

The Role of Social Exclusion as a Mediator of Humor Style Among Dark Triad Personalities

Jacquelyn Knight

Marietta College

Table of Contents

Abstract.....	3
Introduction.....	4
Dark Triad Traits.....	4
Humor Styles.....	7
Social Exclusion.....	11
Method.....	13
Participants.....	14
Materials.....	14
Procedure.....	15
Results.....	17
Discussion.....	23
Limitations and Future Research.....	25
References.....	30
Appendices.....	34
Table 1: <i>Summary of Backwards Multiple Regression for Self-Defeating Humor After Future Condition</i>	34
Table 2: <i>Summary of Backwards Multiple Regression for Aggressive Humor After Future Condition</i>	35
Table 3: <i>Summary of Backwards Multiple Regression for Self-Enhancing Humor After Future Condition</i>	36
Table 4: <i>Summary of Backwards Multiple Regression for Affiliative Humor After Future Condition</i>	37
Table 5: <i>Summary of Backwards Multiple Regression for Aggressive Humor After Future Condition with Sub-Factors of Psychopathy</i>	38
Table 6: <i>Summary of One-Way Analysis of Variance of Social Exclusion Manipulation Checks by Future Condition</i>	39
Appendix A: Consent for Participation in Psychology Research Study.....	40
Appendix B: Demographics Questionnaire.....	42
Appendix C: NPI-40.....	43
Appendix D: MACH-IV.....	47
Appendix E: SRP-III.....	49
Appendix F: Humor Styles Questionnaire.....	52

Abstract

The present study aimed to expand upon previous research to determine if inducing social exclusion in individuals mediates humor style among the Dark Triad personality traits. The study utilized a repeated measures design in which 170 participants completed self-report measures of humor style, psychopathy, narcissism, and Machiavellianism prior to receiving bogus feedback about their futures; participants then completed a second measure of humor styles. One condition of feedback was specifically designed to induce feelings of social exclusion. Multiple regression analyses revealed that the future conditions in the study had no effect on participant's humor styles, but relationships between the Dark Triad and humor styles were found. The Dark Triad traits were significant predictors of an aggressive humor style in participants, as predicted. Psychopathy was also a predictor of self-defeating humor as expected, while Machiavellianism was not a predictor of self-defeating. Future research that addresses the limitations of the current study is necessary to further the understanding of how social exclusion influences the humor style of those with Dark Triad personalities.

The Role of Social Exclusion as a Mediator of Humor Style Among Dark Triad Personalities

In the last decade and a half, a great amount of research in the field of psychology has focused on the Dark Triad of personality, a compilation of subclinical narcissism, Machiavellianism, and subclinical psychopathy. These traits, which are thought to highlight the “darker” sides of individuals, have many similar characteristics leading to their classification in the Dark Triad (Paulhus & Williams, 2002).

Research differentiating four different humor styles utilized by individuals has also seen a surge in recent years and provides an interesting framework to analyze the Dark Triad within. Previous research has evaluated the differences in humor associated with these traits, suggesting that the function of different humor styles for individuals who possess the Dark Triad traits may be self-serving. The present research addresses this relationship, as well as the influential role of other variables such as social exclusion, which will help further understanding of these personality traits.

Dark Triad Traits

Subclinical narcissism as a personality trait is characterized by grandiosity, entitlement, and superiority in a nonclinical population (Paulhus & Williams, 2002). While the subclinical form resembles many characteristics of narcissism in the clinical or pathological form, it represents more of a non-detrimental amount of narcissism seen in an average person. Narcissistic individuals are thought to have elevated levels of self-esteem, although sometimes these individuals have a rather fragile self-esteem that creates the need for self-promotion (Rosenthal & Hooley, 2010). Perceived damage or threats to an individual with narcissism’s inflated self-view can be particularly provoking, triggering many behaviors aimed to preserve that view (Martinez, Zeichner, Reidy, & Miller, 2008). In evaluating measures of narcissism,

Emmons (1984) found that the trait emerged onto four factors: Exploitativeness/Entitlement, Leadership/Authority, Superiority/Arrogance, and Self-absorption/Self-Admiration. The Exploitativeness/ Entitlement factor is comprised of the interpersonal manipulation aspects of narcissism, such as the exploitation of others to advance one's own standing. The Leadership/ Authority factor reflects the desire and enjoyment of being a leader or authoritative figure. Factor 3, Superiority/ Arrogance, reflects the grandiose and arrogant characteristics of the trait. For example, those with narcissistic tendencies enjoy boasting, and even exaggerating, about their successes. Finally, the Self-absorption/ Self-admiration factor reflects the typical idea of 'self-love' and inflated self-view in narcissism (Emmons, 1984). An example of this fourth factor is an individual who is consumed by their popularity and appearance.

Machiavellianism, another Dark Triad trait, is a tendency towards manipulative and exploitive behaviors for self-gain (Rauthmann & Will, 2011). In addition to manipulation and exploitation of others, the trait is characterized by cold affect, lack of remorse, and a negative world view (Rauthmann & Will, 2011). When factor analyses of Machiavellian traits are conducted, they typically fall into three main factors: Interpersonal Tactics, Cynical View of Human Nature, and Disregard for Conventional Morality (Christie & Geis, 1970). Interpersonal Tactics are characterized by the use of interpersonal manipulation to get a desired goal, such as bribing an individual to do you a favor. A Cynical View of Human Nature is characterized by mistrusting others and believing everyone is motivated by self-interests. A Disregard for Conventional Morality is a failure to adhere to society's rules and morals; for example, a person with Machiavellian tendencies would violate the social rule of harming others if it served a useful purpose for them. (Christie & Geis, 1970; Martin et al., 2012).

The third personality trait in the Dark Triad is subclinical psychopathy, which is more indicative of the typical characteristic of psychopathy present in an average population than the pathological forms seen in clinical setting. Psychopathy is thought of as a multidimensional construct, although debate over the number of dimensions can be found in the literature. In one model, psychopathy is thought of as containing a primary and secondary factor.

The primary factor is characterized by a lack of empathy, callousness, and superficial charm, whereas the secondary factor consists of impulsivity, irresponsibility, and lack of behavioral control (Smith & Lilienfeld, 2013). The primary factor reflects the interpersonal and affective aspects of psychopathy while the secondary factor reflects the antisocial behaviors and lifestyle (Jakobwitz & Egan, 2006).

Contrarily, other factor analyses of self-report measures of psychopathy have indicated that the construct is comprised of four distinct factors: Callous Affect, Criminal Tendencies, Erratic Lifestyle, and Interpersonal Manipulation (Williams, Paulhus, & Hare, 2007). Callous Affect as a factor of psychopathy contains the emotional deficits seen in the trait, such as a lack of empathy, remorse, or concern for others, while Criminal Tendencies reflects the antisocial behavioral elements of psychopathy (Williams, Paulhus, & Hare, 2007). The Erratic Lifestyles factor represents the irresponsibility and impulsivity components of psychopathy, and the Interpersonal Manipulation factor reflects the lying and other tactics used in psychopathy to manipulate others. This four factor model has greater empirical support than the previous two factor conceptualization for use in self-report research given the positive intercorrelations of the four factors, which allows for an overall assessment of psychopathy as well as specific assessment of the individual constructs of the trait (Williams, Paulhus, & Hare, 2007).

Narcissism, Machiavellianism, and psychopathy show overlap in many characteristics, such as emotional detachment, self-promotion, aggression, and dishonesty, which lead researchers to analyze the traits in terms of the Dark Triad. There is some debate, however, over the degree to which the traits overlap resulting in the question of whether to conceptualize the Dark Triad as one general trait or as three separate but interrelated traits (Smith & Lilienfeld, 2013). Rauthmann and Kolar (2013) analyzed the three traits in terms of the interpersonal circumplex of Agency and Communion. The circumplex is a two dimensional Cartesian coordinate system that organizes interpersonal qualities by these dimensions. Communion represents the idea of love, affiliation, and union with others which ranges from hostile to friendly, whereas Agency refers to the ideas of dominance, power, and control, which ranges from dominant to submissive (Gurtman, 2009). This results in four major quadrants: Quadrant I- the friendly dominant, Quadrant II- the hostile dominant, Quadrant III- the hostile submissive, and Quadrant IV- the friendly submissive (Rauthmann & Kolar, 2013). When the Dark Triad traits were positioned within the interpersonal circumplex, research found that they fell into different quadrants; narcissism tended to fall into the friendly-dominant quadrant, Machiavellianism into the hostile-submissive, and psychopathy into the hostile-dominant (Rauthmann & Kolar, 2013). This finding supports the idea that the three traits are interrelated, but they are distinct traits themselves.

Humor Styles

Humor provides an interesting variable to evaluate within the context of the Dark Triad. Humor is typically thought to be a positive concept but research suggests that this is not always an accurate representation (Martin, Puhlik-Doris, Larsen, Gray, & Weir, 2003; Veselka,

Schermer, Martin, & Vernon, 2010). Humor has been found to be either adaptive or maladaptive for individuals based upon which humor styles they employ.

In developing a conceptualization of humor in order to create a self-report measure of the various styles, researchers established a 2x2 model for humor (Martin et al., 2003). This model was based upon two distinctions within humor: function and affective nature (Martin et al., 2003). Function refers to the way in which individuals may use humor to either enhance themselves or enhance their relationship with others, and affective nature represents how humor may either be benign and benevolent (adaptive strategy) or malevolent and detrimental (maladaptive strategy). This model distinguishes four humor styles in everyday use based upon these distinctions: affiliative, self-enhancing, self-defeating, and aggressive.

Affiliative humor represents the adaptive use of humor to enhance interpersonal relationships (Martin et al., 2003), and is described as friendly joking that facilitates bonds between individuals (Veselka et al., 2010). This style is positively correlated with markers of healthy interpersonal relationships such as satisfaction, intimacy, and support (Martin et al., 2012).

Self-enhancing humor represents the adaptive use of humor to enhance one's relationship with the self and reflects the use of humor as a coping strategy in stressful life situations or adversity (Martin et al., 2003). Self-enhancing humor is positively correlated with emotional well-being and negatively with emotional distress (Martin, Lastuk, Jeffery, Vernon, & Veselka, 2012).

In terms of the interpersonal circumplex, analysis of the four humor styles tends to place both of these adaptive humor styles in the gregarious-extroverted octant of the friendly dominant quadrant, suggesting the two have similar interpersonal meanings (Markey, Suzuki, & Marino,

2014). This notion of similarity between affiliative and self-enhancing styles is echoed in research on personality impressions associated with the humor styles. When judging personality attributes of individuals prescribed to be either high or low on one of the four humor styles, those with the adaptive humor styles received significantly enhanced impressions; this enhancement was greater for the affiliative style (Kuiper & Leite, 2010). Both adaptive humor styles positively correlate with both the cognitive and affective components of subjective well-being as well, furthering the support for their similarity (Jovanovic, 2011).

The two maladaptive strategies of humor, aggressive and self-defeating, also contain many similarities in these dimensions. Aggressive humor represents the interpersonal expression of humor without regard to how it may affect others, such as teasing, sarcasm, and ridicule (Martin et al., 2003), and may be used to hurt or manipulate others (Veselka et al., 2010). This humor style is correlated negatively with relationship satisfaction and competency in interpersonal relationships, but positively with hostility (Martin et al., 2012).

Self-defeating humor represents the maladaptive use of negative jokes at one's own expense to amuse others (Martin et al., 2003). Self-defeating humor correlates positively with emotional distress and hostility and negatively with optimism and self-esteem (Martin et al., 2012).

Both aggressive and self-defeating humor tended to be associated with the assured-dominant and arrogant-calculating octants of the hostile dominant quadrant within the interpersonal circumplex (Markey, Suzuki, & Marino, 2014). Additionally, in terms of subjective well-being, both of these maladaptive humor styles were negatively correlated with the affective component of subjective well-being, but are not related to the cognitive component (Jovanovic, 2011).

As with the adaptive humor styles, the negative styles also influenced personality judgments from others. There was a detrimental effect of being perceived as high in aggressive or self-defeating humor on impressions given by others (Kuiper & Leite, 2010). The aforementioned research signifies the maladaptiveness of using aggressive or self-defeating humor in everyday situations. However, these humor styles may serve as a strategy for individuals with Dark Triad personalities.

Previous research has investigated this relationship suggesting that the Dark Triad traits have separate but interrelated relationships with humor style. Veselka, Schermer, Martin and Vernon (2010) attempted to see if there were any relationships between the Dark Triad traits and the four proposed humor styles in two groups of twins. Psychopathy and Machiavellianism were significantly and positively correlated with both aggressive and self-defeating humor styles in both groups in the study, whereas narcissism was correlated significantly with both affiliative and self-enhancing humor for one group and only with affiliative in the other group of twins (Veselka et al., 2010).

In research replicating and extending these findings, the individual factors of the Dark Triad were analyzed for their relationship with the four humor styles. The Leadership/Authority, Superiority/Arrogance, and Self-Absorption/Self-Admiration factors of narcissism were positively correlated with affiliative humor, while Exploitativeness/Entitlement was correlated positively with aggressive humor and negatively with self-enhancing humor; Superiority/Arrogance was also positively associated with aggressive humor (Martin et al., 2012).

All three sub-factors of Machiavellianism positively correlated with an aggressive humor style. The Cynical View of Human Nature factor was also positively correlated with self-

defeating humor. Additionally, Interpersonal Tactics and Cynical View of Human Nature were negatively correlated with self-enhancing humor (Martin et al., 2012).

In relation to psychopathy, Callous Affect, Erratic Lifestyles, and Interpersonal Manipulation were all positively correlated with aggressive humor style and Erratic Lifestyle also showed a weak association with affiliative humor. The Criminal Tendency factor was not associated with any of the four humor types (Martin et al., 2012). These findings are not surprising given the personality components each of these sub-factors comprise for the individual traits, and suggest there may be a differential relationship with humor styles based on the individual factors of each personality type.

Social Exclusion

Previous research has also evaluated the relationship between psychopathy and negative humor styles, as mediated by social exclusion. Social exclusion refers to the experience of an individual being excluded, or even ostracized, from other individuals. Massui, Fujiwara, and Ura (2013) conducted a correlational study using self-report measures of psychopathy, experiences of social exclusion, and humor styles to determine if a relationship between the variables exists. The researchers found that experiences of social exclusion completely mediated the relationship between psychopathy and aggressive humor style in a non-clinical population (Massui et al., 2013). Significant positive correlations were found between psychopathy and experiences of social exclusion, psychopathy and aggressive humor, and social exclusion and aggressive humor. Additionally, social exclusion was positively correlated with the self-defeating humor style, and negatively correlated with an affiliative humor style; psychopathy was also negatively correlated with affiliative humor (Massui et al., 2013). Using a regression model, psychopathy predicted both aggressive humor and social exclusion; however, when social exclusion was added to the

first step of the model predicting aggressive humor, the direct relationship between psychopathy and aggressive humor disappeared, indicating that this relationship is completely mediated by social exclusion (Massui et al., 2013).

Social exclusion has also previously been shown to induce aggressive behavior in individuals, both indirectly and directly (Twenge, Baumeister, Tice, & Stucke, 2001). In a series of experiments researchers induced feelings of social exclusion by either providing participants with false information about the number and quality of interpersonal relationships they would have in the future or telling them no one in a group chose them as a desirable partner; participants then had to either rate others for a job interview or induce aversive noise to others (Twenge et al., 2001). Additionally, in four of the experiments, the participant was also told that the person they were rating or inducing noise to had either evaluated them negatively or positively on an essay they had written. Participants who were led to believe that they would be socially isolated and have no interpersonal relationships later in life rated others more negatively for job interviews (indirect aggression) compared to those who were told they would have many quality relationships, those told they would have many relationships but also misfortunes and accidents, and those not provided any feedback at all (Twenge et al., 2001). These findings extend only to those who also had aggressed against the socially excluded person, by means of a bad evaluation; if the target of aggression had praised the participant, they were less likely act aggressively. Additionally, after inducing social exclusion by telling participants that no one in a particular group wished to work with them, participants induced more and louder noise to their perceived excluder than those who were accepted. Furthermore, the researchers found that the effect of social exclusion on aggression was not limited to those who had criticized participants. Specifically, persons who felt socially excluded by a group still engaged in more direct

aggression than those who felt accepted even if the target of the aggression represented a neutral party who had neither criticized nor praised the participant (Twenge et al., 2001).

The current study sought to expand upon this previous research to determine if inducing social exclusion in individuals mediates humor style among the Dark Triad personality traits using a repeated measures design. Since the general population is guarded against individuals who take advantage of them, such as members of the Dark Triad, social exclusion is a factor that these individuals may face in the real world (Jonason, Li, & Teichner, 2010). Determining the effects, if any, that social exclusion may have on the behavior of these individuals may help others guard against these behaviors. Furthermore, information regarding the role that social exclusion plays in shaping an individual's behavior and the implications this has on social relations is important in the current culture of violence and malevolence in the United States. Humor, specifically aggressive humor, plays a role in instances of bullying or manipulation; this role is especially important in individuals with Dark Triad personalities that are prone to dominant or hostile interpersonal interactions (Rauthmann & Kolar, 2013).

Based on previous research regarding humor and the Dark Triad, as well as influences of social exclusion, it was hypothesized that individuals high in the three Dark Triad traits would report an increase in aggressive humor styles in the presence of social exclusion. This relationship was expected to be highest in the three sub-factors of Machiavellianism and the Callous Affect factor of psychopathy. Additionally, it was hypothesized that those high in psychopathy and Machiavellianism who were led to believe they would have misfortunes and be accident prone in the future would report an increase in self-defeating humor styles.

Method

Participants

One hundred and seventy participants (73 males and 97 females) were recruited using Amazon's Mechanical Turk (mTurk). Amazon's mTurk is an online marketplace for work that utilizes human intelligence which has shown good reliability and validity in psychometric research, equivalent to traditional recruitment methods (Buhrmester, Kwang, & Gosling, 2011). Individuals using mTurk can choose to participate in a task, such as a research study, based on a brief description of the task, estimated duration, available compensation, and any prerequisites for the task. Enrollment in a college or university was the only prerequisite for participation in the current study; the participant sample was composed of 6 freshmen, 32 sophomores, 25 juniors, 53 seniors, and 54 graduate students. Participants were compensated \$0.50 for their participation in the study through mTurk.

Materials

An informed consent form stating that the purpose of the study was to determine if different personality traits exist between individuals in different academic majors was given to all participants at the beginning of the study (see Appendix A).

A demographic sheet assessing basic information about participants was given. This information included participants' sex, ethnicity, college major and minor, year in college, and various questions related to daily living activities. Questions were a mixture of multiple choice, yes or no, and free response (see Appendix B).

Narcissism was measured using the 40-item Narcissistic Personality Inventory (Raskin & Terry, 1988). The NPI has been shown to have good reliability and validity with alpha composite reliability scores of .83, .74, .80, and .90 (Raskin & Terry, 1988). Participants chose one of two statements for each item, one of which reflected a narcissistic personality and one that did not (see Appendix C).

The 20-item MACH-IV (Christie & Geis, 1970) was used to assess Machiavellianism. Participants were asked how much they agree with statements reflecting Machiavellian ideas on a Likert scale (1= strongly disagree, 5= strongly agree), which has demonstrated good validity and an alpha reliability of .74 in previous research (Christie & Geis, 1970; Paulhus & Williams, 2002) (see Appendix D).

The Self-Report Psychopathy –III Scale (SRP) (Williams, Nathanson, & Paulhus, 2003) was used to assess psychopathy in the participants. The measure consists of 64 items in which participants rated how much they agree with statements reflecting subclinical psychopathy on a Likert scale (1= strongly disagree, 5= strongly agree). The SRP-III has demonstrated sound psychometric properties with an alpha reliability of .88 for the overall scale and validity evidenced by correlations with other personality scales that are consistent with the characteristics of subclinical psychopathy (Williams, Nathanson, & Paulhus, 2003) (see Appendix E).

The 32-item Humor Styles Questionnaire (HSQ; Martin et al., 2003) was given to participants to assess the four humor style subtypes. Participants were asked to respond to each item on a Likert scale (1=totally disagree, 7=totally agree). The HSQ has demonstrated sound validity and reliability with an alpha scores ranging from .77 and .81 (Martin et al., 2003) (see Appendix F).

Procedure

All participants first completed an informed consent form, followed by a demographic sheet, the NPI, SRP-III, and MACH-IV. Participants also completed a Humor Styles Questionnaire at this time to obtain a baseline measurement.

After completing the personality measures and the HSQ, participants received feedback regarding their futures following a two-minute period during which they were told the computer

was “calculating” their scores. All feedback was completely bogus, and relied on which condition they were in rather than their scores on those measures, which were calculated at a later time. Participants were randomly assigned before beginning the study to one of four conditions: Future-Belonging, Future-Alone, Future-Misfortune, and a control condition. Using the same feedback as Twenge et al. (2001), participants received one of the following vignettes:

Participants in the Future-Belonging condition read:

You’re the type of person who has rewarding relationships throughout life.

You’re likely to have a long and stable marriage and have friendships that will last into your later years. The odds are that you’ll always have friends and people who care about you.

Participants in the Future-Alone condition read:

You’re the type of person who will end up alone later in life. You may have friends and relationships now, but by your mid 20’s most of these will have drifted away. You may even marry or have several marriages, but these are likely to be short-lived and not continue into your 30’s. Relationships don’t last, and when you’re past the age where people are constantly forming new relationships, the odds are you’ll end up being alone more and more.

Participants in the Future-Misfortune read:

You’re likely to be accident prone later in life—you might break an arm or a leg a few times, or maybe be injured in car accidents. Even if you haven’t been accident prone before, these things will show up later in life, and the odds are you will have a lot of accidents.

Participants in the control condition received no feedback about their future and instead read:

The results from your personality measures are inconclusive. Please continue with the rest of the study.

Following the feedback about their futures, participants then completed a second Humor Styles Questionnaire. This measure included additional filler items to help disguise the repetition of the HSQ. Some of these additional items pertained to feelings of social exclusion specifically to serve as a manipulation check for the study conditions. Examples of these items include, “I feel left out by my peers”, “I am always the single one out of my friends”, and “I have a secure support system”.

Once the participants were finished, they were thanked and debriefed. The debriefing included the true nature of the experiment, as well as ensured that the participants knew that all feedback given was completely bogus and their future relationships were not being predicted in the study. Participants were assessed to make sure there were no lasting negative effects, such as anxiety, and provided resources for counseling services if necessary.

Results

Multiple regression analyses were used to analyze the results of this study. Four separate regression analyses were conducted to predict changes in: self-defeating humor style, aggressive humor style, self-enhancing humor style, and affiliative humor style following the future condition. The predictive variables in each regression analyses included participants’: SRP-III scores, Mach-IV scores, NPI scores, future condition, and respective humor style score prior to the future condition.

In order to investigate the extent to which participants' scores on the SRP-III, MACH-IV, NPI, future condition, and self-defeating humor style prior to receiving the future condition predicted participants' self-defeating humor after receiving the future condition, a backwards stepwise multiple regression analysis was conducted. Participants' scores on the SRP-III significantly predicted their scores on the self-defeating subscale of the Humor Styles Questionnaire following the future condition, $b=2.31$, $t(167)=2.62$, $p=.01$. Participants' scores on the self-defeating subscale prior to the future condition also significantly predicted their self-defeating humor scores after receiving the future feedback, $b=.83$, $t(167)=17.18$, $p<.001$. Specifically, these relationships indicate that as participants' scores on the SRP-III and the self-defeating humor subscale prior to the future condition increased, their scores on the self-defeating humor subscale after the future condition did as well. In a model including both participants' SRP-III scores and their self-defeating humor scores prior to feedback, a significant proportion of the variance in participants' self-defeating humor scores following the future condition was also explained, $R^2=.66$, $\Delta R^2<.001$, $F(2,167)=164.67$, $p<.001$. Participants' scores on the NPI and MACH-IV and the future condition in which participants were placed did not significantly predict self-defeating humor scores following the future condition. Table 1 provides a summary of these results.

A backwards stepwise multiple regression analysis was also conducted to investigate the extent to which participants' scores on the SRP-III, MACH-IV, NPI, future condition, and aggressive humor style prior to receiving the future condition predicted participants' aggressive humor after receiving the future condition. Participants' scores on the Self-Report Psychopathy-III also significantly predicted their scores on the aggressive humor subscale of the Humor Styles Questionnaire following the future condition, $b=3.42$, $t(165)=3.24$, $p=.001$. Participants' scores

on the MACH-IV also significantly predicted aggressive humor scores following future feedback, $b=2.35$, $t(165)=2.74$, $p<.05$. In addition, participants' aggressive humor scores prior to the future condition significantly predicted aggressive humor scores following the condition, $b=.71$, $t(165)=12.34$, $p<.001$. These relationships indicate that as participants' scores on the SRP-III, MACH-IV, and aggressive humor scores prior to the future condition increased, so did their aggressive humor scores following the future condition. Participants' scores on the NPI were a significant predictor in the overall model predicting aggressive humor, though the scores on the NPI merely approached being a significant predictor of aggressive humor scores following future feedback, $b=-.10$, $t(165)=-1.73$, $p=.09$. Specifically, this negative relationship indicates that as scores on the NPI increased, aggressive humor scores following the future feedback decreased. A model including participants' scores on the SRP-III, MACH-IV, NPI and aggressive humor subscale of the HSQ prior to receiving feedback about their future explained a significant proportion of the variance of participants' aggressive humor subscale scores after receiving feedback, $R^2=.70$, $\Delta R^2=.002$, $F(4,165)=96.73$, $p<.001$. The future condition that participants were in did not significantly predict their aggressive humor scores following the feedback. A summary of these results is provided in Table 2.

To investigate the extent to which participants' scores on the SRP-III, MACH-IV, NPI, future condition, and self-enhancing humor style prior to receiving the future condition predicted participants' self-enhancing humor after receiving the future condition, a third backwards stepwise multiple regression analysis was conducted. Scores on the self-enhancing humor subscale of the Humor Styles Questionnaire following the future feedback was significantly predicted by participants' scores on the self-enhancing humor subscale prior to the feedback, $b=.79$, $t(166)=17.80$, $p<.001$. Participants' scores on the NPI also significantly

predicted self-enhancing humor scores following the future condition, $b=.11$, $t(166)=2.07$, $p<.05$. These relationships indicate that as participants' scores on the self-enhancing subscale prior to the future feedback and the NPI increased, their scores on the self-enhancing humor subscale following the feedback did as well. Additionally, there was a negative relationship between participants' scores on the SRP-III and self-enhancing humor scores following the future condition, where scores on the SRP-III significantly predicted self-enhancing humor in the overall model, though these scores merely approached being a significant predictor of self-enhancing humor scores after the feedback, $b=-1.39$, $t(166)=-1.76$, $p=.08$. A model including participants' scores on the SRP-III, NPI and self-enhancing humor subscale prior to the future condition explained a significant proportion of the variance in participants' self-enhancing humor scores after the future condition, $R^2=.68$, $\Delta R^2=-.003$, $F(3,166)=117.84$, $p<.001$. Participants' scores on the MACH-IV and the future condition in which they were placed did not significantly predict self-enhancing humor scores following the future condition. Table 3 provides a summary of these results.

A backwards stepwise multiple regression analysis was also conducted to investigate the extent to which participants' scores on the SRP-III, MACH-IV, NPI, future condition, and affiliative humor style prior to receiving the future condition predicted participants' affiliative humor after receiving the future condition. Participants' scores on the MACH-IV significantly predicted affiliative humor scores following the future condition in the overall model predicting aggressive humor, though the scores on the MACH-IV merely approached being a significant predictor, $b=1.27$, $t(166)=1.69$, $p=.09$. Participants' scores on the affiliative humor subscale prior to the future condition also significantly predicted the affiliative humor scores following the future feedback, $b=.85$, $t(166)=21.89$, $p<.001$. These relationships indicate that as participants'

scores on the MACH-IV and the affiliative humor subscale prior to the future condition increased, their affiliative humor scores after the future condition did as well. In addition, participants' scores on the SRP-III significantly predicted affiliative humor scores after the future condition, $b=-1.72$, $t(166)=-2.10$, $p<.05$. This is a negative relationship indicating that as participants' SRP-III scores increased, affiliative humor scores after the future condition decreased. In a model including participants' scores on the MACH-IV, SRP-III, and affiliative humor subscale prior to the future condition, a significant proportion of the variance in affiliative humor scores following the future condition was explained, $R^2=.76$, $\Delta R^2=-.002$, $F(3,166)=175.67$, $p<.001$. Participants' scores on the NPI and their assigned future condition did not significantly predict scores on the affiliative humor subscale of the Humor Styles Questionnaire following the future condition. Table 4 provides a summary of these results.

A follow up multiple regression analysis was ran to predict scores on the aggressive humor subscale following the future condition with the predictive variables including: aggressive humor scores prior to the future condition, the future condition, participants' overall scores on the NPI and MACH-IV, and participants' scores on the four sub-factors of the SRP-III (Antisocial Behavior, Callous Affect, Interpersonal Manipulation, and Erratic Lifestyle). As in the regression analysis with the overall SRP-III score, participant's scores on the NPI, MACH-IV, and aggressive humor score prior to the future condition were significant or approached significance as predictors of aggressive humor scores following the future conditions ($b=-.13$, $t(164)=-2.10$, $p=.04$; $b=1.87$, $t(164)=1.92$, $p=.06$; $b=.72$, $t(164)=12.49$, $p<.001$, respectively). The Erratic Lifestyle factor of the SRP-III was a significant predictor of aggressive humor scores following the future condition in the overall model predicting aggressive humor, though the scores on the Erratic Lifestyles factor merely approached being a significant predictor, $b=1.50$,

$t(164)=1.71, p=.09$. Additionally, the Interpersonal Manipulation factor of the SRP-III was a significant predictor of aggressive humor scores following the future condition, $b=2.31$, $t(164)=2.34, p=.02$. These relationships indicate that as participants' scores on the Erratic Lifestyles and Interpersonal Manipulation factors of the SRP-III increased, so did their aggressive humor scores following the future condition. A model including participants' scores on the NPI, MACH-IV, Erratic Lifestyle and Interpersonal Manipulation factors of the SRP-III, and aggressive humor scores prior to receiving the future condition explained a significant proportion of the variance in aggressive humor scores following the future condition, $R^2=.71$, $\Delta R^2=-.002$, $F(5,164)=78.51, p<.001$. Participants' future condition, scores on the Callous Affect factor of the SRP-III, and scores on the Antisocial Behavior factor of the SRP-III were not significant predictors of participants' aggressive humor scores following the future condition. These results are summarized in Table 5.

Additionally, follow up analyses were ran as a manipulation check to determine if the Future-Alone condition did in fact induce feelings of social exclusion. Eight questions in total were included to serve as the manipulation check for social exclusion. Using a one-way ANOVA, we found that participants' responses to the statement "I have a secure support system" were significantly affected by which future condition they were in, $F(3,166)=2.85, p=.04$. Participants in the Future-Alone condition disagreed more with this statement ($M=4.93$, $SD=1.55$) than those in the Future-Accident condition ($M=5.71$, $SD=1.35$), those in the Future-Belonging condition ($M=5.59$, $SD=1.28$), and those in the control condition ($M=5.63$, $SD=1.42$). There were no significant differences between participants based on their assigned future condition on the seven other manipulation check questions, however. A summary of these results is provided in Table 6.

Discussion

The current study investigated the relationship between social exclusion, humor style, and the Dark Triad personality traits. Specifically, this study investigated whether inducing feelings of social exclusion in individuals mediated humor styles among those Dark Triad personality traits. It was hypothesized that individuals high in the three Dark Triad traits would report an increase in aggressive humor styles in the presence of social exclusion, as in the Future-Alone condition. This relationship was expected to be highest in the three sub-factors of Machiavellianism and the Callous Affect factor of psychopathy. It was also hypothesized in the current study that those high in psychopathy and Machiavellianism who were led to believe they would have misfortunes and be accident prone in the future would report an increase in self-defeating humor styles.

These hypotheses were partially supported in the current study. As hypothesized, all three traits of the Dark Triad significantly predicted aggressive humor following the future condition that participants were in. However, Machiavellianism and the Callous Affect factor of psychopathy did not have the highest relationship with aggressive humor following the future condition. While Machiavellianism was a significant predictor in the overall model, these scores merely approached being a significant predictor of aggressive humor ($p=.06$). Additionally, when the factors of psychopathy were added individually to the multiple regression model predicting aggressive humor scores following the future condition, the Callous Affect factor was not a significant predictor of those humor scores. Instead, the Erratic Lifestyle and Interpersonal Manipulation factors were significant predictors in the overall regression model. It is not surprising that the Erratic Lifestyle and Interpersonal Manipulation factors were predictors of aggressive humor, but it is surprising that the Callous Affect factor was not a predictor given

previous research (Martin et al., 2012). Contrary to the hypotheses, the future condition that participants were in was not a significant predictor of their aggressive humor scores. Therefore, the presence of social exclusion as in the Future-Alone condition had no significant effect on participants' aggressive humor scores. This contradicts previous research in which social exclusion induced using the same Future-Alone vignette led to both indirect and direct aggressive behavior (Twenge et al., 2001). However, results from the social exclusion manipulation check indicate that feelings of social exclusion were not induced in the current study which may explain this contradictory finding.

The third hypothesis was also partially supported; participants' self-defeating humor scores following the future condition were significantly predicted by their psychopathy scores. This is consistent with previous research on the relationship between the psychopathy and humor (Veselka et al., 2010). Self-defeating humor scores were not significantly predicted by participants' Machiavellianism scores, however. Previous research has established a relationship between Machiavellianism and self-defeating humor (Veselka et al., 2010; Martin et al., 2012). Both Veselka et al. (2010) and Martin et al. (2012) investigate the relationships between the Dark Triad traits and humor styles using correlations rather than a predictive model. While Machiavellianism and self-defeating humor may be positively correlated, this correlation may not be substantial enough to predict the use of self-defeating humor in an overall model including other factors. Participants' assigned future condition was also not a significant predictor of their self-defeating humor scores, indicating that being in the Future-Misfortune condition did not increase self-defeating humor.

The current study also found narcissism to be a significant predictor of self-enhancing humor, which is consistent with prior research (Veselka et al., 2010). Unexpectedly, psychopathy

was also a significant predictor of self-enhancing and affiliative humor in the current study, though these relationships were negative. Other studies have not found a relationship between psychopathy and these two adaptive forms of humor, but the characteristics of psychopathy and these humor styles lend an explanation for these findings. Research has found psychopathy to fall typically in the hostile-dominant quadrant of the interpersonal circumplex indicating a lack of communion in individuals high the trait (Rauthmann & Kolar, 2013). To the contrary, both affiliative and self-enhancing humor fall in the friendly-dominant quadrant of the interpersonal circumplex indicating that those with these humor styles are high in communion (Markey, Suzuki, & Marino, 2014). Machiavellianism was also a significant predictor of affiliative humor in the current study. Given the high tendency for manipulative tactics in individuals high in Machiavellianism, it is likely that the use of affiliative humor may be one of those tactics (Christie & Geis, 1970).

Limitations and Future Research

There were several limitations to the current study. First, the sample was lacking ethnic diversity. The majority of participants in this study were Caucasian (70%). In addition, a prerequisite to participating in this study was enrollment in a college or university due to the details in the cover story. It is possible that there are certain qualities unique to a collegiate population that influenced the results of the current study. Researchers have previously looked at the reliability and validity of utilizing college student samples in research on personality traits. Cooper, McCord, and Socha (2011) found that college students differ from older adults on the Big Five factors of personality, but that these personality traits had the same influence on their dependent variable (political opinions) for both groups. This suggests that there may be distinct difference in personality traits between college students and non-students and while the data was

still reliable and valid in the case of political opinions, it is possible that the same is not true in the case of humor styles.

A second limitation to the current study was the inefficacy of the future conditions. Results from a manipulation check indicate that feelings of social exclusion were not induced by the Future-Alone condition in this study. However, the vignettes used in this study were effective in inducing social exclusion in previous research (Twenge et al., 2001). One difference between previous research and the current study was the use of an online forum for participants. The impersonal element of using Amazon's Mechanical Turk may have influenced the efficacy of the future conditions. In the current study, participants never met the researcher and had no real ties to the researcher other than name and email information, which may have reduced the level of importance participants placed on the bogus feedback they received about their futures. Research has established that perceived social presence can influence user trust in an online context, and infusing social presence into websites with socially rich descriptions and pictures can affect perceived trust and usefulness of commercial websites (Hassanein & Head, 2007). There may have been a lack of perceived social presence in the current study which influenced the efficacy of the future conditions. Future research should be conducted replicating this study in a research lab setting using a computer system or by adding more socially rich descriptions of the researcher to determine whether the impersonal nature of mTurk had an effect on the results.

Other methods of inducing social exclusion could also be utilized in future research to test the hypothesis that feelings of social exclusion will increase aggressive humor scores. Many computerized programs have been effective in laboratory setting to induce feelings of ostracism and exclusion. Cyberball is one common program for research on inclusion and exclusion (Williams & Jarvis, 2006). In Cyberball, a participant is playing a computerized game of "catch"

with what it thinks are other real players; based on the researchers manipulations, a participant can be made to feel ostracized by the other players if they don't receive the ball in the game. This program has been found to be a valid and reliable method of inducing feeling of ostracism, and has proved useful in other domains of inclusion and exclusion research as well (Williams & Jarvis, 2006). Ostracism Online is a more recent paradigm that has been developed to induce feelings of exclusion in a computerized setting. This program is based on a social media design in which participants are told that they will participate in an online group task and first need to develop a personal profile for the group members to become acquainted (Wolf, Levordashka, Ruff, Kraaijeveld, Lueckmann, & Williams, 2014). Participants then go through the acquaintance phase where they read the other group members' profiles (which are fake) and believe theirs is being reviewed; during this phase social acceptance is communicated via "likes" which is how feelings of ostracism and exclusion are manipulated. Ostracism Online was found to be a valid and reliable tool for this type of research, and in comparison to Cyberball is a more versatile research tool in terms of how these feelings of exclusion influence future group behavior (Wolf et al., 2014). Utilizing a program such as Ostracism Online to research the effects of social exclusion on humor style could provide a unique method of measuring humor use in group contexts following exclusion, rather than relying on a self-report measure like the HSQ.

Future research should also address the significant stability that was found among participants' scores on the Humor Styles Questionnaire before and after receiving feedback about their futures. For each of the four humor styles, multiple regression analyses found that participants' humor scores prior to the future condition were a significant predictor of their scores following the future conditions ($p < .001$). It is likely that the lack of effective manipulation in the future conditions was a factor in this relationship. However, it is also possible that the

Humor Styles Questionnaire reflects a more stable humor trait rather than a participant's humor style in a particular situation. Previous research has looked at the importance of evaluating intra-individual differences in personality traits, including humor, as well as the inter-individual differences that are commonly measured. Caldwell, Cervone, and Rubin (2008) evaluated the intra-individual variation that occurs in humor ratings through various social contexts by asking participants how likely they were to use each of the four humor types in certain scenarios and identifying each participants' own reasons for using humor. Through this, they found that the likelihood of using a particular humor style varied by the situation's relevance to the participants' own identified reasons for using humor, but not for the relevance to the reasons for using humor identified by the four humor styles (Caldwell, Cervone, & Rubin, 2008). Expanding upon this research to develop a standardized measure of the four humor styles established in the Humor Styles Questionnaire in various social situations could elaborate on the intra-individual differences in humor use and expand on the relationship between social exclusion and humor in everyday contexts.

Despite the limitations of the current study, it does provide further evidence of a relationship between the Dark Triad personality traits and humor styles. In line with previous research, the current study found that all of the Dark Triad traits were significant predictors of aggressive humor styles. The current study also found a significant relationship between psychopathy and self-defeating humor and between narcissism and self-enhancing humor that has been shown previously (Veselka et al., 2010). In addition to replicating these relationships, the current study found some unexpected relationships. Particularly, the current study found participants' psychopathy scores were significant predictors of both self-enhancing and affiliative humor, though this relationship was negative in both cases. As mentioned, these

results are not surprising when taken in the context of the characteristics of both adaptive humor styles and psychopathy. It is evident that the Dark Triad personality traits and the four humor styles have specific relationships. The current study sought to determine the effects that social exclusion in particular may have on mediating relationships between the Dark Triad personalities and humor style, as aggressive humor plays a role in some of the malevolence we see in our society. As social exclusion was not induced in the current study, it is apparent that further research needs to be done to improve upon the present design. By improving upon the current study, researchers may be able to answer questions about aggressive interpersonal behavior and the role of social exclusion in some of the violent acts that affect our world.

References

- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data?. *Perspectives On Psychological Science*, 6(1), 3-5. doi:10.1177/1745691610393980
- Caldwell, T. L., Cervone, D., & Rubin, L. H. (2008). Explaining intra-individual variability in social behavior through idiographic assessment: The case of humor. *Journal Of Research In Personality*, 42(5), 1229-1242. doi:10.1016/j.jrp.2008.03.008
- Christie, R. & Geis, F.L. (1970). *Studies in Machiavellianism*. New York, NY: Academic press.
- Cooper, C. A., McCord, D. M., & Socha, A. (2010). Evaluating the college sophomore problem: The case of personality and politics. *The Journal Of Psychology: Interdisciplinary And Applied*, 145(1), 23-37. doi:10.1080/00223980.2010.528074
- Gurtman, M. B. (2009). Exploring personality with the interpersonal circumplex. *Social and Personality Psychology Compass*, 3(4), 601-619. doi:10.1111/j.1751-9004.2009.00172.x
- Hassanein, K., & Head, M. (2007). Manipulating perceived social presence through the web interface and its impact on attitude towards online shopping. *International Journal of Human-Computer Studies*, 65, 689-708. doi:10.1016/j.ijhcs.2006.11.018
- Jonason, P. K., Li, N. P., & Teicher, E. A. (2010). Who is James Bond?: The dark triad as an agentic social style. *Individual Differences Research*, 8, 111-120.
- Jovanovic, V. (2011). Do humor styles matter in the relationship between personality and subjective well-being?. *Scandinavian Journal of Psychology*, 52(5), 502-507. doi:10.1111/j.1467-9450.2011.00898.x

- Kuiper, N. A., & Leite, C. (2010). Personality impressions associated with four distinct humor styles. *Scandinavian Journal of Psychology*, 51(2), 115-122. doi:10.1111/j.1467-9450.2009.00734.x
- Markey, P. M., Suzuki, T., & Marino, D. P. (2014). The interpersonal meaning of humor styles. *Humor: International Journal of Humor Research*, 27(1), 47-64. doi:10.1515/humor-2013-0052
- Martin, R. A., Lastuk, J. M., Jeffery, J., Vernon, P. A., & Veselka, L. (2012). Relationships between the dark triad and humor styles: A replication and extension. *Personality and Individual Differences*, 52(2), 178-182. doi:10.1016/j.paid.2011.10.010
- Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J., & Weir, K. (2003). Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. *Journal of Research in Personality*, 37(1), 48-75. doi:10.1016/S0092-6566(02)00534-2
- Masui, K., Fujiwara, H., & Ura, M. (2013). Social exclusion mediates the relationship between psychopathy and aggressive humor style in noninstitutionalized young adults. *Personality and Individual Differences*, 55(2), 180-184. doi:10.1016/j.paid.2013.03.001
- Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36(6), 556-563. doi:http://dx.doi.org/10.1016/S0092-6566(02)00505-6
- Raskin, R., & Terry, H. (1988). A principle components analysis of the narcissistic personality inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, 54, 890-902.

- Rauthmann, J. F., & Kolar, G. P. (2013). Positioning the dark triad in the interpersonal circumplex: The friendly-dominant narcissist, hostile-submissive Machiavellian, and hostile-dominant psychopath? *Personality and Individual Differences*, 54(5), 622-627. doi:<http://dx.doi.org/10.1016/j.paid.2012.11.021>
- Rauthmann, J. F., & Will, T. (2011). Proposing a multidimensional Machiavellianism conceptualization. *Social Behavior & Personality: An International Journal*, 39(3), 391-403.
- Smith, S. F., & Lilienfeld, S. O. (2013). Psychopathy in the workplace: The knowns and unknowns. *Aggression and Violent Behavior*, 18(2), 204-218. doi:<http://dx.doi.org/10.1016/j.avb.2012.11.007>
- Twenge, J. M., Baumeister, R. F., Tice, D. M., & Stucke, T. S. (2001). If you can't join them, beat them: Effects of social exclusion on aggressive behavior. *Journal of Personality and Social Psychology*, 81(6), 1058-1069. doi:10.1037/0022-3514.81.6.1058
- Veselka, L., Schermer, J. A., Martin, R. A., & Vernon, P. A. (2010). Relations between humor styles and the dark triad traits of personality. *Personality and Individual Differences*, 48(6), 772-774. doi:<http://dx.doi.org/10.1016/j.paid.2010.01.017>
- Williams, K. D., & Jarvis, B. (2006). Cyberball: A program for use in research on interpersonal ostracism and acceptance. *Behavior Research Methods*, 38(1), 174-180. doi:10.3758/BF03192765
- Williams, K.M., Nathanson, C., Paulhus, D.L. (2003). *Structure and validity of the self-report psychopathy scale-iii in normal populations*. Poster presented at the 111th annual convention of the American Psychological Association, Toronto, Canada.

- Williams, K. M., Paulhus, D. L., & Hare, R. D. (2007). Capturing the four-factor structure of psychopathy in college students via self-report. *Journal of Personality Assessment*, 88(2), 205-219. doi:10.1080/00223890701268074
- Wolf, W., Levordashka, A., Ruff, J. R., Kraaijeveld, S., Lueckmann, J., & Williams, K. D. (2015). Ostracism Online: A social media ostracism paradigm. *Behavior Research Methods*, 47(2), 361-373. doi:10.3758/s13428-014-0475-x

Table 1

Summary of Backwards Multiple Regression for Self-Defeating Humor After Future Condition

Model	Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>R</i>	<i>R</i> ²	ΔR^2
	<i>B</i>	Std. Error	Beta								
1 (Constant)	-1.25	2.85			-.44	.66	64.77	.000*	.82	.66	.66
NPI Score	.004	.07	.003		.05	.96					
MACH-IV Score	-.22	1.00	-.01		-.22	.83					
Overall SRP-III Score	2.43	1.19	.13		2.04	.04*					
Future Condition	.13	.40	.01		.31	.76					
HSQ Self-Defeating Humor 1	.84	.05	.79		16.78	.000*					
2 (Constant)	-1.23	2.82			-.44	.66	81.46	.000*	.82	.66	.000
MACH-IV Score	-.22	1.00	-.01		-.22	.82					
Overall SRP-III Score	2.45	1.08	.13		2.27	.02*					
Future Condition	.13	.40	.01		.31	.76					
HSQ Self-Defeating Humor 1	.83	.05	.79		16.97	.000*					
3 (Constant)	-1.50	2.56			-.58	.56	109.22	.000*	.82	.66	.000
Overall SRP-III Score	2.31	.89	.12		2.61	.01*					
Future Condition	.13	.40	.01		.31	.76					
HSQ Self-Defeating Humor 1	.83	.05	.79		17.13	.000*					
4 (Constant)	-1.18	2.34			-.50	.62	164.67	.000*	.82	.66	.000
Overall SRP-III Score	2.31	.88	.12		2.62	.01*					
HSQ Self-Defeating Humor 1	.83	.05	.78		17.18	.000*					

Note. Dependent variable: HSQ self-defeating humor scores following future condition. Model 4 is the best predictor model of data. * $p < .05$.

Table 2

Summary of Backwards Multiple Regression for Aggressive Humor After Future Condition

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>R</i>	<i>R</i> ²	ΔR^2
	<i>B</i>	Std. Error	Beta							
1 (Constant)	-6.94	2.29		-3.04	.003*	77.47	.000*	.84	.70	.70
NPI Score	-.10	.06	-.08	-1.70	.09					
MACH-IV Score	2.37	.86	.15	2.76	.006*					
Overall SRP-III Score	3.43	1.06	.20	3.25	.001*					
Future Condition	.31	.34	.04	.91	.36					
HSQ Aggressive Humor 1	.71	.06	.64	12.24	.000*					
2 (Constant)	-6.15	2.12		-2.91	.004*	96.73	.000*	.84	.70	-.002
NPI Score	-.10	.06	-.08	-1.73	.09					
MACH-IV Score	2.35	.86	.15	2.74	.007*					
Overall SRP-III Score	3.42	1.06	.20	3.24	.001*					
HSQ Aggressive Humor 1	.71	.06	.65	12.34	.000*					

Note. Dependent variable: HSQ aggressive humor scores following future condition. Model 2 is the best predictor model of data. * $p < .05$.

Table 3

Summary of Backwards Multiple Regression for Self-Enhancing Humor After Future Condition

Model	Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>	<i>F</i>	<i>P</i>	<i>R</i>	<i>R</i> ²	ΔR^2
	<i>B</i>	Std. Error	Beta								
1 (Constant)	8.09	3.20			2.53	.01*	71.12	.000*	.83	.68	
NPI Score	.11	.05	.10		2.11	.04*					
MACH-IV Score	.61	.80	.04		.76	.45					
Overall SRP-III Score	-1.74	.92	-.11		-1.89	.06					
Future Condition	.39	.32	.05		1.23	.22					
HSQ Self-Enhancing Humor	.80	.05	.81		17.55	.000*					
1											
2 (Constant)	9.26	2.80			3.31	.001*	88.98	.000*	.83	.68	-.001
NPI Score	.11	.05	.10		2.09	.04*					
Overall SRP-III Score	-1.37	.79	-.09		-1.75	.04*					
Future Condition	.38	.32	.05		1.20	.23					
HSQ Self-Enhancing Humor	.79	.04	.81		17.86	.000*					
1											
3 (Constant)	10.43	2.63			3.96	.000*	117.84	.000*	.83	.68	-.003
NPI Score	.11	.05	.10		2.07	.04*					
Overall SRP-III Score	-1.39	.79	-.09		-1.76	.08					
HSQ Self-Enhancing Humor	.79	.04	.80		17.80	.000*					
1											

Note. Dependent variable: HSQ self-enhancing humor scores following future condition. Model 3 is the best predictor model of data. * $p < .05$.

Table 4

Summary of Backwards Multiple Regression for Affiliative Humor After Future Condition

Model	Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>R</i>	<i>R</i> ²	ΔR^2
	<i>B</i>	Std. Error	Beta								
1 (Constant)	5.33	3.10			1.72	.09	105.07	.000*	.87	.76	.76
NPI Score	.01	.06	.01		.17	.86					
MACH-IV Score	1.29	.75	.08		1.71	.09					
Overall SRP-III Score	-1.79	.92	-.10		-1.94	.05*					
Future Condition	.32	.30	.04		1.04	.30					
HSQ Affiliative Humor 1	.85	.04	.86		20.58	.000*					
2 (Constant)	5.22	3.03			1.72	.09	132.10	.000*	.87	.76	.000
MACH-IV Score	1.28	.75	.08		1.71	.09					
Overall SRP-III Score	-1.72	.82	-.10		-2.10	.04*					
Future Condition	.32	.0	.04		1.05	.30					
HSQ Affiliative Humor 1	.86	.04	.86		21.92	.000*					
3 (Constant)	6.17	2.89			2.13	.03*	175.67	.000*	.87	.76	-.002
MACH-IV Score	1.27	.75	.08		1.69	.09					
Overall SRP-III Score	-1.72	.82	-.10		-2.10	.04*					
HSQ Affiliative Humor 1	.85	.04	.86		21.89	.000*					

Note. Dependent variable: HSQ affiliative humor scores following future condition. Model 3 is the best predictor model of data. * $p < .05$.

Table 5

Summary of Backwards Multiple Regression for Aggressive Humor After Future Condition with Sub-factors of Psychopathy

Model	Unstandardized Coefficients		Standardized Coefficients		<i>t</i>	<i>p</i>	<i>F</i>	<i>P</i>	<i>R</i>	<i>R</i> ²	ΔR^2
	<i>B</i>	Std. Error	Beta								
1 (Constant)	-7.18	2.52			-2.85	.005*	48.88	.000*	.84	.71	.71
Future Condition	.31	.34	.04		.92	.36					
NPI Score	-.13	.06	-.11		-2.16	.03*					
HSQ Aggressive Humor 1	.71	.06	.64		12.08	.000*					
MACH-IV Score	.76	.99	.11		1.78	.08					
SRP-III Erratic Lifestyle	1.38	.96	.09		1.44	.15					
SRP-III Interpersonal Manipulation	2.01	1.09	.15		1.95	.07					
SRP-III Callous Affect	.86	.95	.06		.91	.37					
SRP-III Antisocial Behavior	-.22	.72	-.02		-.30	.76					
2 (Constant)	-7.14	2.51			-2.84	.005*	56.16	.000*	.84	.71	.000
Future Condition	.31	.34	.04		.92	.36					
NPI Score	-.13	.06	-.10		-2.08	.03*					
HSQ Aggressive Humor 1	.70	.06	.64		12.11	.000*					
MACH-IV Score	1.78	.98	.11		1.80	.07					
SRP-III Erratic Lifestyle	1.28	.90	.08		1.42	.16					
SRP-III Interpersonal Manipulation	1.97	1.08	.15		1.83	.07					
SRP-III Callous Affect	.81	.94	.06		.87	.39					
3 (Constant)	-7.25	2.5			-2.90	.004*	65.50	.000*	.84	.71	-.001
Future Condition	.31	.34	.04		.92	.36					
NPI Score	-.13	.06	-.10		-2.08	.04*					
HSQ Aggressive Humor 1	.71	.06	.65		12.40	.000*					
MACH-IV Score	1.88	.98	.12		1.93	.06					
SRP-III Erratic Lifestyle	1.48	.88	.09		1.69	.09					
SRP-III Interpersonal Manipulation	2.34	.99	.17		2.37	.02*					
4 (Constant)	-6.50	2.37			-2.74	.007*	78.51	.000*	.84	.71	-.002
NPI Score	-.13	.06	-.10		-2.10	.04*					
HSQ Aggressive Humor 1	.72	.06	.65		12.49	.000*					
MACH-IV Score	1.87	.98	.12		1.92	.06					
SRP-III Erratic Lifestyle	1.50	.88	.09		1.71	.09					
SRP-III Interpersonal Manipulation	2.31	.99	.17		2.34	.02*					

Note. Dependent variable: HSQ aggressive humor scores following future conditions. This model includes all four sub-factors of psychopathy rather than one overall score. Model 4 is the best predictor model of data. * $p < .05$.

Table 6

Summary of One-Way Analysis of Variance of Social Exclusion Manipulation Checks by Future Condition

	<i>Source</i>	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
“I make friends easily.”	Between Groups	3	7.24	2.41	.95	.42
	Within Groups	166	420.39	2.53		
	Total	169	427.62			
“I have been called abrasive by peers.”	Between Groups	3	1.50	.50	.14	.94
	Within Groups	166	589.45	3.55		
	Total	169	590.95			
“I associate myself with positive people.”	Between Groups	3	8.34	2.78	1.69	.17
	Within Groups	166	272.84	1.64		
	Total	169	281.18			
“I have made lasting relationships during college.”	Between Groups	3	8.54	2.85	.79	.50
	Within Groups	166	596.45	3.59		
	Total	169	604.99			
“Good friends are hard to come by.”	Between Groups	3	13.35	4.45	1.86	.14
	Within Groups	166	396.35	2.39		
	Total	169	409.70			
“I feel left out by my peers.”	Between Groups	3	7.61	2.54	.79	.50
	Within Groups	166	532.76	3.21		
	Total	169	540.38			
“I am always the single one out of my friends.”	Between Groups	3	5.36	1.79	.37	.77
	Within Groups	166	795.14	4.79		
	Total	169	800.50			
“I have a secure support system.”	Between Groups	3	16.85	5.62	2.85	.04*
	Within Groups	166	327.37	1.97		
	Total	169	344.21			

Note. * $p < .05$.

Appendix A

Consent for Participation in Psychology Research Study

Please read the following information carefully. Your electronic signature on this document is required to participate in this study.

Project Title: Differences in Personality Traits between Academic Majors

Principal Investigators: Jacquelyn Knight

What is the purpose of this research study? The purpose of this research study is to determine what, if any, differences in personality traits exist between individuals in different academic majors. This study is being conducted as a requirement for completion of a Graduate Thesis in Psychology at Marietta College. It is being supervised by Dr. Ryan May (ryan.may@marietta.edu). This study has been approved by the Marietta College Human Subjects Committee.

How many people will take part in this study? The researchers anticipate that approximately 170 people will participate in this study. You must be between 18 and 24 years of age and currently enrolled in college to participate in this research.

What will happen if you take part in the study? You will be asked to complete a demographics survey and multiple personality measures. In these measures, you will be asked about alcohol consumption and sexual interactions; some of these questions are very personal and may make you feel uncomfortable. However, you are not required to answer every question if you feel uncomfortable and may withdraw from the study at any point. You will receive feedback about your future based on these personality measures. Two final assessments will be given following this feedback. The researcher will also explain in more detail the rationale for the study afterwards.

How long will your part in this study last? The study should take no more than two hours to complete. If you decide at any point that you do not wish to continue, you may leave with no negative consequences.

What are the possible risks and/or benefits from being in this study? There is an anticipated risk of stress/discomfort from participating in this study associated with some of the questionnaires and the feedback regarding your future. If you feel uncomfortable at any time during the experiment, you may choose to take a break and/or withdraw completely from the study. You will receive \$0.50 if you are an mTurk participant.

How will your privacy be protected? The researchers will make every effort to protect your privacy. Your name will only appear on this informed consent form. Your testing materials will only be associated with a code number that is assigned by the researcher, and this will only be connected with your name on a master key kept by the researcher. Thus, your responses are confidential. The data will only be accessible to the researcher and faculty advisor, and will be

stored separately from consent forms. All materials from this study will be stored for 1 year after completion of the study, then destroyed.

Participant's Agreement: I have read the information provided above. I have asked all the questions that I have at this time. I voluntarily agree to participate in this research study. I understand that I may contact the researcher, Jacquelyn Knight (jek002@marietta.edu) or Dr. Ryan May (ryan.may@marietta.edu) with questions about the study, and you may contact Jennifer Hancock, Marietta College Human Subjects Committee Chairperson (jah006@marietta.edu, 740-376-4982) with questions about research participant rights.

Please print this document for your records.

To electronically sign this document, type your full name and date below:

Appendix B

Demographic Questionnaire

To help us provide an accurate description of the sample, please take a moment to answer the following questions. The information provided on this sheet will not be linked to your name in any way. All responses are anonymous.

Sex: male female

Ethnicity:

<input type="checkbox"/> Asian or Pacific Islander	<input type="checkbox"/> Latino/Hispanic
<input type="checkbox"/> Asian Indian	<input type="checkbox"/> Black/African American (non-Hispanic)
<input type="checkbox"/> Caucasian/White	<input type="checkbox"/> Native American
<input type="checkbox"/> More than once race (please specify): _____	

Major(s): _____

Minor(s): _____

Year in College:

<input type="checkbox"/> Freshman	<input type="checkbox"/> Sophomore
<input type="checkbox"/> Junior	<input type="checkbox"/> Senior
<input type="checkbox"/> Graduate student	

Are you employed? Yes No

If yes, do you work full-or part-time hours? Full-time Part-time

If yes, is your current job relevant to your major and/or minor? Yes No

Are you involved in any organizations on campus? Yes No

If yes, how many? _____

If yes, what leadership positions do you hold in those groups (if

any)? _____

What is your current marital status? Single Married Separated Divorced

Do you currently play video games? Yes No

If yes, approximately how many hours per day do you play? _____

Do you consume alcohol on a regular basis? Yes No

Do you exercise on a regular basis? Yes No

If yes, how many hours per week do you exercise? _____

Appendix C**NPI-40**

This inventory consists of a number of pairs of statements with which you may or may not identify.

Consider this example:

A. I like having authority over people

B. I don't mind following orders

Which of these two statements is closer to your own feelings about yourself? If you identify more with "liking to have authority over people" than with "not minding following orders", then you would choose option A. You may identify with both A and B. In this case you should choose the statement which seems closer to yourself. Or, if you do not identify with either statement, select the one which is least objectionable or remote.

In other words, read each pair of statements and then choose the one that is closer to your own feelings. Indicate your answer by typing the letter (A or B) in the space provided to the right of each item. Please do not skip any items.

1. A. I have a natural talent for influencing people.
 B. I am not good at influencing people. 1. _____
2. A. Modesty doesn't become me.
 B. I am essentially a modest person. 2. _____
3. A. I would do almost anything on a dare.
 B. I tend to be a fairly cautious person. 3. _____
4. A. When people compliment me I sometimes get embarrassed.
 B. I know that I am good because everybody keeps telling me so. 4. _____
5. A. The thought of ruling the world frightens the hell out of me.
 B. If I ruled the world it would be a better place. 5. _____
6. A. I can usually talk my way out of anything.
 B. I try to accept the consequences of my behavior. 6. _____
7. A. I prefer to blend in with the crowd.
 B. I like to be the center of attention. 7. _____
8. A. I will be a success.

- B. I am not too concerned about success. 8. _____
9. A. I am no better or worse than most people.
B. I think I am a special person. 9. _____
10. A. I am not sure if I would make a good leader.
B. I see myself as a good leader. 10. _____
11. A. I am assertive.
B. I wish I were more assertive. 11. _____
12. A. I like to have authority over other people.
B. I don't mind following orders. 12. _____
13. A. I find it easy to manipulate people.
B. I don't like it when I find myself manipulating people. 13. _____
14. A. I insist upon getting the respect that is due me.
B. I usually get the respect that I deserve. 14. _____
15. A. I don't particularly like to show off my body.
B. I like to show off my body. 15. _____
16. A. I can read people like a book.
B. People are sometimes hard to understand. 16. _____
17. A. If I feel competent I am willing to take responsibility for making decisions.
B. I like to take responsibility for making decisions. 17. _____
18. A. I just want to be reasonably happy.
B. I want to amount to something in the eyes of the world. 18. _____
19. A. My body is nothing special.
B. I like to look at my body. 19. _____
20. A. I try not to be a show off.
B. I will usually show off if I get the chance. 20. _____
21. A. I always know what I am doing.
B. Sometimes I am not sure of what I am doing. 21. _____
22. A. I sometimes depend on people to get things done.
B. I rarely depend on anyone else to get things done. 22. _____
23. A. Sometimes I tell good stories.
B. Everybody likes to hear my stories. 23. _____

24. A. I expect a great deal from other people.
B. I like to do things for other people. 24. _____
25. A. I will never be satisfied until I get all that I deserve.
B. I take my satisfactions as they come. 25. _____
26. A. Compliments embarrass me.
B. I like to be complimented. 26. _____
27. A. I have a strong will to power.
B. Power for its own sake doesn't interest me. 27. _____
28. A. I don't care about new fads and fashions.
B. I like to start new fads and fashions. 28. _____
29. A. I like to look at myself in the mirror.
B. I am not particularly interested in looking at myself in the mirror. 29. _____
30. A. I really like to be the center of attention.
B. It makes me uncomfortable to be the center of attention. 30. _____
31. A. I can live my life in any way I want to.
B. People can't always live their lives in terms of what they want. 31. _____
32. A. Being an authority doesn't mean that much to me.
B. People always seem to recognize my authority. 32. _____
33. A. I would prefer to be a leader.
B. It makes little difference to me whether I am a leader or not. 33. _____
34. A. I am going to be a great person.
B. I hope I am going to be successful. 34. _____
35. A. People sometimes believe what I tell them.
B. I can make anybody believe anything I want them to. 35. _____
36. A. I am a born leader.
B. Leadership is a quality that takes a long time to develop. 36. _____
37. A. I wish somebody would someday write my biography.
B. I don't like people to pry into my life for any reason. 37. _____
38. A. I get upset when people don't notice how I look when I go out in public.
B. I don't mind blending into the crowd when I go out in public. 38. _____

39. A. I am more capable than other people.
B. There is a lot that I can learn from other people. 39. _____
40. A. I am much like everybody else.
B. I am an extraordinary person. 40. _____

Appendix D MACH IV SCALE

Please rate your agreement with each statement using the scale below.

- | | | | | |
|-------------------|----------|---------|-------|----------------|
| 1 | 2 | 3 | 4 | 5 |
| Disagree Strongly | Disagree | Neutral | Agree | Agree Strongly |
- _____ 1. Anyone who completely trusts anyone else is asking for trouble.
 - _____ 2. Most people who get ahead in the world lead clean moral lives.
 - _____ 3. It is safest to assume that all people have a vicious streak and it will come out when they are given a chance.
 - _____ 4. One should take action only when sure it is morally right.
 - _____ 5. Generally speaking, people won't work hard unless they're forced to do so.
 - _____ 6. It is wise to flatter important people.
 - _____ 7. It is hard to get ahead without cutting corners here and there.
 - _____ 8. People suffering from incurable diseases should have the choice of being put painlessly to death.
 - _____ 9. Most people are brave.
 - _____ 10. The best way to handle people is to tell them what they want to hear.
 - _____ 11. The biggest difference between most criminals and other people is that criminals are stupid enough to get caught.
 - _____ 12. Honesty is the best policy in all cases.
 - _____ 13. Barnum was very wrong when he said there's a sucker born every minute.
 - _____ 14. Most people are basically good and kind.
 - _____ 15. 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.
 - _____ 16. It is possible to be good in all respects.
 - _____ 17. Most people forget more easily the death of a parent than the loss of their property.

- _____ 18. Never tell anyone the real reason you did something unless it is useful to do so.
- _____ 19. There is no excuse for lying to someone else.
- _____ 20. All in all, it is better to be humble and honest than to be important and dishonest

Appendix E**SRP III**

Please rate the degree to which you agree with the following statements about you using the scale below.

1	2	3	4	5
Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly

1. I'm a rebellious person.
2. I'm more tough-minded than other people.
3. I think I could "beat" a lie detector.
4. I have taken illegal drugs (e.g., marijuana, ecstasy).
5. I have never been involved in delinquent gang activity.
6. I have never stolen a truck, car or motorcycle.
7. Most people are wimps.
8. I purposely flatter people to get them on my side.
9. I've often done something dangerous just for the thrill of it.
10. I have tricked someone into giving me money.
11. It tortures me to see an injured animal.
12. I have assaulted a law enforcement official or social worker.
13. I have pretended to be someone else in order to get something.
14. I always plan out my weekly activities.
15. I like to see fist-fights.
16. I'm not tricky or sly.
17. I'd be good at a dangerous job because I make fast decisions.
18. I have never tried to force someone to have sex.
19. My friends would say that I am a warm person.
20. I would get a kick out of 'scamming' someone.
21. I have never attacked someone with the idea of injuring them.

22. I never miss appointments.
23. I avoid horror movies.
24. I trust other people to be honest.
25. I hate high speed driving.
26. I feel so sorry when I see a homeless person.
27. It's fun to see how far you can push people before they get upset.
28. I enjoy doing wild things.
29. I have broken into a building or vehicle in order to steal something or vandalize.
30. I don't bother to keep in touch with my family any more.
31. I find it difficult to manipulate people.
32. I rarely follow the rules.
33. I never cry at movies.
34. I have never been arrested.
35. You should take advantage of other people before they do it to you.
36. I don't enjoy gambling for real money.
37. People sometimes say that I'm cold-hearted.
38. People can usually tell if I am lying.
39. I like to have sex with people I barely know.
40. I love violent sports and movies.
41. Sometimes you have to pretend you like people to get something out of them.
42. I am an impulsive person.
43. I have taken hard drugs (e.g., heroin, cocaine).
44. I'm a soft-hearted person.
45. I can talk people into anything.
46. I never shoplifted from a store.
47. I don't enjoy taking risks.
48. People are too sensitive when I tell them the truth about themselves.
49. I was convicted of a serious crime.
50. Most people tell lies everyday.
51. I keep getting in trouble for the same things over and over.
52. Every now and then I carry a weapon (knife or gun) for protection.

53. People cry way too much at funerals.
54. You can get what you want by telling people what they want to hear.
55. I easily get bored.
56. I never feel guilty over hurting others.
57. I have threatened people into giving me money, clothes, or makeup.
58. A lot of people are “suckers” and can easily be fooled.
59. I admit that I often “mouth off” without thinking.
60. I sometimes dump friends that I don’t need any more.
61. I would never step on others to get what I want.
62. I have close friends who served time in prison.
63. I purposely tried to hit someone with the vehicle I was driving.
64. I have violated my parole from prison

Appendix F

Humor Styles Questionnaire

Please read each of the following statements carefully, and indicate the degree to which you agree or disagree with it. Please respond as honestly and objectively as you can. Use the following scale:

1	2	3	4	5	6	7
Totally	Moderately	Slightly	Neutral	Slightly	Moderately	Totally
Disagree	Disagree	Disagree		Agree	Agree	Agree

1. I usually don't laugh or joke around much with other people.
2. If I am feeling depressed, I can usually cheer myself up with humor.
3. If someone makes a mistake, I will often tease them about it.
4. I let people laugh at me or make fun at my expense more than I should.
5. I don't have to work very hard at making other people laugh -- I seem to be a naturally humorous person.
6. Even when I'm by myself, I'm often amused by the absurdities of life.
7. People are never offended or hurt by my sense of humor.
8. I will often get carried away in putting myself down if it makes my family or friends laugh.
9. I rarely make other people laugh by telling funny stories about myself.
10. If I am feeling upset or unhappy I usually try to think of something funny about the situation to make myself feel better.
11. When telling jokes or saying funny things, I am usually not very concerned about how other people are taking it.
12. I often try to make people like or accept me more by saying something funny about my own weaknesses, blunders, or faults.
13. I laugh and joke a lot with my friends.
14. My humorous outlook on life keeps me from getting overly upset or depressed about things.

15. I do not like it when people use humor as a way of criticizing or putting someone down.
16. I don't often say funny things to put myself down.
17. I usually don't like to tell jokes or amuse people.
18. If I'm by myself and I'm feeling unhappy, I make an effort to think of something funny to cheer myself up.
19. Sometimes I think of something that is so funny that I can't stop myself from saying it, even if it is not appropriate for the situation.
20. I often go overboard in putting myself down when I am making jokes or trying to be funny.
21. I enjoy making people laugh.
22. If I am feeling sad or upset, I usually lose my sense of humor.
23. I never participate in laughing at others even if all my friends are doing it.
24. When I am with friends or family, I often seem to be the one that other people make fun of or joke about.
25. I don't often joke around with my friends.
26. It is my experience that thinking about some amusing aspect of a situation is often a very effective way of coping with problems.
27. If I don't like someone, I often use humor or teasing to put them down.
28. If I am having problems or feeling unhappy, I often cover it up by joking around, so that even my closest friends don't know how I really feel.
29. I usually can't think of witty things to say when I'm with other people.
30. I don't need to be with other people to feel amused -- I can usually find things to laugh about even when I'm by myself.
31. Even if something is really funny to me, I will not laugh or joke about it if someone will be offended.
32. Letting others laugh at me is my way of keeping my friends and family in good spirits.