

PERSONALITY TYPE AND THE SUCCESSFUL LIAR

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By

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ABSTRACT

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Deception is a heavily researched and highly contentious area in the field of modern psychology. A large emphasis has been placed on deception detection, but little is known about the individual differences of a successful liar. Machiavellianism and psychopathy are two traits commonly associated with deceptive behavior (Vrij, 2009). Past research has demonstrated that individuals scoring high on Machiavellianism were harder to judge if they were telling the truth and ultimately more successful at telling believable lies (Geis & Moon, 1981). These traits pertain to abnormal behavior but lying is part of everyone's life. Therefore, it is important to examine if normal personality traits influence successful lying. Machiavellianism is not specifically included in the FFM but research has demonstrated significant negative correlations with the Agreeableness and Conscientiousness domains of the FFM (Vrij, 2009). The purpose of the present study was to investigate the relationship between personality and the ability to tell a successful lie. The M5-120, which is based on the FFM of personality, was used to gather information on the participants' personality. Pearson correlations were used to examine the relationship between personality and successful lying. Findings revealed a significant relationship between successful lying and the Agreeableness domain.

Specifically, the modesty and sympathy facets of the Agreeableness domain were significantly correlated with successful lying. The relationship between successful lying and the artistic interests facet of the Openness to Experience domain was also revealed to be significant. An independent t-test revealed no significant relationship between successful lying and gender. This study suggests that personality may play a role in the ability to successfully lie but additional research is needed to confirm this relationship.

CHAPTER ONE: INTRODUCTION

Deception is a widely researched and at times contentious area in the fields of psychology and law. There are multiple ways to define the terms “deception” and “lying” but for the most part, the terms are used interchangeably in research. Deception is defined as “a tactic used in social interaction in order to gain a strategic advantage over an opponent or other relationship partner” (Johnson, 2005). Lying is “an extreme form of impression management that involves the deliberate fostering of a false impression rather than the judicious editing of a true one” (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996).

From earliest recorded history, animals and humans alike demonstrated a strong tendency to deceive or lie. For many species, deception is a skill necessary for survival. Animals deceive other species into making mistaken judgments about what they are or their possible intentions (Searcy & Nowicki, 2005). For example, an opossum will work its jaw until excessive drool forms and it is blowing bubbles out of its nose because excessive drooling causes a predator to think it is sick and consequently unappetizing (Searcy & Nowicki, 2005). Frans deWaal studied chimpanzees in Netherlands and revealed that deception permeates “all aspects of the chimpanzees’ social behavior, and chimpanzees’ skills in deceit are a match for human lie detecting abilities” (deWaal, 1986). Deception in humans, however, is much more complicated.

Lying is part of everyday life and is a fact of social life rather than an extraordinary or unusual event (Kashy & DePaulo, 1996). It has been implied that deceitful behavior is intrinsic to survival and influences the outcomes of evolution

through differential reproduction, but humans lie for many reasons other than survival. One reason people lie is to achieve social interaction goals (Ford, 1996). They lie to reassure or support others, to influence others, or to make a good impression (DePaulo, Lindsay, Malone, Muhlenbruck, Charlton, & Cooper, 2003). Lies are commonly categorized as self-centered, altruistic, or other-oriented (DePaulo & Kashy, 1998; Vrij, 2000; Ennis, Vrij, & Chance 2008). Studies have demonstrated that most people tell at least one lie a day (DePaulo & Kashy, 1998; Vrij, 2000; Ennis, Vrij, & Chance 2008). In one study, college students lied one out of every three times they interacted with someone (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996). Despite the frequency of lies in everyday life, people expect others to generally be honest. If people anticipated deception in every conversation, then talking and interacting with others would be unproductive and useless. Furthermore, most research has found that the accuracy of an untrained person to detect deception is close to chance (DePaulo, Stone, & Lassiter, 1985; Zuckerman & Driver, 1985).

It is well-known that most people lie; however, but some individuals lie more often than others and for reasons that are uncertain. Individual differences that contribute to deception remain, for the most part, a mystery. There may be sex differences associated with motivation to lie and the type of lie told. For example, studies have found that women appear to lie more about their opinions and their lies are intended to protect others while men tell more lies to benefit the self (Ennis, Vrij, & Chance, 2008). Both sexes, however, have been shown to tell more self-centered lies to men than to women (DePaulo et. al, 1996).

Given that almost everyone lies, it can be helpful to assess individuals' veracity on multiple occasions. Consequently, research has focused on deception detection and determining what makes an individual appear truthful versus deceitful. There are a variety of reasons that lies fail. The liar's behaviors may reveal their deception, or circumstances that are out of the liar's control may expose the lie (Ekman & Frank, 1993). A commonly neglected area in deception research is what constitutes a good liar (Vrij, Granhag, & Mann, 2010). Personality is believed to be an innate characteristic that affects individual behavior. It is a logical assumption that personality traits may affect a person's ability to deceive. Previous research on deception has focused primarily on the personality of the observer and not on the liar. Furthermore, deception has often been studied in connection with abnormal personality and not on basic traits that describe a normal, functioning individual (Lee, Klaver, & Hart, 2008). The Five Factor Model of personality was designed as a measurement for normal personality and can be utilized to examine the relationship between specific personality traits and the successful deceiver in order to determine what characteristics are the most influential in telling a good lie.

In the present study, participants were administered a personality inventory and videotaped while retelling a partially scripted story. A group of raters reviewed the video clips and decided whether the participants were telling the truth or lying. The purpose of this study was to determine whether there is a relationship between personality and successful lying.

CHAPTER TWO: LITERATURE REVIEW

Types of Lies

People lie for a variety of reasons but lies are generally divided into three categories: self-centered, altruistic, or other-oriented (DePaulo & Kashy, 1998; Vrij, 2000; Ennis, Vrij, & Chance 2008). “Self-centered” lies are told to protect the self (e.g., “I did not do it”), and make up majority of lies that are told (DePaulo, Ansfield, & Bell, 1996). “Altruistic” lies are told to protect a third party (e.g., John couldn’t have done that because he was with me all night) (DePaulo et al., 1996, Vrij, 2000, Enis et al., 2008). “Other-oriented” lies are told to protect someone else (e.g., those jeans don’t make you look fat). Altruistic and other-oriented lies may also serve to protect one’s own wellbeing (e.g., to maintain a relationship).

DePaulo et al. (1996) found that most lies benefit the self. In a detailed analysis of this study, DePaulo and Kashy (1998) examined the frequency of telling self-centered and other-oriented/altruistic lies to close friends and strangers. The findings supported their prediction that more lying would occur in casual relationships than in close relationships. They also found, as predicted, that lies told to close friends would be disproportionately other-oriented/altruistic lies. In a study conducted by Ennis, Vrij, and Chance (2008), participants reported telling significantly more self-centered lies and significantly fewer other-oriented lies to strangers when compared to close friends. People also reported telling significantly fewer other-oriented lies to strangers when compared with close friends and significantly fewer altruistic lies about strangers when compared with close friends.

Different types of deception are specific to certain social interactions. Therefore, the function of the lie depends on the subject of the deception and the kind of situation the liar is in. Deception is most likely to occur in situations that are more taxing than ones in which social interaction goals can easily be accomplished in nondeceptive ways (Ennis et al., 2008). Social interactions in which lies are told are usually less desirable, less pleasant, and less intimate than interactions where no lies are told. Some people naturally find themselves in taxing social situations more often than others. The type of social situation one encounters most could depend upon sex and/or personality type. For example, when women interact with other women, they do not behave in the same manner as men behave when they are interacting with other men. Similarly, interactions between same-sex individuals differ from interactions between people of the opposite sex. In every social interaction, there is an opportunity to lie. Previous findings suggest that rates of socializing differ dramatically in different kinds of groups or dyads (e.g., Reis & Wheeler, 1991). The frequency of individual lying is dependent upon the type of social interaction an individual encounters the most (Ennis et al., 2008).

Gender differences in lying

In traditional Western culture, women are believed to be “socioemotional specialists” (DePaulo et al., 1996). Women provide more emotional support to others and self-disclose more than men (Dindia & Allen, 1992). They demonstrate warmer nonverbal behaviors by smiling, making good eye contact, touching others more often, and using animated and legible facial expressions (DePaulo, 1992). Women are believed to be more communal than men and more likely to offer and receive intimacy in their

interactions with others. One might assume that women lie less than men, especially to other women, and studies have shown that women are more likely to lie about their opinions than men (e.g. DePaulo & Bell, 1993). However, It has been suggested that one of the ways women foster intimacy and supportiveness in their interactions with others is by telling lies (DePaulo, Epstein, & Wyer, 1993). Although it may seem that the majority of lies told by women are altruistic and motivated by concern for others, research on sex differences and the types of lies that are told in everyday life by women appears to be inconclusive. DePaulo et al. (1996) conducted two self-report studies: one on college students and one on community members. In the college study, women told significantly fewer self-centered lies than did men and significantly more other-oriented/altruistic lies. The sex of the targets of the lies was especially noteworthy. In both studies, participants told significantly more self-centered lies and fewer other-oriented lies to men than to women. Although men do not tell as many other-oriented lies to women as other women do, or as few self-centered ones, they do tell more other-oriented lies and fewer self-centered lies to women than they do to men. In both of the studies, participants believed that the women they lied to, more so than the men, would have felt even worse if the truth had been told.

Behaviors Associated with Deception

The polygraph, the psychological stress evaluator, brain fingerprints, and EEGs are methods that have been employed to detect deception (Bond & DePaulo, 2006). Unfortunately, the accuracy and reliability of these technological aids is debatable.

As of the first decade of the 21st century, lie detection is left up to ordinary citizens (i.e., jurors) who are instructed to judge a person's truthfulness on the stand

(Bond & DePaulo, 2006). This can be problematic considering observers tend to perform at or slightly above chance in judging whether another person is lying (e.g., Bond & DePaulo, 2006; Ekman & O'Sullivan, 1991; Vrij, 2000, 2008). The desire for more accurate lie detection techniques has resulted in a rapid growth of research on behaviors associated with lying. Facial movements, body language, and vocal patterns are some of the behavioral cues that are thought to reveal lies (Ekman, 1988).

Deception studies often distinguish between actual and perceived indicators of deception (DePaulo, Stone, & Lassiter, 1985; Zuckerman, DePaulo, & Rosenthal, 1981, Vrij, Semin, & Bull, 1996). Actual indicators of deception are “nonverbal behaviors that are proven to be associated with deception” and “perceived indicators of deception are nonverbal behaviors that observers believe to be associated with deception” (Vrij, Semin, & Bull, 1996). Several meta-analyses and recent studies have provided empirical evidence that observers associate lying or deception with more speech disturbances (both “ahs” and “non-ahs”), a higher pitched voice, a slower speech rate, a longer latency period between responses, more gaze aversion, less smiling, and more movements (DePaulo, et al., 1985, Vrij, 1991; Zuckerman, DePaulo, & Rosenthal, 1981; Zuckerman & Driver, 1985). People often believe that lying is associated with an increase in movements when, in fact, recent studies have found that deception, especially when liars are highly motivated, is associated with a decrease in hand, foot, and leg movements (Davis & Hadiks, 1995; DePaulo, 1992; Ekman, 1989; Ekman, O'Sullivan, Freisen, & Scherer, 1991; Hofer, Kohnken, Hanewinkel, & Bruhn, 1992; Vrij, 1993, 1995; Vrij, et al., 1996). One possible explanation for this perception is that observers assume that liars are nervous and that their behaviors will reflect this (Burgoon, Kelley, Newton, & Keely-

Dureson, 1989; Burgoon & LePoire, 1992; Davis & Hadiks, 1995). Random movements are valid indicators of nervousness so this does seem like a rational assumption.

However, according to the attempted control framework, liars actually try to control their body language to avoid giving off nonverbal cues to deception and to create a reliable impression (DePaulo, 1988, 1992; DePaulo & Kirkendol, 1989; Ekman, 1989, Kohnken, 1990). The deceivers' behavior will appear planned, rehearsed, and lacking in spontaneity, and their attempts to control their behavior actually serve as cues to deception. Liars will move deliberately, avoiding any unnecessary movements. They will appear unusually rigid and inhibited and avoid subtle, nonfunctional movements, such as hand and finger movements and foot and leg movements (Vrij, 1995). The cognitive load framework suggests that lying is a cognitively complex task and people engaged in cognitively demanding tasks make less hand and arm movements (Burgoon, et al., 1989; Ekman & Friesen, 1972; Goldman-Eisler, 1968; Kohnken, 1989). There is evidence that speech disturbances, a higher pitched voice, and a shorter response rate are correlated with deception (DePaulo, et al., 1985, Vrij, 1995; Zuckerman, DePaulo, & Rosenthal, 1981; Zuckerman & Driver, 1985).

Past studies that have examined non-verbal indicators of deception have revealed specific behaviors associated with lying (DePaulo, Lindsay, Malone, Muhlenbruck, Charlton, & Cooper, 2003; Vrij, 2000; Zuckerman, DePaulo, & Rosenthal, 1986). Other studies have shown that detecting deception through non-verbal behaviors is no better than chance (DePaulo, 1994; Ekman, O'Sullivan, & Frank, 1999) and suggest that verbal indicators may be more important in detecting lies (Lee, Klaver, & Hart, 2008).

However, Vrij, Granhag, and Porter (2010) argue that there are no distinct nonverbal and

verbal cues uniquely related to deceit. In addition, they demonstrate that only small differences exist between liars and truth tellers, and that lie detection is made more difficult by the fact that liars focus their energy in appearing credible.

A study by Hartwig, Granhag, & Stromwall (2007) revealed that liars and truth tellers spent equal time planning the verbal content of their statement, but liars reported having planned their nonverbal behavior to a larger extent than truth tellers. A possible explanation for this is that many truth-tellers seem to have strong faith in the power of their own innocence and believe that their nonverbal behavior will reflect this (Kassini & Norwick, 2004). There are a couple of nonverbal strategies commonly used by both liars and truth tellers. In a study by Stromwell and colleges (2006), about 50% of the liars and truth tellers reported that they avoided making any excess movements and about 25% of the liars and truth tellers reported trying to maintain eye contact in order to appear more credible.

Although liars attempt to control all of their behaviors, some are more difficult to control than others. These are often referred to as *leaky channels*, which expose deceptive intent (Ekman & Frisen, 1974). Ekman (2006) has argued that some aspects of facial communication are uncontrollable and can betray a deceiver's true emotion to a trained observer. Some of this theory dates back to Darwin's *inhibition hypothesis*, which states "if you cannot voluntarily activate a muscle, then you will not be able to voluntarily inhibit its involuntary activation in a spontaneous emotional expression" (Ekman, 2003). Ekman proposed that when an emotion is concealed, the true emotion may be manifest as a *micro expression*. A micro expression is a fleeting, but complete, facial expression discordant with the expressed emotion and usually suppressed within

1/5 to 1/25 of a second so that it is difficult to detect with the naked eye (e.g., Ekman, 1992, 2006). Surprisingly, the theory regarding micro expressions has been subjected to little empirical research. Regardless, it has received a lot of attention in the media. As a result, the general public may presently be more apt to look at facial expressions for signs of deceitful behavior. Although a vast amount of research has been conducted on deception, few studies have thoroughly examined the relationship between personality traits and deception.

The Five-Factor Model of Personality

Researchers in the field of psychology have attempted to create a functional, comprehensive model of personality for the past several decades. Previous theories of personality have been described as having a shaky empirical foundation and questionable heuristic value (Costa & McCrae, 1996). In recent years, however, there has been a dramatic shift in the scientific study of personality. The increasing empirical interest in personality can be attributed to some degree to the development of the Five-Factor model (FFM). Costa and McCrae's Five-Factor model of personality (FFM) has been described as the most comprehensive model of personality to date (Wiggins & Pincus, 1992). Costa and McCrae (1996) stated, "The FFM has a sufficiently strong empirical basis to make it an indispensable aspect of any future theory of personality."

Although the development of the FFM is relatively new, the theory that personality is comprised of factors has been around for several decades. In 1932, McDougall proposed that, "personality may be broadly analyzed into five distinguishable, but separate behaviors." Soon after this proposal, the President of the American Psychological Association, Louis Thurstone, reported the occurrence of five

emergent factors of personality (1934). In 1933, he examined 60 adjectives known to reflect human personality utilizing factor analysis and discovered five salient categories that accurately described all of the 60 adjectives. Thurstone stated, “It is of considerable psychological interest to know that a whole list of adjectives can be accounted for by postulating only five independent factors” (Thurstone, 1934). The creation of a lexical database of adjectives creates the availability of an empirical database for personality description (Goldberg, 1990). Multiple researchers have replicated Thurstone’s original analysis of lexical knowledge on a much larger scale (Hendricks, 1997; Goldberg, 1990; Saucier & Goldberg, 1996). The factor analyses of such lexical information in multiple languages, (Dutch, English, and Indo-European), also revealed the emergence of five factors. Their findings revealed five emergent domains that provided broad categorical descriptions of the adjectives listed in each language.

Despite Thurstone’s (1934) initial findings, it took several decades before his research on the five factors of personality was properly acknowledged (Borgatta, 1964; Norman, 1963; Smith, 1967). Donald Fiske was one of the few personality researchers of his time who reported significant findings supporting the occurrence of five factors (1949). He performed a factor analysis on correlational data collected from the Michigan Veterans Administration (VA) Selection Project (Kelley & Fiske, 1951). Data were collected from VA trainees, independent evaluators, and VA trainee peers utilizing 22 of the 35 Temperament Rating Scales designed by Cattell (1933). Cattell (1947) first used these scales in the development of his well-known questionnaire. Fiske’s Factor analysis of the three correlational data sets demonstrated five factors that could categorize the contents of the rating scales. Results from each of the three groups that completed the

rating scales revealed the same five factors that are very similar to the five factors of personality that generally accepted today. Fiske labeled these as Social Adaptability, Conformity, Emotional Control, Inquiring Intellect, and Confident Self-Expression. Fiske also found that these factors were stable across self-ratings, peer ratings, and supervisor ratings.

In 1961, Tupes and Christal analyzed Cattell's (1933) Temperament Scales through factor analysis. They collected data from US Air Force trainees for 30 of the 35 rating scales to determine the stability of personality factors across replicated conditions. Results from their factor analysis revealed five distinct factors. Tupes and Christal then reanalyzed the previous findings of Cattell (1947) and Fiske (1949). The meta-analysis of Cattell's original findings revealed several significant calculation errors that affected the results of the initial factor analysis (that revealed 16 factors). After the appropriate corrections were made, the reanalysis revealed five factors, instead of 16. Tupes and Christal's reanalysis of Fiske's (1949) data verified the five emergent factors that were demonstrated in his original study. Their research was published in an Air Force journal (Tupes & Christal, 1961). Unfortunately, due to poor circulation, it was only available to few personality researchers. This resulted in the FFM being widely overlooked and no clear model of personality existed until the 1980s (Digman, 1996).

The reemergence of the five factors of personality occurred at the 1980 Western Psychological Association Conference. Goldberg, Digman, Comrey, and Takemoto-Chock met at a symposium to discuss the factors of personality (Digman, 1990). Goldberg presented his research, based on a meta-analysis of previous lexical information provided by his predecessors, that demonstrated only five factors of personality were

stable across studies (Wiggins, 1994). Goldberg traveled to a seminar in Baltimore that was hosted by Costa and McCrae. Costa and McCrae (1992) had developed a three-factor model of personality consisting of Neuroticism, Openness, and Extraversion. Goldberg convinced Costa and McCrae to add the factors of Agreeableness and Conscientiousness to their three-factor model (Wiggins, 1994). Consequently, the first inventory based on the FFM was presented by Paul Costa and Robert McCrae (Costa & McCrae, 1985).

The five factors included on Costa and McCrae's inventory are Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. The Neuroticism domain assesses adjustment vs. emotional instability. Maladaptive coping strategies, proneness to psychological distress, excessive cravings or urges, and delayed gratification are identified in this domain (Costa & McCrae, 1992). The Extraversion domain, often referred to as introversion vs. extroversion, assesses quantity and intensity of interpersonal interaction, need for stimulation, activity level, and even the capacity for joy (Costa & McCrae, 1992; Widiger & Lynam, 1998). The Openness to Experience domain, or intellectual openness vs. closedness, assesses the proactive seeking and appreciation of experience for its own sake and exploration of the unfamiliar (Costa & McCrae, 1992; Widiger & Lynam, 1998). The Agreeableness domain assesses the quality of one's interpersonal orientation. This is measured along a continuum from compassion to antagonism in thoughts, feelings, and actions (Costa & McCrae, 1992). It is often interpreted as a measurement of interpersonal agreeableness vs. antagonism (Widiger & Lynam, 1998). The Conscientiousness domain assesses organization, persistence, and motivation in behavior that is goal directed (Costa & McCrae, 1992). It

should be noted that theorists favoring the five-factor model use a combination of two separate factors, the Agreeableness and Conscientiousness domains, instead of the single Psychoticism factor has been used in alternative models (Eysenck, 1992). Costa and McCrae's five domains and explicit lower-level facets are presented in Table 1.

Measuring Personality Using the Five-Factor Model

The Five Factor Model of personality has received extensive empirical support. The three most prominent instruments used to measure the FFM are the Big-Five Inventory (BFI; John, 1995), the Hogan Personality Inventory (HPI; Hogan, 1986), and the NEO Personality Inventory-Revised (NEO-PI-R; Costa & McCrae, 1992).

The NEO-PI-R is a comprehensive personality inventory that measures the five factors as well as specific traits represented by subscales, called facets (Costa & McCrae 1995). Six facet scales are measured in each domain. A general description of the five factors, or domains, measure personality while a more specific analysis is provided by the facet scales. The inclusion of scores reflecting each of the 30 facets, in addition to the five domains, provides researchers with a more precise view of personality traits (Costa & McCrae, 1995). Statistically, the facets are separate from one another but they remain unified under their specific domain (Costa & McCrae, 1995). The NEO-PI-R is widely successful and demonstrates impressive validity but there are some limitations of this inventory. The NEO-PI-R is sold commercially and there is a cost associated with its use. This limits researchers, particularly in academic settings, from its use as a measure

Table 1

Costa and McCrae's 5 Domains and 30 Facets of the Five Factor Model of Personality

- 1) Neuroticism
 - Anxiety
 - Angry Hostility
 - Depression
 - Self-Consciousness
 - Impulsiveness
 - Vulnerability

 - 2) Extraversion
 - Warmth
 - Gregariousness
 - Assertiveness
 - Activity
 - Excitement-Seeking
 - Positive Emotions

 - 3) Openness to Experience
 - Fantasy
 - Aesthetics
 - Feelings
 - Actions
 - Ideas
 - Values

 - 4) Agreeableness
 - Trust
 - Straightforwardness
 - Altruism
 - Compliance
 - Modesty
 - Tender-Mindedness

 - 5) Conscientiousness
 - Competence
 - Order
 - Dutifulness
 - Achievement Striving
 - Self-Discipline
 - Deliberation
-

of personality. Goldberg (1999) stated that the proprietary nature of modern personality inventories inhibits the research necessary to assess their validity and allow for refinement. As a result, Goldberg (1999) proposed that the creation of a public domain item set is necessary to meet the needs of researchers. This item set is based off questions from leading inventories and allows researchers to customize and adapt these questions in a manner best suited to their research without accruing the cost from the use of proprietary measures such as the NEO-PI-R. Goldberg's proposal led the way for the construction of International Personality Item Pool (IPIP). Researchers can access the IPIP free of charge and develop personality inventories to compliment their research. Measures that are developed from the item pool will make comparisons more feasible and reliable. Additional information regarding the IPIP can be found on the IPIP Scientific Collaboratory website (IPIP: <http://ipip.ori.org/>).

The M5-120 (M5) Questionnaire (McCord, 2002) is a personality inventory created for use in the public domain. McCord (2002) utilized the IPIP to select the 120 items that best measure the 5 domains and 30 facets of the five-factor model. This inventory has been shown to be highly correlated with the NEO-PI-R at the domain and facet levels and possess a high degree of internal reliability (McCord, 2002). Research has shown that each of the five domains reveal high correlations with other well validated personality measures of the same domain (Proctor & McCord, 2009a; Proctor & McCord, 2009b; Socha et. al, 2010). For example, a study of the Neuroticism domain (Rosnov, Pickup, & McCord, 2003) found significant positive correlations with Speilberg's (1983) State Trait Anxiety Inventory and significant negative correlations with Rosenberg's (1965) Self-Esteem Scale. A validity study of the Extraversion domain revealed significant

negative correlations with Richmond and McCroskey's (1998) Personal Report of Communication Apprehension 24 and the Shyness Scale (Richmond & McCroskey, 1998). In a validation study of the Openness to Experience Domain, significant positive relationships were found (Kelly, Mims, & McCord, 2003) with the Sensation Seeking Scale (Zuckerman, 1979). A validation study on the Agreeableness domain (Payne, Shelton, Bradley, & McCord, 2004) revealed significant negative correlations with the Bag-Trust Questionnaire (BTQ). The five domains and explicit lower-level facets measured by the M5 are presented in Table 2.

Personality and Deception

Personality impacts all aspects of human behavior. Thus, it is realistic to expect it to have an impact on deception. Lying is usually more cognitive demanding than telling the truth, but skilled liars don't experience much cognitive load when they tell a lie (Vrij, Fisher, Mann, & Leal, 2006). There are individual differences related to personality that describe why some people are better at lying than others. For example, lying is typically less demanding for manipulators and actors than it is for their counterparts (Vrij et. al., 2010). In addition, skilled liars may be more well prepared and have spent time working out the details of their lie in advance (Vrij, et. al., 2010). These behaviors can sometimes be attributed to personality.

There are two big reasons that lies fail; one to do with thinking and the other to do with feeling. Either the liar failed to adequately prepare, or the "interference of emotions" caused the lie to fail. (Ekman, 1989). The interference of emotions describes how lies are betrayed by signs of emotion (Ekman, 1989). Typically, liars may attempt to conceal an emotion that is actually being experienced. A liar might feel a variety of emotions including, "fear of being caught", "guilt about lying", and/or "delight in having

Table 2

The 5 Domains and 30 Facets of the M5-Personality Questionnaire

- 1) Neuroticism
 - Anxiety
 - Anger
 - Depression
 - Self-Consciousness
 - Immoderation
 - Vulnerability

 - 2) Extraversion
 - Friendliness
 - Gregariousness
 - Assertiveness
 - Activity Level
 - Excitement-Seeking
 - Cheerfulness

 - 3) Openness to Experience
 - Imagination
 - Artistic Interests
 - Emotionality
 - Adventurousness
 - Intellect
 - Liberalism

 - 4) Agreeableness
 - Trust
 - Morality
 - Altruism
 - Cooperation
 - Modesty
 - Sympathy

 - 5) Conscientiousness
 - Self-Efficacy
 - Orderliness
 - Dutifulness
 - Achievement Striving
 - Self-Discipline
 - Cautiousness
-

duped someone” (Ekman & Frank, 1993). Personality type plays a large role in a person’s emotional state, and the manifestation of these emotions depends on the personality of the liar and the circumstances under which the lie takes place (Ekman, 1988). There are multiple factors that influence how the fear of being caught in a lie will be felt and subsequently manifested. This is often referred to as deception apprehension (Ekman & Frank, 1993). The liar’s belief about his target’s skill in detecting deception, the liar’s amount of previous success in lying, fear of punishment, and the personality of the liar can all influence deception apprehension, or the fear of being caught. There are some people who find it easy to lie, while others find it difficult and challenging (Ekman & Frank, 1993). The group that lies easily and with great success is referred to as natural liars (Ekman & Frank, 1993). Natural liars have been deceiving others throughout their lives. Their success instills a sense of confidence and reduces or eliminates any detection apprehension. Two very different skills may be needed for the natural liar’s success: the skill to plan a deceptive strategy and the skill to mislead a target in a face-to-face meeting. With this said, it is important to note that in previous studies, examining the face, body, and speech of liars, observers did not rate natural liars differently from others on objective personality assessments. These rating scales were composed of 7-point bipolar adjectives that measured abnormal behavior (Ekman & Frank, 1993).

Furthermore, natural liars must not be confused with psychopaths. Although psychopaths routinely employ deception to get what they want, unlike natural liars, psychopaths show poor judgment, superficial charm, no remorse or shame, antisocial behavior without apparent compunction, and pathological egocentricity and incapacity for love (Hare, 1970). “Manipulators, good actors, and expressive people” may be more successful liars

than their counterparts but there is little empirical research that examines these characteristics in terms of a broader personality type (Vrij, 2009). Machiavellianism, which describes a tendency towards cunning and deceitful behavior, and psychopathy are two traits commonly associated with deceptive behavior (Vrij, 2009). Research has demonstrated that individuals scoring high on Machiavellianism were harder to judge if they were telling the truth and ultimately more successful at telling believable lies (Geis & Moon, 1981). Machiavellianism is not specifically included in the FFM but research has demonstrated significant negative correlations with the Agreeableness and Conscientiousness domains of the NEO-PI-R) (Vrij, 2009). Psychopathy also has a significant negative relationship to the Agreeableness domain. One could therefore infer that individuals scoring low on the Agreeableness and Conscientiousness domains of the FFM will be more successful at lying. There are other traits measured by the FFM of personality that may have some relationship with a person's ability to lie. For example, anxiety and self-consciousness are two of the facets measured in the Neuroticism domain of the FFM. Psychopaths usually score low on the neuroticism domain, implying those most comfortable telling a lie would also score low in neuroticism. However, both anxious and avoidant individuals are believed to use deception to accomplish social interaction goals in romantic relationships (Ennis, Vrij & Chance, 2008). Avoidant individuals may use deception to maintain a desired sense of autonomy, such as avoiding the disclosure of personal information. Anxious individuals often have a negative opinion of the self and a fear of abandonment. They may lie in order to present a more attractive persona to their romantic partner or to appease the partner (Ennis, Vrij & Chance, 2008). Studies have demonstrated that anxiety and avoidance are associated

with an increase in deception in romantic relationships and the frequency of this deception is stable across romantic partners rather than governed by relationship-specific factors such as reciprocity (Cole, 2001). As a result, individuals scoring high on the self-consciousness and anxiety facets of the neuroticism domain may be more successful at lying.

Hypotheses

Machiavellianism and psychopathy are two traits commonly associated with deceptive behavior (Vrij, 2009). Previous research has demonstrated that individuals scoring high on Machiavellianism were harder to judge and more successful at telling a believable lie (Geis & Moon, 1981). Past studies revealed significant negative correlations between the following: Machiavellianism and Conscientiousness, Machiavellianism and Agreeableness, and Psychopathy and Agreeableness (Vrij, 2009). These findings suggest that the most successful liars will score low on the Conscientiousness and Agreeableness domains measured by the M5-100.

Other studies have examined the verbal and nonverbal indicators of deception. Past studies examining non-verbal indicators of deception have revealed specific behaviors associated with lying (e.g. lack of eye contact, controlled body movements, etc.) (DePaulo et al., 2003; Vrij, 2000; Zuckerman, DePaulo, & Rosenthal, 1986). However, other studies have found that detecting deception through non-verbal behaviors is no better than chance (DePaulo, 1994; Ekman, O'Sullivan, & Frank, 1999) and suggest that verbal indicators may be more important in detecting lies (Lee, Klaver, & Hart, 2008). Thus, based on previous research, the following hypotheses and research questions were made:

Testable Hypothesis #1: Pearson correlations between the Conscientiousness Domain and successful lying will be significant and negative.

Testable Hypothesis #2: Pearson correlations between the Agreeableness Domain and successful lying will be significant and negative.

Additional Analyses: In addition, the relationship between successful lying and gender, body language, voice/speech, facial expressions, and details/length of response will be examined.

CHAPTER THREE: METHOD

Participants

Participants for this study were 58 college students enrolled in introductory psychology classes. Each student received research credit for his or her participation in the study. Three of the 58 participants were excluded due to incomplete data. The ages of the remaining 55 participants ranged between 18 and 25 ($M=19.15$, $SD=$ with a 1.67). Of the 55 participants, 15 were male and 40 were female. Demographic information is listed in Appendix A.

Raters

In addition to the 58 participants, 7 raters were involved with this study. The raters were recruited from an upper level communications class. They received extra credit for their participation in the study. Raters ranged between the ages of 20 and 27 ($M=22.29$, $SD=2.98$). Of the 7 raters, 2 were male and 5 were female. Demographic information is listed in Appendix B.

Measures

The following measures were administered to the participants and raters.

Demographic Inventory for Participants. Participants completed a demographic inventory in Qualtrics, a computer survey program, that consisted of basic demographic questions including gender, age, and current year in college. In addition, participants answered a question regarding how comfortable they are lying on a sliding scale from 0 (not comfortable at all) to 100 (very comfortable). The demographic questionnaire is included as Appendix C.

M5-120 Questionnaire (M5). Participants completed the M5-120 Questionnaire in Qualtrics. The M5-120 Questionnaire (McCord, 2002) is a 120 item self-report measure designed to assess traits of normal personality. Items are scored on a 5- point likert-scale with answers ranging from 1 (Inaccurate) to 5 (Accurate). The M5 is based on the FFM and is derived from the International Personality Item Pool (IPIP; Goldberg, 1999). The five domains identified by the M5 are Neuroticism, Extroversion, Openness to Experience, Conscientiousness, and Agreeableness. Six descriptive facets are measured under each of these domains. Several studies have reported appropriate levels of validity and reliability in the majority of the domains (Proctor & McCord, 2009; Shelton et al., 2004; Socha et al., 2010). The overall Cronbach's Alpha for the current study was .76. The M5-120 Questionnaire is included as Appendix D.

Participant Nondisclosure Form. Given the deceptive nature of this project and the fact that data collection was ongoing, participants were provided a hard copy of a non-disclosure statement that covered the importance of not discussing the study upon completing their portion. The participant nondisclosure form is included as Appendix E.

Demographic Inventory for Raters. Raters completed a demographic inventory in Qualtrics that included gender, age, and year in college. In addition, they answered a question regarding their confidence in their ability to detect a lie on a sliding scale from 0 (not confident) to 100 (very confident). The demographic inventory for raters is included as Appendix F.

Rater Form. Raters completed a rating questionnaire in Qualtrics for each of the 55 participants. This questionnaire included a place to type the participant's number and

questions to be answered on a sliding scale from 0 to 100. The rater form is included as Appendix G.

Rater Debriefing Form. Raters received a hard copy of a debriefing form that outlined the deception involved in this study. The rater debriefing form is included as Appendix H.

Procedure

This study was conducted in two phases. Phase I consisted of participant questionnaires and participant video recordings. Phase II consisted of a rater questionnaire and ratings of the participants' videos.

Phase I. Fifty-eight participants completed Phase I of the study. Twelve data collection sessions with groups of five individuals or less were held over 6 weeks. Participants arrived at the computer lab on the third floor of the psychology building. They were asked to take a seat at a computer and were provided a randomly assigned identification number on a note card. They were told to keep the note card with them for the rest of the study. Participants were provided with a brief description of the study, including informed consent. Questions and concerns were addressed and then the participants were directed to the consent form on their computer screens. After providing informed consent (Appendix I), participants responded to basic demographic questions, including gender, age, and current year in college. Participants were also asked to rate their comfort lying on a sliding scale from "0" to "100" with "100" being completely comfortable lying. The last thing the participants completed online was the M5-120 Questionnaire. Participants were asked to raise their hands after they completed the online portion of the study. The order in which the participants proceeded to the second

phase of the study was determined by the order in which they completed the first part. Two students at a time were escorted to the second portion of the study while the remaining participants waited in the computer lab. Each participant was seated in a private room with a laptop computer and a small video camera on a tripod. The participants watched a brief video clip, providing them with instructions for the remainder of the study. They were instructed to “pause” the computer and open the door when the video instructed them to do so. Each participant heard the principal researcher say the following in the video:

I am researching how well people lie in everyday life. Participants have been randomly placed in one of two groups: liars and truth-tellers. You are in the lying group. I am going to provide you with a lie that I want you to tell. You will then answer 4 brief questions using the information I have provided you. Please feel free to make up any additional information that you need in order to sound convincing. Another group of people will watch your video clips and will decide whether you are telling the truth or lying. The 5 of you that are rated as the most believable will receive a \$15 iTunes gift card. If you have any questions or technical difficulties, I will be waiting outside to assist you. You will notice a small flip camera located beside the computer. I will be videotaping your answers in a few minutes. If you have any questions throughout this experiment, please see me for assistance. Now, I want you to listen carefully to the following story. You will base your answers on the information I am providing you.

Last week, your professor told your class about a study that you could participate in for extra credit on your final exam. This study took place yesterday. You were told to arrive at the computer lab on the second floor of Killian at 6:00 pm if you were interested in participating. Many of your classmates arrived on time and waited for 30 minutes but no one showed up to provide them with any instructions. Although, you did not go to Killian for the study, you are going to lie and say that you did. You will state that you arrived at 6:00 pm with your classmates and no one ever showed up to administer the study. You are upset that you wasted your time and believe that your professor should give you the extra credit that is owed to you.

That's the story you are going to use as a basis to answer a few questions. Feel free to reflect on this story for a couple minutes if you would like. You can make up any additional information you need in order to sound believable. When you are ready to begin answering questions, open the door and I will come in to set up the video camera. I will first ask you for your participant number and then I will proceed with the questions. The participant number is written on the card that was provided to you downstairs. Pause the video of me after each question is asked so that you have enough time to give your answer. After you are done with your answer, restart the video and proceed with the next question. I will tell you when you are finished and provide you with instructions. If these instructions are

unclear, please ask me for help. Remember to pause the video after I ask you each question.

When the participants opened their doors indicating that they were ready to proceed, the principal researcher verified that they understand the directions and turned on the video camera. The principal researcher began recording and stepped out of the room, closing the door. When the participants restarted the video, they heard the following questions and instructions.

1. *Please state your participant number*
2. *Can you tell me in as much detail as possible what happened yesterday?*
3. *How did you feel about this?*
4. *In relation to the front door, where did you sit while you waited?*
5. *Are you sure that you are telling the truth?*

You are now finished with the questions portion of this study. Please open your door and I will turn off the video camera and provide you with additional information.

After the participants answered the questions, they were asked to indorse a non-disclosure statement that stressed the importance of not discussing the details of this study with anyone. After completing this form, they were released. The non-disclosure statement is included as Appendix F.

Phase II. I reviewed the 55 video clips, edited out blank segments or extended non-content segments, and stored the clips on a flash drive for the second phase of the study. The second phase incorporated the use of the seven aforementioned raters. Seven

students majoring in communications studies viewed the 55 video clips and determined the degree to which they believed the participants to be telling the truth or lying. I introduced the study to the raters by telling them that I was looking at how well people lie in everyday life. They were directed to their computers to read and acknowledge a consent form and were asked if they had any questions or concerns before proceeding. After attaining informed consent, the principal researcher explained to the raters that they had been selected because previous research has demonstrated communication majors are better able to detect deception given their field of study. They were told that they will watch 55 video clips and that they will hear a very similar story from all of the participants. Deception was involved when I told them that many of the participants were telling the truth and many were lying. However, in actuality all were lying. They were shown how to complete the rater questions in Qualtrics. Raters were informed that the person who was the most accurate in determining lies versus truth tellers would be rewarded with a \$15 iTunes gift card. They were asked to type in their email address if they wanted to be considered for the reward. The video clips were then projected on a large screen in the classroom. The raters were given two minutes to complete the rater form after each clip. This phase took approximately 2.5 hours. The raters were given a 30- minute break at the halfway mark and provided with pizza and soft drinks. The importance of keeping their ratings and their opinions to themselves was strongly emphasized. The raters were debriefed at the end of the study. The rater debriefing form is included as Appendix J. The present study was approved by the Institutional Review Board of Western Carolina University.

Definition of Successful Lying

Successful lying was defined by the raters' decision whether the participants were lying or telling the truth and the raters' confidence in that decision. The scale ranged from “-100” to “100”, with “-100” meaning that the rater was absolutely sure the participant was telling the truth and “100” meaning the rater was absolutely sure the participant was lying ($M=24.06$, $SD=44.48$).

RESULTS

Data from all seven raters were unavailable for all of the participants. Out of 55 participants, 30 received complete ratings from the all seven raters and the remaining 25 received ratings from at least five of the raters. Given that roughly 30% of the raters' data was missing for a significant minority of the participants, two separate sets of analyses were conducted. The first analysis consisted of the 55 participants with incomplete ratings and the second analysis consisted of the 30 participants with complete ratings.

Analyses of the 55 Participants

Pearson product moment correlation analyses were conducted to examine the relationships between the variables of interest for the total participant sample. Raters were asked how much the participants' body language, voice/speech, facial expressions, and details/length of response affected their truth/lie rating. Therefore, the relationship between successful lying (measured by truth/lie ratings and the raters' confidence in their ratings) and body language, voice/speech, facial expressions, and details/length of response was explored. No statistically significant relationships were revealed between successful lying and body language, voice/speech, or facial expressions. An independent t-test revealed no significant effect for gender $t(53) = .34, p > .05$. Males ($M=27.44, SD=46.64$) were not better liars than females ($M=22.78, SD=44.19$). Ethnicity was not explored due to the lack of racial diversity in the sample. For a list of correlation coefficients see Table 3.

Table 3

Pearson Correlations for Body Language, Voice/Speech, Facial Expressions, with Successful Lying for the 55 Participant Group

Variable	Correlation Coefficient
Body Language	.20
Voice/Speech	-.09
Facial Expressions	.26
Details/Length of Response	.19

Note. n=55 for all cells.

*Correlation is significant at the .05 level (2-tailed).

Pearson product moment correlation analyses were also conducted to examine the relationship between the FFM of personality and the 55 participants' ability to lie. No statistically significant relationship was found between any of the Big Five domains and successful lying. However, a significant negative correlation was revealed between the sympathy facet of the Agreeableness domain and successful lying, $r(53) = -.34, p < .05$. For a list of correlation coefficients see Table 4.

Table 4

Pearson Correlations for M5-120 M5 Personality Domains/Facets and Successful Lying Score For the 55 Participant Group

Domain/Facet	Correlation Coefficient With Successful Lying
Neuroticism	-.08
Anxiety	-.04
Anger	-.07
Depression	-.14
Self Consciousness	-.07
Immoderation	-.10
Vulnerability	.11
Extraversion	.09
Friendliness	.02
Gregariousness	.14
Assertiveness	.13
Activity Level	.12
Excitement Seeking	.10
Cheerfulness	-.06
Openness to Experience	-.04
Imagination	-.00
Artistic Interests	-.20
Emotionality	-.08
Adventurousness	.13
Intellect	-.02
Liberalism	.20
Agreeableness	-.15
Trust	.11
Morality	.04
Altruism	-.20
Cooperation	.04
Modesty	-.24
Sympathy	-.34*
Conscientiousness	.11
Self-Efficacy	.15
Orderliness	.21
Dutifulness	-.16
Achievement-Striving	.03
Self-discipline	.06
Cautiousness	.10

Note. n=55 for all cells.

*Correlation is significant at the .05 level (2-tailed).

Analyses of the 30 Participants

Pearson product moment correlation analyses were also conducted to examine the same variables for the 30 participant group (individuals with complete rater data). Again, no statistically significant relationships were revealed between successful lying and voice/speech or details/length of response. There were, however, statistically significant negative correlations between successful lying and body language, $r(28) = -.40, p < .05$, and successful lying and facial expressions, $r(28) = -.40, p < .05$. An independent t-test revealed no significant effect for gender $t(28) = .71, p > .05$. Males ($M=29.13, SD=46.05$) were not rated as better liars than females ($M=15.03, SD=51.66$). Ethnicity was not explored due to the lack of racial diversity in the sample. For a list of correlation coefficients see Table 5.

Table 5

Pearson Correlations for Body Language, Voice/Speech, Facial Expressions, with Successful Lying for the 30 Participant Group

Variable	Correlation Coefficient
Body Language	-.40
Voice/Speech	-.06
Facial Expressions	-.40
Details/Length of Response	.08

Notes. n=55 for all cells.

*Correlation is significant at the .05 level (2-tailed).

The relationship between personality and successful lying was reexamined for the 30 participants who were rated by all seven raters. There was a statistically significant negative correlation between successful lying and the Agreeableness domain, $r(28) =$

-.37, $p < .05$. Within the Agreeableness domain, the following facets demonstrated significant negative relationships with successful lying: modesty, $r(28) = -.41, p < .05$, and sympathy, $r(28) = -.53, p < .01$.

No statistically significant correlations were demonstrated between successful lying and the remaining four domains, however; there was a significant negative correlation between the artistic interests facet of the Openness to Experience domain and successful lying, $r(28) = -.51, p < .01$. For a complete list of correlation coefficients see Table 6.

Table 6

Pearson Correlations for M5-120 M5 Personality Domains/Facets and Successful Lying Score For the 30 Participant Group

Domain/Facet	Correlation Coefficient With Successful Lying
Neuroticism	-.05
Anxiety	-.06
Anger	-.12
Depression	-.11
Self Consciousness	-.13
Immoderation	-.06
Vulnerability	.08
Extraversion	.11
Friendliness	-.02
Gregariousness	.26
Assertiveness	.34
Activity Level	.15
Excitement Seeking	.11
Cheerfulness	-.03
Openness to Experience	-.28
Imagination	-.07
Artistic Interests	-.51**
Emotionality	-.25
Adventurousness	-.05
Intellect	-.15
Liberalism	.20
Agreeableness	-.15
Trust	.11
Morality	-.17
Altruism	-.34
Cooperation	.04
Modesty	-.41*
Sympathy	-.53**
Conscientiousness	.18
Self-Efficacy	.27
Orderliness	.34
Dutifulness	-.18
Achievement-Striving	.05
Self-discipline	.14
Cautiousness	.22

Note. n=55 for all cells.

*Correlation is significant at the .05 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).

CHAPTER FIVE: DISCUSSION

Correlations

The relationship between personality and the ability to tell a credible lie were examined in the current study. Two sets of analyses were performed; one with all 55 participants and one with the 30 participants who had complete ratings by all seven raters. Findings from the analyses of the 55 participants did not support the first hypotheses of a significant negative relationship between the Conscientiousness domain and successful lying. In addition, the results failed to support the hypothesis of a significant negative relationship between the Agreeableness domain and successful lying; however, there was a significant negative correlation between the sympathy facet of the Agreeableness domain and successful lying. This finding suggests that the participants who scored low on the sympathy facet of the Agreeableness domain were more successful liars. Individuals who score low on the sympathy facet are widely considered to be rational, logical and often perceived as lacking warmth and compassion. These traits may be helpful when lying because they help suppress the emotion and guilt that often arises in deceptive situations. Traits such as low morality do not have as strong of an impact when the stakes are not high and there is no real consequence for deceitful behavior and this could explain the absence of a significant finding between Conscientiousness and successful lying. In addition, participants were asked to lie about an event void of anything that would challenge their personal values and beliefs or elicit a strong emotional response. There is also the possibility that Agreeableness and Conscientiousness do not have a significant impact on the ability to tell a successful lie.

Results from the analyses of the 30 participants who were rated by all seven raters produced different findings. Again, the first hypothesis of a significant relationship between the Conscientiousness domain and successful lying was not supported. Participants who rated themselves as careless, unreliable, less moral, and having a more relaxed conscience were no more successful at lying than participants who rated themselves as reliable, organized, and ethical. There was a statistically significant negative relationship between Agreeableness and successful lying. Participants who scored low on Agreeableness were rated as better liars. Specifically, participants who scored low on the modesty and sympathy facets of the Agreeableness domain appeared to be the best deceivers. Individuals who score low on Agreeableness are often described as cynical, rude, suspicious, uncooperative, vengeful, ruthless, irritable, and manipulative. Those who score low on the modesty facet believe they are superior people and may be seen as arrogant by other (McCord, 2002). Individuals who are low on the sympathy facet are described as realists who make rational decisions based on logic. They are usually more hard-hearted and less moved emotion or appeals of pity (McCord, 2002). In the current study, participants who rated themselves as rational, unemotional, and arrogant were more successful liars. The raters may have interpreted the rational, unemotional, arrogant presentation as the participants' confidence in the story they were telling. These findings support previous research that suggests that individuals scoring high on Machiavellianism and low on Agreeableness are better liars (Vrij, 2009; Geis & Moon, 1981). Individuals who possess these traits may have more experience telling lies and this experience could help them appear more comfortable and believable to the deceived.

Findings from the analyses of the 30 participants also produced a statistically significant finding between successful lying and the artistic interests facet of the Openness to Experience domain. Those with lower scores on artistic interests were rated as the more believable. Someone who scores low on the artistic interests facet is often uninterested in art and beauty. This finding is interesting because on the surface, it appears to contradict previous research that suggests that “manipulators, good actors, and expressive people” tend to be more successful deceivers than their counterparts (Vrij, 2009). However, those who score high on the artistic interests facet are not necessarily talented, and it is possible that they were perceived as overacting by the raters. A person who appears overly dramatic is not necessarily a “natural performer” who is skilled at lying by virtue of their inherent acting skills (Ekman, 1992). In addition, studies have shown that actors with high self-awareness are better deceivers (Johnson, Barnacz, Yokkaichi, Rubio, Racioppi, Shackelford, Fisher, & Keenan, 2005). In the present study, no significant relationship was found between artistic interests and conscientiousness, suggesting that those who rated themselves as having a high appreciation for art were no more organized, reliable, cautious, and self-disciplined than the rest of the participants.

Additional variables of interest were analyzed and produced statistically significant results with the 30 participant group. Significant negative correlations were demonstrated between body language and successful lying and between facial expressions and successful lying. These results suggest that body language and facial expressions were of particular interest to the raters in determining whether the participants were telling the truth or telling a lie. Body language and facial expressions were a significant factor for the participants who were perceived as deceitful. This

finding suggests that skilled liars may have some measure of control over their nonverbal behavior and expression of emotions (Ford, 1996). It is possible that the participants who appeared uncomfortable (i.e. avoiding eye contact) and unnatural (i.e. excessive movement or extremely rigid behavior) were perceived as deceptive. Results suggest that raters did not consider the participants' voice or the length and details of their stories to be significantly important in determining whether they were telling the truth or lying.

Limitations

The current study consisted of 55 participants and 7 raters. As previously mentioned, all 55 participants received complete ratings from at least 5 of the 7 raters but only 30 participants received complete ratings from all 7 raters. The missing data from the remaining 25 participants is a limitation to this study. It is unclear whether the additional data would have directly affected the findings but it does pose some additional questions as discussed above.

The sample composition is also a significant limitation to this study. The age and ethnic composition of the participants, while normal for a rural southern university, do not accurately reflect the general population.

There are a number of additional limitations typical to most studies that involve deception. The first and perhaps most important limitation is that the deception is of little consequence to the deceiver. Cues normally associated with deception, such as nervousness, are the most pronounced when the deception is of importance and "unimportant deceptions do not induce these telltale signs" (Mann & Vriq 2006; Vriq & Mann 2005). Meta-analysis suggests that common cues to deception (e.g., vocal pitch) are more obvious when people are highly motivated to deceive (DePaulo, et al. 2003). In

the present study, participants were given research credit hours for their participation in the study. There was a reward for the participants who were the most successful at deceiving the raters but no consequence for being caught in a lie. It is likely that some of the participants just wanted to complete the study and had no real motivation to be successful liars.

Another limitation to this study is that the deceived was not allowed to question the deceiver. The raters were presented with videotapes and unable to cross-examine the participants. This minimized cognitive load and nervousness because providing a spontaneous answer to an unexpected question is usually much more difficult than delivering a rehearsed lie (Vrij, 2009). In a “real world” situation, the deceiver would not be able to provide fictitious accounts of their whereabouts without being cross-examined. A measure of doubt is reflected by someone who questions the validity of a statement, which often induces anxiety and affects the behavior of the individual in question.

Future Directions

The current study implies that the ability to tell a successful lie may be associated with personality. Future research is necessary to confirm past findings and accumulate new data. A replication of this study should include measures to insure that the raters answer every question. In addition, a more representative sample of the population should be utilized to include an equal amount of males and females, more ethnic diversity, and more diverse age groups. Perhaps future research can include high-stakes situations, live interviewing instead of videotapes, and participants and raters who are both known and unknown to each other.

Implications and Conclusions

The fact that two groups of data emerged from this study was unplanned and unexpected. Overall, the analyses of the two groups produced significantly different results. The most likely explanation for this discrepancy is that the raters failed to provide complete ratings when they were not confident whether the participant was telling the truth or lying. This might suggest that most people would prefer not to speculate about the validity or falsehood of a statement or story when they do not feel confident about their decision. Another possibility is that the raters were fatigued after reviewing video clips for 2.5 hours, resulting in inconsistent ratings. However, there was missing data from participants throughout the viewing process; therefore, it appears less likely that fatigue was the primary cause. In addition, data was missing from each of the seven raters so the incomplete data was not a result of one or two raters who neglected to complete the study.

The psychology of deception is complex and cannot be reduced to a few basic principles. For years, researchers have investigated how truthful interactions differ from deceptive interactions. Often ignored is the basic question: What makes a good liar? Insight into this question would be greatly beneficial to law enforcement. It may help decide who would be suitable for undercover work as well as help in the lie detecting process. The ability to deceive is also a valuable skill in other careers, such as politics and sales, and determining what individual characteristics are associated with successful lying could help to ensure success in those areas.

The findings from the present study are inconclusive but they do shed some light on the complexities surrounding deception. The study of deception is intricate and full of

pitfalls. We must exercise extreme caution when generalizing experimental findings to the larger population. The type of lie told, the situation in which it's told, the relationship to the deceived, and the consequences for getting caught are some of the variables that must be taken into consideration.

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Appendices

APPENDIX A

Participant Demographics

Age

Minimum	Maximum	Mean	Std. Deviation
18	25	19.15	1.67

Ethnicity

Caucasian	African American	Asian	Hispanic	American Indian	Other
49	5	1	0	0	0

Year in School

Freshman	Sophomore	Junior	Senior
35	5	9	6

APPENDIX B

 Rater Demographics

Age

Minimum	Maximum	Mean	Std. Deviation
20	27	22.29	2.98

Ethnicity

Caucasian	African American	Asian	Hispanic	American Indian	Other
4	1	1	0	0	1

Year in School

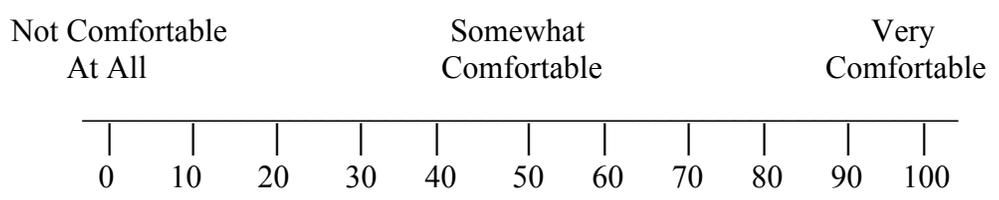
Freshman	Sophomore	Junior	Senior
0	0	5	2

APPENDIX C

Demographic Information Survey for Participants

- 1. Participant Number _____
- 2. Gender _____
- 3. Age _____
- 4. Year in School _____

5. How comfortable do you feel telling lies in your everyday life?
Please indicate your answer on the following scale.



APPENDIX D

M5-120 Personality Questionnaire

		Inaccurate	Moderately Inaccurate	Neither	Moderately Accurate	Accurate
1	Worry about things.	0	0	0	0	0
2	Make friends easily.	0	0	0	0	0
3	Have a vivid imagination.	0	0	0	0	0
4	Trust others.	0	0	0	0	0
5	Complete tasks successfully.	0	0	0	0	0
6	Get angry easily.	0	0	0	0	0
7	Love large parties.	0	0	0	0	0
8	Believe in the importance of art.	0	0	0	0	0
9	Use others for my own ends.	0	0	0	0	0
10	Like to tidy up.	0	0	0	0	0
11	Often feel blue.	0	0	0	0	0
12	Take charge.	0	0	0	0	0
13	Experience my emotions intensely.	0	0	0	0	0
14	Love to help others.	0	0	0	0	0
15	Keep my promises.	0	0	0	0	0
16	Find it difficult to approach others.	0	0	0	0	0
17	Am always busy.	0	0	0	0	0
18	Prefer variety to routine.	0	0	0	0	0
19	Love a good fight.	0	0	0	0	0
20	Work hard.	0	0	0	0	0
21	Go on binges.	0	0	0	0	0
22	Love excitement.	0	0	0	0	0
23	Love to read challenging material.	0	0	0	0	0
24	Believe that I am better than others.	0	0	0	0	0
25	Am always prepared.	0	0	0	0	0
26	Panic easily.	0	0	0	0	0
27	Radiate joy.	0	0	0	0	0
28	Tend to vote for liberal political candidates.	0	0	0	0	0
29	Sympathize with the homeless.	0	0	0	0	0
30	Jump into things without thinking.	0	0	0	0	0
31	Fear for the worst.	0	0	0	0	0
32	Feel comfortable around people.	0	0	0	0	0
33	Enjoy wild flights of fantasy.	0	0	0	0	0
34	Believe that others have good intentions.	0	0	0	0	0
35	Excel in what I do.	0	0	0	0	0
36	Get irritated easily.	0	0	0	0	0
37	Talk to a lot of different people at parties.	0	0	0	0	0
38	See beauty in things that others might not notice.	0	0	0	0	0
39	Cheat to get ahead.	0	0	0	0	0
40	Often forget to put things back in their proper place.	0	0	0	0	0
41	Dislike myself.	0	0	0	0	0

42	Try to lead others.	0	0	0	0	0
43	Feel others' emotions.	0	0	0	0	0
44	Am concerned about others.	0	0	0	0	0
45	Tell the truth.	0	0	0	0	0
46	Am afraid to draw attention to myself.	0	0	0	0	0
47	Am always on the go.	0	0	0	0	0
48	Prefer to stick with things that I know.	0	0	0	0	0
49	Yell at people.	0	0	0	0	0
50	Do more than what's expected of me.	0	0	0	0	0
51	Rarely overindulge.	0	0	0	0	0
52	Seek adventure.	0	0	0	0	0
53	Avoid philosophical discussions.	0	0	0	0	0
54	Think highly of myself.	0	0	0	0	0
55	Carry out my plans.	0	0	0	0	0
56	Become overwhelmed by events.	0	0	0	0	0
57	Have a lot of fun.	0	0	0	0	0
58	Believe that there is no absolute right or wrong.	0	0	0	0	0
59	Feel sympathy for those who are worse off than myself.	0	0	0	0	0
60	Make rash decisions.	0	0	0	0	0
61	Am afraid of many things.	0	0	0	0	0
62	Avoid contacts with others.	0	0	0	0	0
63	Love to daydream.	0	0	0	0	0
64	Trust what people say.	0	0	0	0	0
65	Handle tasks smoothly.	0	0	0	0	0
66	Lose my temper.	0	0	0	0	0
67	Prefer to be alone.	0	0	0	0	0
68	Do not like poetry.	0	0	0	0	0
69	Take advantage of others.	0	0	0	0	0
70	Leave a mess in my room.	0	0	0	0	0
71	Am often down in the dumps.	0	0	0	0	0
72	Take control of things.	0	0	0	0	0
73	Rarely notice my emotional reactions.	0	0	0	0	0
74	Am indifferent to the feelings of others.	0	0	0	0	0
75	Break rules.	0	0	0	0	0
76	Only feel comfortable with friends.	0	0	0	0	0
77	Do a lot in my spare time.	0	0	0	0	0
78	Dislike changes.	0	0	0	0	0
79	Insult people.	0	0	0	0	0
80	Do just enough work to get by.	0	0	0	0	0
81	Easily resist temptations.	0	0	0	0	0
82	Enjoy being reckless.	0	0	0	0	0
83	Have difficulty understanding abstract ideas.	0	0	0	0	0
84	Have a high opinion of myself.	0	0	0	0	0
85	Waste my time.	0	0	0	0	0
86	Feel that I'm unable to deal with things.	0	0	0	0	0
87	Love life.	0	0	0	0	0
88	Tend to vote for conservative political candidates.	0	0	0	0	0
89	Am not interested in other people's problems.	0	0	0	0	0
90	Rush into things.	0	0	0	0	0

91	Get stressed out easily.	0	0	0	0	0
92	Keep others at a distance.	0	0	0	0	0
93	Like to get lost in thought.	0	0	0	0	0
94	Distrust people.	0	0	0	0	0
95	Know how to get things done.	0	0	0	0	0
96	Am not easily annoyed.	0	0	0	0	0
97	Avoid crowds.	0	0	0	0	0
98	Do not enjoy going to art museums.	0	0	0	0	0
99	Obstruct others' plans.	0	0	0	0	0
100	Leave my belongings around.	0	0	0	0	0
101	Feel comfortable with myself.	0	0	0	0	0
102	Wait for others to lead the way.	0	0	0	0	0
103	Don't understand people who get emotional.	0	0	0	0	0
104	Take no time for others.	0	0	0	0	0
105	Break my promises.	0	0	0	0	0
106	Am not bothered by difficult social situations.	0	0	0	0	0
107	Like to take it easy.	0	0	0	0	0
108	Am attached to conventional ways.	0	0	0	0	0
109	Get back at others.	0	0	0	0	0
110	Put little time and effort into my work.	0	0	0	0	0
111	Am able to control my cravings.	0	0	0	0	0
112	Act wild and crazy.	0	0	0	0	0
113	Am not interested in theoretical discussions.	0	0	0	0	0
114	Boast about my virtues.	0	0	0	0	0
115	Have difficulty starting tasks.	0	0	0	0	0
116	Remain calm under pressure.	0	0	0	0	0
117	Look at the bright side of life.	0	0	0	0	0
118	Believe that we should be tough on crime.	0	0	0	0	0
119	Try not to think about the needy.	0	0	0	0	0
120	Act without thinking.	0	0	0	0	0

APPENDIX E

Participant Nondisclosure Form

Thank you for participating in the study titled *Personality Type and the Successful Liar*. As explained in the informed consent, the purpose of this study is to examine the relationships between personality traits and successful lying. Confidentiality is critical to this study. In order for the results to be accurate, it is of the utmost importance that future participants do not know the details of this study. Please do not discuss your participation in this study with anyone. If you have questions regarding this statement, please ask me prior to leaving. If you have any more questions about your participation or about any other aspect of this study, please feel free to contact the experimenter, Alicia Isenberg via email at anisenberg1@email.wcu.edu or via phone 828-280-2389. You can also contact the IRB Chair at 828-227-3177. Finally, if you are experiencing distress as a result of participating in this study and would like to talk to a mental health professional, please contact the Counseling Services at WCU at 828-227-7469. The Counseling center offers services to students free of charge.

APPENDIX G

Rater Form

Participant Number _____

1. Is this person telling the truth or lying?

Please circle your answer:

(a) Telling the Truth

(b) Lying

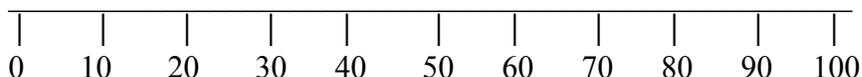
2. How confident are you with the answer you circled on the previous question?

Please indicate your answer on the following scale.

Not Confident

Somewhat Confident

Very Confident



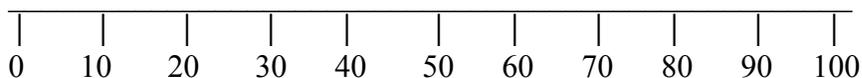
3. How much of your decision was based on the length and details of the participant's response?

Please indicate your answer on the following scale.

None

Some

All



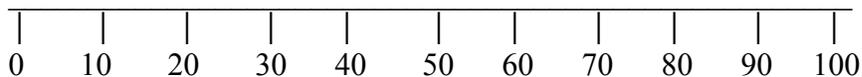
4. How much of your decision was based on the participant's facial expressions?

Please indicate your answer on the following scale.

None

Some

All



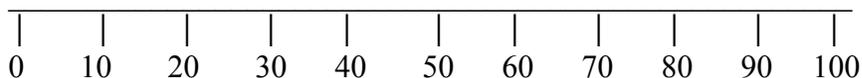
5. How much of your decision was based on body language?

Please indicate your answer on the following scale.

None

Some

All



APPENDIX H

Consent Form (Participant)

My name is Alicia Isenberg. I am a Clinical Psychology Graduate Student at Western Carolina University.

The purpose of this study is to determine if there is a relationship between personality and ability to tell a believable lie. Dr. Alvin Malesky, in the Psychology Department of WCU, is supervising this research.

Your participation in this project involves two parts. First, you will be asked to answer some questions pertaining to your personality. Next, you will be given thorough instructions on how to answer a few additional questions. You may be asked to lie and your responses to these questions will be videotaped. Another group of raters will be viewing these videos and determining whether you are lying or telling the truth. These raters will be selected from the Communication Department at WCU and will be told to keep all information confidential. Your participation in this research will take no more than one hour. There are no foreseeable risks with this study and you may withdraw at anytime without penalty. The five of you that are rated as the most believable will be rewarded with a \$15 i-Tunes gift card by the end of the 2010-2011 school year. The video recordings will be destroyed at the completion of this study.

If you have any questions or concerns, please discuss them with me at this time. However, if you would like to discuss this research at another time, you can contact me at 828-280-2389 or Dr. Alvin Malesky at 828-227-3357. If you have concerns about your treatment as a participant in this study, contact the chair of WCU's Institutional Review Board through the office of Research Administration at WCU (828-227-7212).

Please note that by proceeding to the next page you are giving informed consent.

If you would like to receive a summary of the results, once the study has been completed, please type your email address here.

APPENDIX I

Consent Form (Rater)

My name is Alicia Isenberg. I am a Clinical Psychology Graduate Student at Western Carolina University.

The purpose of this study is to determine if there is a relationship between personality and ability to tell a believable lie. Dr. Alvin Malesky, in the Psychology Department of WCU, is supervising this research.

Your participation in this project involves viewing video-clips of participants telling either the truth or lying about an event. As a rater, you will be asked to provide basic demographic information about yourself and answer several brief questions about the video clips you will be viewing. Your participation in this research will take about 2 hours. There are no foreseeable risks with this study and you may withdraw at anytime without penalty. The rater that is the most accurate in determining who is lying and who is telling the truth will receive a \$15 i-Tunes gift card by the end of the 2010-2011 school year. Your responses will be held strictly confidential and your rating forms will be destroyed at the completion of this study.

If you have any questions or concerns, please discuss them with me at this time. However, if you would like to discuss this research at another time, you can contact me at 828-280-2389 or Dr. Alvin Malesky at 828-227-3357. If you have concerns about your treatment as a participant in this study, contact the chair of WCU's Institutional Review Board through the office of Research Administration at WCU (828-227-7212).

If you would like to receive a summary of the results, once the study has been completed, please print (as legibly as possible) your email address here.

APPENDIX J

Rater Debriefing Form

Thank you for participating in the study titled *Personality Type and the Successful Liar*. As explained in the informed consent, the purpose of this study is to examine the relationships between personality traits and successful lying. Prior to beginning the assigned task, you were told that communication majors are better able to detect deception. This statement was intended to make you more confident in your ability to detect a lie, however, there is no evidence to support this. In addition, you were told that this was a double-blind experiment and that many of the participants in the video-clips were telling the truth and many were lying. In reality, all of the participants were lying and none of them participated in a previous study. In order to eliminate additional variables, it was important to have every participant perform the same task. If you have any more questions about your participation or about any other aspect of this study, please feel free to contact the experimenter, Alicia Isenberg via email at anisenberg1@email.wcu.edu or via phone 828-280-2389. You can also contact the IRB Chair at 828-227-3177. Finally, if you are experiencing distress as a result of participating in this study and would like to talk to a mental health professional, please contact the Counseling Services at WCU at 828-227-7469. The Counseling center offers services to students free of charge.