.001$) in addition to its negative relationship with the global IMS *commitment*. The combined LSRP shows significant negative correlations with all R-DAS

subfactors; *consensus* ($r = -0.230, p = 0.001$), *satisfaction* ($r = -0.195, p = 0.005$), and *cohesion* ($r = -0.143, p = 0.04$), as well as the PRQC subfactors; *satisfaction* ($r = -0.193, p = 0.005$), *commitment* ($r = -0.211, p = 0.002$), *intimacy* ($r = -0.259, p < 0.01$), *trust* ($r = -0.259, p < 0.01$) and *love* ($r = -0.202, p = 0.004$). The combined LSRP also positively correlates with every SOI component; *behavior* ($r = 0.227, p = 0.001$), *attitude* ($r = 0.199, p = 0.004$), and *desire* ($r = 0.262, p < 0.01$). F1-LSRP shows a positive correlation with IMS *QoA* ($r = 0.226, p = 0.001$) in addition to its negative correlation with IMS *commitment*. Factor 1 also shows additional negative relationships with R-DAS components *consensus* ($r = -0.188, p = 0.007$) and *satisfaction* ($r = -0.142, p = 0.041$) but not *cohesiveness*. F1-LSRP also shows additional negative relationships with PRQC subfactors *intimacy* ($r = -0.175, p = 0.011$) and *trust* ($r = -0.201, p = 0.004$). F1-LSRP was also positively correlated with all subfactors of the SOI; *behavior* ($r = 0.163, p = 0.019$), *attitude* ($r = 0.139, p = 0.045$), and *desire* ($r = 0.183, p = 0.009$). F2-LSRP shows negative correlations with IMS *satisfaction* ($r = -0.266, p < 0.019$) and *investment* ($r = 0.141, p = 0.042$) and positive correlations with IMS *QoA* ($r = 0.177, p = 0.011$) in addition to its negative correlation with IMS *commitment*. F2-LSRP is negatively associated with all components of the R-DAS; *consensus* ($r = -0.225, p = 0.001$), *satisfaction* ($r = -0.216, p = 0.002$), and *cohesion* ($r = -0.158, p = 0.023$), as well as the PRQC subfactors; *satisfaction* ($r = -0.297, p < 0.01$), *commitment* ($r = -0.293, p < 0.01$), *intimacy* ($r = -0.309, p < 0.01$), *trust* ($r = -0.270, p < 0.01$) and *love* ($r = -0.251, p < 0.01$). For the PRQC subfactor of *passion*, the associativity of F2-LSRP is just slightly sub-significant. Lastly, F2-LSRP correlates significantly with all components of the SOI; *behavior* ($r = 0.259, p < 0.01$), *attitude* ($r = 0.230, p = 0.001$), and *desire* ($r = 0.306, p < 0.01$).

Chapter 4 Discussion

A three-tiered examination of this cross-sectional data has produced several emergent correlations between DT traits, sexuality and relationships. The findings provide further evidence to support the notion that DT personalities as a whole are particularly inept at forming authentic pair-bonds and struggle to maintain long-term intimate relationships (Horton, 2011). Additionally, these findings suggest the difficulties in relationship maintenance increase in severity from subclinical-narcissism to Machiavellianism to subclinical-psychopathy. This tiered severity of long-term pair bonding incompatibility may be explained by the nature of the three DT traits as distinct personalities.

Narcissism

As a construct narcissistic people thrive on a high perceived level of success and status in any given area of their life but give little mind to actually achieving that level of success and or status. Deep down all narcissists are deeply insecure yet pathologically wired not to let that show. They combat overwhelming feelings of inferiority with self-enhancing as well as self and other deception. Thus, in terms of generic human social interactions, subclinical narcissism is characterized by making highly positive first impressions that deteriorate overtime.

In relationships then, narcissists may respond to the measures in this research differently depending on how prestigious they are perceived in the relationship such that early in the relationship - while their positive impression still holds - they may report much higher levels of relationship quality compared to in later stages when their good first impression inevitably deteriorates. Narcissists, as a rule, may also bias their responses to perceive themselves as having

higher quality relationships as a result of their self-enhancement motivations. These justifications however are hypothetical and not empirically shown in the data but would be a great area for further research.

Looking directly at the results, Narcissism is the least negatively associated with relationship quality of the three traits. Additionally, narcissism is the least positively associated with sexual activity of the three traits. This coincides with the idea that narcissists value admiration in relationships much more than they do intimacy, apparently including that of a sexual nature. Interestingly, narcissism is also the least negatively associated with relationship length of the three traits, and - while statistically insignificant for all traits - narcissism is the trait most positively associated with declaring a preference for long term relationships. These observations suggest that of the DT traits, narcissism is the least abrasive yet also the least effective at exploiting the short-term mating style psycho-ecological niche in terms of reproduction as measured by sexual activity.

Machiavellianism

Machiavellianism is essentially the reciprocal of narcissism. Machiavellians pay no mind to how they are perceived by others per se. So long as they are benefiting themselves and their own circumstances, they are thriving. Machiavellians thus, do not bias their responses. The three DT traits likely share the same short-term mating style psychosexual niche but are adapted to exploit it differently. With this as well as the assumption that the purpose of intimate relationships is primarily reproductive, Machiavellians should thus be most content in relationships with high levels of SA and simultaneously dissatisfied by every other aspect of

relationships besides SA. This is rather clearly represented in the results. Machiavellians' negative associations with relationship quality fall generally in between narcissism and psychopathy. On the other hand, Machiavellianism is more positively associated with each measure of SA than either narcissism or psychopathy. These results are particularly captivating because, as mentioned, Machiavellians' - of all three DT traits - are the least likely to lie due to their lack of crippling insecurity seen in narcissists and insignificant association with impulsivity, which may result in falsifying responses and response bias in narcissists and response fatigue in psychopaths.

Equally intriguing, if not more so, is the pattern of Machiavellians' sexual activity. In addition to scoring highest in all SA measures, Machiavellians' strongest association with SA is for *non-penetrative* SA. Following the characteristic saying 'the ends justify the means' this suggests that, by deliberately engaging in non-penetrative sexual activity - such as petting, oral sex and foreplay, Machiavellians are able to significantly increase their ability to achieve orgasm and presumably also the willingness of their partner to engage in sexual activity in general. With that said, Machiavellians must, to some extent, either be accustomed to or expect high rates of sexual activity regardless of their relationship status and or simply loathe the non-self-serving aspects of intimate relationships. They must do so to such an extent that even such high rates of sexual activity are insufficient for them to maintain what they perceive as a high quality sexually intimate relationship.

Psychopathy

Psychopaths on the other hand essentially are not conscious and are even less aware of the conscious nature of others. Psychopaths by far express the most numerous and for the most part severe negative interactions in their relationships. There are a number of possible explanations. Perhaps psychopaths, being so impulsive and thrill seeking, are entirely bored by the monotony of a singular intimate relationship. Perhaps low empathy reduces the psychological benefits available to them through positive social and sexual interactions with their partner within their relationship. Or, perhaps due to their incessant impulsivity psychopaths - lacking a general sense of conscious awareness - are simply unable to maintain appreciation for anything that most others would typically hold close and form an emotional attachment with.

Measurement Discrepancies

Relationships unveiled in the results section of this research reveal patterns of sexuality and relationships specific to individual DT traits. However, the research also exposed contradictions between measurements of identically labeled personalities and constructs in some cases illustrating and in others further complicating the psychological paradigm of a particular DT trait. Specifically, the NPI and GNS scales produced relationships revealing, at times, blatant discrepancies between the identically labeled subfactors of both scales. Additionally, a few subfactors within both scales at times either, failed to contribute any significant associations with relationship quality and or sexuality or, expressed significant relationships with SA or relationship quality that ran counterintuitive to the expected outcomes based on the established literature on narcissism and associated short-term mating strategies. The presence of

counterintuitive relationships and or lack of congruence in relationships of identically labeled subfactors between the GNS and NPI deserves further investigation in subsequent research.

Limitations

The data collection for this study was not prospectively collected to address the specific research questions in this study. As mentioned in the methods section the data used for this study are archival data collected as part of a three-week longitudinal study of college students conducted for a master's thesis project. The implications of this are:

1. No power calculation has been performed to establish the sample size needed to avoid risk of Type 2 errors, thus the risk of Type 2 errors is potentially relatively high.
2. The three traits were not equally represented in the number and complexity of the scales used to measure them. Future research should attempt to use at least two scales to measure each trait, preferably those that also measure subfactors.
3. The time period may be too short to fully capture the sexual activity for 2 reasons
 - a. The time period does not cover a full menstrual cycle
 - b. Since the study cohort are college students, the ability to have sexual activity during a week will depend on whether the partner is local to the area allowing for daily sexual activity or living away from the college town so sexual activity only possible on weekends and/or longer breaks.
4. Since this study is conducted in a limited sample of college students there is the potential for the study being confounded by the possibility that some study participants also are the “partner” for another study subject.

5. Since this data is based on college students the results may not be applicable to broader socio-economic or demographic groups.
6. Lastly the gender distribution is asymmetrically weighted towards females. Males are considered to be more representative of and more severely affected by the presence of DT traits within their personalities thus a study more equally representative of both genders or even asymmetrically weighted towards males would have potentially provided data producing stronger associations for the personality to relationship and sexuality outcomes relationships investigated in this research.

Future Directions

The potential different correlation between the DT traits and distinct aspects of intimate relationships with primary sexual partners could be a highly interesting topic to investigate further. Using a more deliberate design, and an appropriate sample size with better representativeness would likely produce more powerful relationships and better characterize and clarify the distinct psychosexual strategies utilized by each of the dark triad traits to exploit the short-term mating strategy psycho-ecological niche. Further, performing multivariate analyses on the elucidated relationships will enable future research to establish whether the three DT traits are significantly different with respect to those correlations. If it can indeed be documented that the DT traits differ in this regard, additional studies would be needed to understand why there are those differences and which aspects of the traits empirically explain these differences. Another fascinating question would be to understand to which degree these differences are driven by the subject with the DT trait or the partners reaction to the study subjects:

1. The difference is solely related to the individual with a specific DT trait
2. It is solely a consequence of the partners reaction to the individual with the specific DT trait
3. A combination of 1 and 2

Perhaps there are individuals who prefer, or - more likely - are more vulnerable to exploitation by, partner with dark personalities in sexually intimate relationships.

Conclusion

The dark triad traits matter. The large scales measuring those traits matter, and most importantly the subscale also matter. Fundamentally, this data research achieved its goal of elucidating emergent relationships between individual characteristics of DT personality traits and distinct aspects of intimate relationships with primary sexual partners. As a first look rather than an exploratory research paper, novel distinctions are highlighted here as to how the three DT traits exploit the short-term mating strategy psycho-ecological niche, along with possible explanations based on the current literary consensus on the personality characteristics for each trait. It will be for another study, however, to hypothesize and provide empirical evidence for the existence of those and potentially other differences and provide empirical evidence for how and why they come about.

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EDUCATION

The Pennsylvania State University

Schreyer Honors College

Major: B.S. Psychology, Neuroscience option, pre-med, minor in biology

University Park, PA

May 2020

LEADERSHIP

Outreach360

Volunteer

University Park, PA/Monte Cristi, DR

October 2017 – May 2018

- Volunteered to co-lead a service trip of five students from the PSU Pre-Dental society to teach English in the Dominican Republic over spring break

- Formed lasting relationships and was inspired to co-founded Outreach360 as an independent Student Organization at Penn State

Buntes Zuhause (Colorful Home) Community Center

Refugee Center Volunteer and German Tutor

Bad Soden, Germany

March 2015 – April 2016

- Volunteered to tutor German to refugees of various cultural backgrounds at the height of the European refugee crisis
- Prepared and meals with refugees in my community, forming friendships and sharing stories that transcend cultures and language barriers

WORK

Upper Main Line YMCA

Environmental educator, camp counselor, driver

Berwyn, PA

June 2019 – August 2019

- Planned and lead lessons, activities, nature walks and off-site excursions for groups of children between the ages of seven and fourteen years old with the intention of fostering curiosity in science and an appreciation for nature.
- Handled severe weather, and unforeseen circumstances putting child safety first while maintaining an optimal environment, facilitating child engagement, fostering development and promoting environmental stewardship

Lebeau Gardens and Landscapes

Plant nursery employee, landscaper, driver

Downingtown, PA

May 2017 – June 2019

- Worked two summers as a landscaper, driver and small business employee aiding in inventory maintenance, book-keeping and accounting for the business

Five Guys

Crew Member

State College, PA

February – Present

- Perform all tasks involved with producing delicious burgers, fries and shakes in a sanitary work environment

RESEARCH EXPERIENCE

Plant Science

REU undergraduate research scholarship

University Park, PA

March 2017 – September 2017

- Awarded a summer research grant to complete a primer identification project for designated *Cuscuta* genes
- Contributed to a genomic barcoding project for all plant species in the Penn State Arboretum, by collecting samples and extracting genomes.

Max-Planck Institute for Brain Research

Internship

Riedberg, Germany

June 2015 – September 2015

- Worked in Dr. Letzkus's neocortical circuits lab under the supervision of Dr. Rogier Poorthuis
- Developed lab proficiency in a world class animal research setting by preparing solutions and materials for experiments
- Learned ethical animal research conduct during the humane extraction, handling and slicing of transgenic mice brains
- Gained experience in confocal microscopy, data analysis and neuron tracing
- Tasked with the search, negotiation and purchase of a neuro-imaging software suitable for creating 3-dimensional neuron traces

SKILLS

Proficient in German ILR level 3; native English speaker, adept in wilderness survival, multi-cultural teaching experience

