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Situational Determinism Reconsidered: An Interactionist Exploration of the Effects of Induced Mood, Agreeableness, and Kindness on Subsequent Helping Behavior

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SITUATIONAL DETERMINISM RECONSIDERED: AN INTERACTIONIST EXPLORATION OF THE EFFECTS OF INDUCED MOOD, AGREEABLENESS, AND KINDNESS ON SUBSEQUENT HELPING BEHAVIOR

By

Gary Tyler Lefevor

A DISSERTATION

Submitted to the Faculty
of the University of Miami
in partial fulfillment of the requirements for
the degree of Doctor of Philosophy

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An Interactionist Exploration of the Effects
of Induced Mood, Agreeableness, and
Kindness on Subsequent Helping Behavior

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Personality and social psychologists have debated the importance of trait and situational explanations of behavior for nearly a century (e.g., Epstein & O'Brien, 1985; Mischel, 1968). Though many contemporary personality and social psychologists advocate an interactionist paradigm for understanding the impact of situational factors and traits, most research studies trait or situational factors in isolation. Few studies of interaction effects have been conducted. Further, experiments exploring interaction effects have been limited by their reliance on a narrow understanding of traits and by their use of self-reported instead of observed helping behavior.

The present study addresses these limitations by assessing the interaction between the situational factor of induced mood and robust traits of kindness and agreeableness on observed helping behavior. The study is guided by the research question: are situational influences, character traits, and their interaction all necessary to explain behavior?

To answer this question, 121 undergraduates from a private university in the southeastern region of the United States were recruited to participate in a study about the influence of traits and mood on helping behavior. Participants completed two commonly used measures of traits—the 44-item version of the Big Five Inventory (BFI; John & Srivastava, 1999) and the 120-item version of the Values in Action Inventory (VIA;

Peterson & Seligman, 2004). Participants' scores on the Agreeableness subscale of the BFI and the Kindness subscale of the VIA were used as primary measures of traits relevant to helping behavior. Participants also completed a bogus intelligence test after which they received one of three kinds of false feedback designed to induce either a positive, negative, or neutral mood. Following this manipulation, participants were given the opportunity to help the researcher retrieve spilled pencils. The number of pencils retrieved was recorded as the primary dependent variable.

Three main hypotheses were examined to assess the research question. First, I hypothesized that there would be a main effect for trait measures on helping behavior. This hypothesis was supported as Kindness emerged as a significant predictor of helping behavior ($\beta = .30$). Agreeableness, however, was not found to be significantly related to helping behavior ($\beta = -.02$). Second, I hypothesized that there would be a main effect for situational factors (feedback) on helping behavior. This hypothesis was not supported as feedback was not found to be significantly predictive of later helping behavior, $F(2, 114) = .13$, $p = .87$, $\eta^2 < .01$. Third, I hypothesized that there would be an interaction effect between trait measures and situational factors. I hypothesized four separate interactions, all of which were non-significant, failing to support hypothesis 3. Two of the four interactions (Kindness with positive feedback and Kindness with negative feedback) trended significance but were not in the direction hypothesized

Taken together, the results of this study indicate that virtue-specific measures such as kindness may be useful in understanding behavior in place of more general personality trait measures. Future studies should employ differing experimental

manipulations of mood that may be more sensitive to individual differences to further test the lack of mood effects on helping behavior.

This dissertation is dedicated to my parents, Julie and Gary Lefevor who have taught me more about kindness and helping than a lifetime of study could.

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This project would not have been possible without the generous contributions of several people, for whom I am grateful. I would like to thank Blaine Fowers, for his guidance not only on the content of the dissertation but on the process of doing academic work, which added immense value to the experience of writing this dissertation. Dr. Richard Smith for spending a Saturday afternoon rummaging through old files to find the Miller-Holt IQ Aptitude Test for someone he barely knew. John Feldman for his assistance organizing the laboratory and running participants. Mike McCullough, Dan Santisteban, and Robert McMahon for their insightful comments that made the study and the resulting document of a much higher caliber than it otherwise would have been. And finally, my friends and family, too numerous to mention by name, who supported me through the process.

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CHAPTER ONE

INTRODUCTION

Welles Crowther, a 24-year old equity trader, was at work on the 104th floor of the South Tower of the World Trade Center when United Airlines flight 175 hit the tower on September 11th, 2001 (Crowther Trust, 2014). As he began to evacuate, he passed the 78th floor, encountering groups of confused people lost in the smoke-filled room. Crowther separated himself from the exiting mass to assess the situation. Almost reflexively, he began barking commands to the confused group. After accompanying the group to safety, Crowther returned up the stairs to aid other victims down the collapsing tower. Crowther, with his signature red bandana, made several more trips into the inferno to direct others to safety. This decision cost Crowther his life as he remained in the South Tower when it finally collapsed.

Why did Crowther sacrifice his life for people he had never met while nearly all of his colleagues saw the same scene and fled the burning building? Crowther was a trained firefighter, having served as a volunteer years earlier, and those who knew him described him as a caring man. Several aspects of that particular day were not recorded by news reports, like Crowther's mood or aspects of the crisis that may induced Crowther to believe he was expected to help. Should Crowther's acts be explained by his extraordinary sense of compassion, or might they be better explained by aspects of that particular day such as his mood or perceived expectations that he help cued by the situation?

Crowther's actions have largely been presented as acts of valor. His compassion and bravery inspired a book memorializing his character and a not-for-profit organization

designed to help children and adolescents cultivate character. If Crowther's actions, however, are best explained by aspects of his situation such as his mood or a perceived expectation to help induced by the situation, these efforts are largely misguided, and little change would be expected to come from participating in such programs. The shape and success of character education, one of the most prominent forms of moral education, hinge on whether character traits exist. Further, the existence of character has important implications for other disciplines such as moral philosophy, which is becoming increasingly concerned with providing psychologically realistic accounts of morality.

Although psychologists initially studied character (Nicholson, 1998), many switched their focus to personality in the 1930s with the hopes of conducting more impartial research. Allport (1937) distinguished between character traits, which were thought to be consistent and reliable, morally praiseworthy patterns of behavior, and personality traits, which were thought to refer to equally consistent and reliable patterns of behavior that did not include an evaluative component. Though different in the role moral evaluation is thought to play, theorists of character and personality share a focus on traits.

Since the late 1920's, psychologists and philosophers have debated whether personality traits or situational factors best account for behavior. On one side, personality psychologists like Allport (1937) and Epstein (1980) argue that stable personality traits can both explain and predict behavior. On the other side, social psychologists such as Mischel (1969) argue that personality traits are a lay fallacy and have little or no correlation with actual behavior, often favoring explanations of behavior that focus on the influence of proximal situational factors.

Several influential studies early on set the tone for the person/situation debate. Hartshorne and May (1928) assessed the consistency of honest behavior among a group of school children. They found that children displayed significant intrapersonal variability in honest behavior and concluded that it was nearly impossible to predict whether a child would behave honestly from prior honest/cheating behavior. In a similar study, Newcomb (1929) explored the consistency of extraversion among boys at a summer camp. Counselor ratings of the boys' extraverted behavior showed that it was nearly impossible to predict whether a boy would exhibit extraverted or introverted behavior from knowledge of a boy's previous behavior. Other early studies found similar trends (Allport & Vernon, 1933; Dudycha, 1936). Commenting on this body of literature, Mischel (1969) noted that the great majority of empirical studies of personality found less than a .3 correlation between self-reported personality traits and a subsequent behavior. He concluded that the study of personality provided little genuine insight in the study of behavior.

Personality psychologists rejoined Mischel's (1969) critique by suggesting that the ".3 ceiling" was the result of measurement error (Alker, 1972). On further analysis, Epstein (1980) noted that most studies of personality relied heavily on the influence of single-item assessments. He argued that personality is better thought of as aggregated behavior across time and situations. Consequently, Epstein and O'Brien (1985) re-analyzed data from four influential studies, including Hartshorne and May's (1928) famous study of honesty and Newcomb's (1929) study of extraversion. They found that when multiple observations of a trait-relevant behavior were aggregated together, correlations between trait ratings and aggregated behavior much higher than the alleged

".3 ceiling" were observed. Over the course of his career, Epstein commented on a number of ways in which personality research had been misinterpreted and poorly conducted (Epstein, 1980; Epstein, 1983; Epstein & Teraspulsky, 1986). Through aggregation, he consistently found evidence for stable personality traits.

Though there were some who continued to study and find evidence for personality traits and even the interaction between traits and situations (e.g., Omoto & Snyder, 1995; Penner & Finkelstein, 1998), many psychologists turned from studying personality traits to studying aspects of situations that were thought to better predict behavior. In particular, many researchers began to focus on helping behavior and sought to make generalizations to behavior more broadly defined from there.

For example, from the 1970s forward, hundreds of studies were conducted establishing significant relationships between situational factors such as the number of bystanders present (Fischer et al., 2011) or mood (Carlson & Miller, 1987; Carlson, Charlin, & Miller, 1988) and subsequent helping behavior. Other situational factors such as ambiguity of the helping situation (Clark & Word, 1974), perceived deviance of the person needing help (Bridges & Clark, 2000), noise (Matthews & Canon, 1975), and temperature (Schneider, Lesko, & Garrett, 1980) were found to affect rates of helping. Taken together, these studies indicate an undeniable set of effects of a variety of situational factors on helping behavior.

Given the extensiveness of empirical support for the importance of situational factors, some psychologists and philosophers have gone so far as to conclude that situational factors are the primary determinants of helping behavior (e.g., Doris, 2002; Harman, 1999). These researchers, known as situationists, see personality and character

traits as misleading constructs that are empirically unjustifiable. Situationists advocate for a more nuanced study of the strength of situational factors on behavior that is unfettered by notions of traits. Recent syntheses of the myriad of social psychological studies that have been conducted across the past 50 years have spurred a revival of interest in situationist thought (Doris, 2002; Harman, 2009; Miller, 2013; Ross & Nisbett, 1991). Though current publication trends indicate that many are embracing viewpoints that include both situational and trait explanations (Webster, 2009), the influence of situationist thought is evident in the relative paucity of empirical studies examining both situational and trait explanations or their interaction.

Personality psychologists have responded to the situationist tradition by accumulating evidence of stable traits using novel paradigms. Fleeson and colleagues (Fleeson, 2001; Fleeson, 2004; Fleeson & Noftle, 2008) addressed situationist claims by proposing and testing a model of personality that builds on Epstein's concepts of aggregation. Fleeson and colleagues conceptualize personality traits as density distributions of trait-relevant behaviors. A person's trait-relevant behaviors are aggregated across time and form a distribution, for which a mean and standard deviation can be calculated. Participants are expected to vary in the degree to which they display trait-relevant behavior such as extraversion or honesty on a day-to-day basis but to have a reliable frequency of extraverted or honest behavior across time. Further, individuals are hypothesized to have meaningfully different distributions of trait-relevant behaviors, which are understood as differences in broad personality traits. Empirical tests of Fleeson's hypotheses have been conducted with considerable success (Fleeson & Gallagher, 2009; Meindl, Jayawickreme, Furr, & Fleeson, 2013). Like Epstein's studies,

these demonstrations challenge situationist arguments against reliability and consistency of traits.

Positive psychologists have also challenged the situationist tradition by investigating the empirical validity of character traits using self-report measures. Peterson and Seligman (2004) developed the Values in Action (VIA) questionnaire to assess 24 character strengths such as kindness, curiosity, and zest. This classification has been widely used by positive psychologists to understand individual variation in character traits (Park, Peterson, & Seligman, 2004; Peterson, Ruch, Beerman, Park, & Seligman, 2007) and has been translated into languages other than English for broader use (Ruch et al., 2010). Others have developed self-report measures of character traits (Rushton, Chrisjiohn, & Fehken, 1981; Spreecher & Fehr, 2005) that have been compared to behavioral measurements of character. These measures have provided evidence of the existence of character traits and that they can be measured.

Though Fleeson and others have found evidence for the import of traits, the bulk of empirical studies focus on the impact of situational factors on helping. Many psychologists and philosophers do not take these attempts to measure personality and character seriously, as they seem to rely on the weight of evidence favoring situational factors to better account for behavior. Though the situationist viewpoint is not accepted in totality by most psychologists, many of its assumptions have been incorporated, perhaps unreflectively, into psychological thought and theory. Because situationist claims have clear implications for the study of personality and character and continue to impact psychological theorizing, any serious investigation of traits must first create theoretical

space by responding to situationist claims. In this study, I explored two key assumptions situationists make in their assessment of personality in order to create such a space.

First, because social psychology studies have consistently found situations to affect behavior, situationists appear to assume that the effects are so strong that personality traits do not need to be measured. Situationists interpret the results from these empirical studies beyond what the initial authors stated to imply that the study of personality is a fruitless endeavor. This conclusion, however, is based on a literature that examined only the strength of situational factors and did not assess the role that traits may play in behavior. Any variance due to traits was unaccounted for in such studies and would have been treated as error variance. Thus, though informative, these studies cannot rule out the influence of traits on behavior.

Second, because situationists tend to view traits and situations as mutually exclusive explanations for behavior, interactions between the two are precluded. People are assumed to either be primarily motivated by aspects of the situation or by traits. Because of this artificial dichotomy, an approach that focuses only on situational factors does not allow for the meaningful study of these interactions.

Aggregationists, proponents of the density-distribution model of personality, and positive psychologists, have all made empirical arguments for the existence of traits. These studies have found important evidence that traits may be observed as behavioral consistency across situations. With the exception of the density-distribution research, these studies have not simultaneously measured traits and situational factors in a way that will thoroughly respond to the situationist tradition of studying traits and situational factors separately. The few studies that have measured both personality and situational

factors have not measured character traits. Thus, the interaction between character traits and situational factors has yet to be explored.

I addressed this gap by conducting a study that assessed the influence of both trait and situational influences on subsequent helping behavior. I did this by employing a commonly used helping behavior paradigm in situational social psychology and measures typical of studies of both personality and character. This allowed independent assessment of the effects of situations and traits on a specific instance of helping behavior, as well as assessment of a moderating effect.

This study was guided by the question, are situational influences, traits, and their interaction all necessary to explain behavior? I anticipated that the traits of kindness and agreeableness as well as the situational influence of induced mood would be relevant in accounting for helping behavior. Further, I expected that kindness and agreeableness would moderate the relationship between induced mood and helping behavior, with individuals high in relevant traits such as kindness or agreeableness being more likely to engage in helping behavior, even when the situation discouraged helping.

CHAPTER TWO

REVIEW OF THE LITERATURE

Personality and social psychologists have debated the importance of trait and situational influences on behavior for nearly a century. This debate can be summarized in three major time periods: the era of personality, the era of the situation, and the emerging interactionist paradigm. In this section, I review the empirical literature and philosophical arguments made during these periods, indicating strengths and weaknesses in the arguments that point toward a plausible way to move forward in the study of trait and situational influences on behavior.

Prior to jumping into the debate, a brief note about the different trait perspectives is in order. Trait perspectives include research from two distinct but comparable research traditions: personality and character. Traditionally, personality has referred to "value-neutral" assessments of an individual's traits where character was assumed to be morally-evaluative assessments of traits. Because character was considered more subjective, the majority of psychological research has focused on personality (Nicholson, 1998) meaning that morally-evaluative dimensions were typically seen as "outside" the purview of empirical investigation. However, the ability to take a morally neutral approach to traits has been called into question (Richardson, Fowers, & Guignon, 1999; Sugarman, 2009). Many traits typically studied as personality traits (e.g., agreeableness, conscientiousness) rely on morally relevant concepts in their measurement (John, 2008), indicating that personality and character may not be as distinct as previously thought. Throughout the literature review, I will focus on the common understanding about traits provided by both

personality and character perspectives while distinguishing between the traditions to which the research belongs.

The Era of Traits

Historically, the existence of traits has been accepted with very little argument. The Old Testament is filled with accounts of righteous, wicked, and brave individuals; ancient Greek and Roman medicine identified fundamental personality types thought to originate from levels of bodily fluids; and discussions of honesty, chastity, and loyalty were common in early American society. Near the beginning of the 20th century, personality psychology emerged from this context seeking to understand the way in which traits underlie behavior. Over time, however, personality psychologists began to question the legitimacy of the character traits they had set out to study.

In this spirit, Hartshorne and May (1928) investigated the character trait of honesty. To do so, Hartshorne and May observed various behaviors related to honesty in over 10,000 students in 23 schools between grades 3 and 12. They examined deception—stealing, lying, copying, misrepresenting, and cheating—providing many opportunities for students to be dishonest (e.g., allowing students to correct their own papers, providing opportunities for students to access an answer key prior to a test). From over 170,000 observations, Hartshorne and May concluded that nearly all children cheated some of the time and were honest some of the time, finding little evidence of a global trait of honesty.

Hartshorne and May's (1928) conclusions inspired several other studies of global traits, which reached similar conclusions. Newcomb (1929) studied the consistency of introversion and extraversion among 51 troubled boys. During a five week summer camp, counselors filled out daily records of extraverted and introverted behaviors for each boy.

Newcomb found only modest correlations between mean introversion/extraversion scores at different time points for the same boy and between a boys' behavior on an individual indicator (e.g., sitting alone at lunch) across situations. Though some individual behaviors were more consistent than others across time, Newcomb doubted their ability to form global personality traits. He concluded his study with a plea for a "more individual technique instead of a dependence on a type psychology" (p. 115).

Allport and Vernon (1933) continued the study of traits by examining the then-common belief that "the gestures or expressive movements of a person are consistent with one another," (p. 173) conceptualized as the personality trait of expressive movement. Allport and Vernon tested 25 men in 3 experimental sessions in several experimental tasks yielding 300 observations. They found that average inter-task correlations for items relating to the trait of expressive movement hovered around .20. These poor correlations led Allport and Vernon to reject the notion of an overall trait of expressive movement in favor of more specified "traits" of motor acts.

Dudycha (1936) added to the growing disillusionment with global traits in his study of punctuality as a personality trait. He observed 307 college students over several months to assess whether punctuality was a situation-specific or general trait. More than 15,360 observations of arrival time were collected and analyzed across six types of situations: eight o'clock classes, breakfast, appointments with teachers, extra-curricular activities, religious vesper services, and leisure appointments. Dudycha found inter-correlations between the mean arrival times for the six situations between .08 and .44 with the majority of correlations centering around .20. He concluded that "*some* students are markedly consistent in punctuality in *specific* situations" (p. 50). Though Dudycha

believed that his results provided evidence for the existence of a general trait of punctuality, the low inter-correlations between events were later interpreted as evidence of the poor utility of a general trait of punctuality.

Taken together, these four studies were interpreted as evidence against the utility of trait concepts. Synthesizing these and other similar studies, Mischel (1968) challenged the assumption of trait consistency. He noted that these empirical findings had not accurately validated personality theory, which continued to rely heavily on robust, overarching personality traits. Individual inconsistencies under this view were typically explained as different behavioral manifestations of the same overarching trait, perpetuating an empirically unfalsifiable view.

Mischel (1969) further noted that in their zeal to search for underlying commonalities in behaviors, psychologists had been ignoring proximal situational factors that could better explain behavior. He observed that correlation coefficients between behavioral manifestations of a personality trait rarely exceeded .30, explaining less than 10% of the variance in behavior. In contrast to the hundreds of studies measuring traits, Mischel struggled to find studies of the influence of situational factors on behavior. He advocated that *some* significant predictions could be made from traits but that the *most powerful* ones would likely be made by taking situational factors into account. Though Mischel did not advocate for the elimination of the study of personality, he argued for a complementary study of situational factors (Mischel & Shoda, 1995).

Overall, early 20th century personality researchers found some empirical evidence for the existence of traits, but these traits explained behavior much more poorly than expected. The studies cited and the critiques that ensued (e.g., Bowers, 1973; Mischel,

1968) indicated that a more nuanced understanding of traits was needed to explain the way that traits impact behavior. These critiques also opened doors to alternative explanations for behavior.

The Era of Situational Factors

While results from early studies and critiques of traits pushed psychologists away from studying traits, several surprising studies pulled psychologists to study the impact of situational factors on behavior. Milgram's obedience trials (1974), Zimbardo's Stanford Prison Experiment (Haney, Banks, & Zimbardo, 1973), and Latané and Darley's (1968) bystander study shocked many by pointing out the effects that situational factors like an authoritarian other, a simulated situation, or the presence of others could have on peoples' behavior.

Other researchers soon found that subtle situational manipulations could have a large effect on behavior. Helping behavior was often employed as a test case from which principles about behavior could be generalized. For example, Darley and Batson (1969) found that seminary students were much less helpful to an ailing confederate when they were in a rush to cross campus, despite extensive religious education and an ostensible reminder of the parable of the Good Samaritan. Isen and Levin (1972) found that people who found a dime in the coin return slot of a payphone were 9 times more likely to subsequently help a confederate pick up dropped papers than those who did not find a dime. Page (1977) found that participants were much more helpful to a confederate when a street was quiet compared to when there was construction noise on that same street.

The startling results of these studies led to a proliferation of research on the situational influences on helping behavior. A basic literature search conducted in March

2012 identified 750 published articles using keywords related to helping behavior, with the majority of these studies examining the effects of situational manipulations on helping behavior (Lefevor, Fowers, Lang, & Cohen, 2014). Because the present study builds on this research tradition, I briefly review the four major kinds of situational factors researchers have found to be consistently related to helping behavior (Lefevor & Ahn, 2015). These are situationally induced mood, the presence of passive bystanders, manipulated characteristics of the recipient of help, and manipulations to the perceptual environment of the participant.

Situationally induced mood has consistently been found to influence helping behavior. In two meta-analyses, Carlson and colleagues found that both positive and negative mood were associated with increased helping behavior. Carlson, Charlin, and Miller (1987) averaged the effects of 61 positive mood induction conditions and found substantial effects for positive mood on helping. They noted that these effects were more salient when tasks did not require sustained attention, were more pleasant, and when positive mood manipulations elevated participants' moods by focusing on participants' views of themselves. In a separate analysis, Carlson and Miller (1988) summarized the effects of 85 negative mood conditions and found that negative mood—especially guilt—was also associated with increased helping. In particular, inducing participants' feelings of increased responsibility for a negative event and a focus on the suffering of others were tied to greater helping.

The presence of passive bystanders has also been found to consistently influence helping behavior. Since Latané and Darley's (1968) initial study of the bystander effect, hundreds of studies have been conducted manipulating various facets of the bystander

helping scenario including the number of people present (e.g., Baron & Yechiam, 2002; Lewis, Thompson, Wuensch, Grossnickle, & Cope, 2004), the ambiguity of the helping situation (e.g., Clark & Wood, 1974; Wilson, 1980), and the degree of emergency exhibited (e.g., Shotland & Huston, 1979; Sterling & Gaertner, 1983). Fischer and colleagues (2011) conducted a meta-analysis of 105 bystander studies and found that the presence of bystanders overall led to decreased helping behavior but that this effect was attenuated when participants viewed the situation as more dangerous, when the perpetrator was present, and when physical intervention was needed.

Manipulations of the characteristics of the recipient of help and manipulations of the perceptual environment of the participant have also been found to consistently affect helping behavior. These studies manipulate characteristics of the person needing help such as whether the recipient of help is an in-group member, has scars, is smiling, or is holding flowers (e.g., Fisher-Lokou, Martin, Guéguen, & Lamy, 2011, Guegen & De Gail, 2003) or characteristics of the perceptual environment such as temperature or noise (e.g., Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Dovidio & Morris, 1975). In a meta-analysis of 286 independent effect sizes, Lefevor and Ahn (2015) found that manipulations of characteristics of the person needing help and manipulations of characteristics of the perceptual environment exert substantial influence on helping behavior.

A Situationist Perspective. The proliferation of research on the influence of situational factors on helping behavior has led some to conclude that situational factors are the most important factor in explaining behavior. A group of philosophers and psychologists known as situationists have gone as far to posit the primacy of situational

factors to the near exclusion of the import of traits (Doris, 2002; Harman, 1999, 2000, 2009). Situationists make three fundamental theoretical commitments, supported by their interpretation of the research on the impact of situational factors on helping behavior. First, situationists hold that the behavioral variation in a population is better accounted for by reference to situational factors rather than robust individual differences. Any explanation of behavior should thus take into account situational influences on behavior before considering an individual's way of being. Second, situationists hold that systematic, empirical observation poses serious problems for trait-based views of behavior. They remind us that people are consistently less honest and virtuous than they portray themselves to be. Third, situationists hold that behaviors are not often evaluatively integrated to form a cohesive character. Evaluative integration means that the probability of an individual possessing one trait is related to the probability of that same individual possessing another trait. In other words, situationists would hold that learning that someone is honest at school does not necessarily mean that he will be more likely to be loyal or dependable at school or elsewhere. They hold that traits are best interpreted as situation-specific proclivities such as "sailing-in-rough-weather-with-one's-friends-courageous" (Doris, 2001, p. 116) or "kind-when-not-driving-in-traffic".

Although a recent survey of Google Scholar hits relevant to the person/situation debate indicates that researchers are increasingly approaching the study of behavior from an interactionist perspective (Webster, 2009), situationists' bold claims are still present in the work of many psychologists. Studies of the impact of situational factors on helping behavior often adopt causal language and broad claims, indicating the exclusion of other explanations. Situationist thought may also be responsible for the relative paucity of trait-

based explanations of behavior, as trait explanations are seen as less valid and promising than situational explanations.

Lefevor and colleagues (2014) challenged situationist assumptions in a meta-analytic investigation of the impact of situational factors on helping behavior. They found that although situations had a large influence on helping behavior, leading an average of 2.27 people to help someone in need when situational factors were manipulated to encourage helping for every person who helped in the control group. Yet situations were far from determinative of helping behavior as claimed by situationist theory. Of the 286 studies examined, only one had a manipulation that successfully swayed every participant to help. Further, Lefevor et al. found that participants exhibited high levels of helping in the absence of situational inducements or impediments to help with an average of 47.56% helping in the control groups of the studies examined. This led them to conclude that though situational manipulations are powerful, they are far from determinative of helping behavior.

Research on the impact of situational factors on helping behavior across several decades has consistently demonstrated that situational factors are important in explaining helping behavior. Though some have concluded that situational factors are the *only* factors necessary to explain behavior, increasing evidence indicates that situational factors are not sufficient in themselves to explain behavior. This has led many to consider the interaction between situational factors and traits as the best way to explain behavior.

An Interactionist Paradigm

Initially, trait-based explanations of behavior were discounted because trait-relevant behaviors seemed inconsistently related to traits and were thought to preclude

situational explanations. However, over time, these assumptions have been examined more closely and dismantled, making room for an interactionist paradigm. Epstein (1980) used statistical aggregation of trait-relevant behavior across time and situations to address the notion that traits were not consistent or reliable. Fleeson and colleagues (Fleeson, 2001; Fleeson & Noftle, 2008) conceptualized traits as density distributions of trait-relevant behavior that could be tested alongside situational factors, challenging the dichotomy of trait/situational explanations. Graziano and other contemporary trait researchers (Graziano, Habashi, Sheese, & Tobin, 2007) have refined contemporary measures of traits and employed them in conjunction with measures of situational factors and have found that traits can and do correlate meaningfully to several relevant variables. In this section, I briefly review each of these three traditions, highlighting the contributions and limitations of each, pointing the way to future interactionist research.

Epstein's aggregationism. Through statistical aggregation, Epstein (1980) found evidence for the meaningful existence of traits. Epstein argued that single-instance measures of presumed traits were inadequate because traits reflect broad behavioral dispositions. He argued that except when phenomena are highly robust (e.g., reflexes) or of such intensity that they eclipse all other variables (e.g., social exclusion), results from a single demonstration of a phenomenon should not be expected to be replicated across situations unless results are aggregated in one of four ways. These are aggregating across subjects such as is common practice in nomothetic research, aggregation over stimuli and/or situations such as in meta-analysis, aggregation across time such as is common in repeated-measures research designs, and aggregation across measures such as may be seen by using multiple indicators of a construct in factor analytic structural equation

modeling. Epstein expected that traits would be evident if measures were aggregated across time.

Epstein and O'Brien (1985) demonstrated the usefulness of aggregation by critically examining and re-analyzing data from four influential trait studies: Hartshorne and May's (1928) study of honesty, Newcomb's (1929) study of extraversion, Allport and Vernon's (1933) study of expressive movement, and Dudycha's (1936) study of punctuality. They noted that these studies de-emphasized the relationships between the aggregates of items, the measures used in the studies had poor item selection, and many individual items had poor reliability. Re-analyzing data from these studies by first adjusting for item reliability and then aggregating items, Epstein and O'Brien found substantially higher estimates of traits than were reported by the original study authors. In some cases, correlations between traits and behavior were as high as .93, effectively surpassing the ".30 barrier" noted by Mischel (1968). Epstein and O'Brien concluded that "behavior is often highly situationally specific at the individual-item level but general at the aggregate level" (p. 514) and reconceptualized traits as stable, broad dispositions that are best measured by multiple instances of behavior.

Fleeson's density distribution model. Fleeson (2001) continued Epstein's work in the formulation of the density distribution model. Fleeson built on Epstein's arguments that traits are best represented through aggregated behavior over time and that single instances of behavior will be very difficult to predict.

Fleeson (2001) proposed that personality traits are best represented as density distributions of personality states. This density distribution model makes three basic assumptions: 1) people tend to regularly express all levels of all traits but vary

predictably in the frequency and intensity that they display these traits, 2) the mean level of behavior exhibited across time will be more predictable than any single data point, and 3) this mean is a stable individual-differences variable. Personality traits are thus conceptualized as distributions of trait-relevant behaviors across time. These distributions are characterized by a mean and a standard deviation, which provide measures of central tendency and variation respectively. Further, individuals are thought to characteristically differ one from another on the mean and standard deviation of their density distribution of a given trait. This makes traits both a within-person (standard deviation) and a between-person (mean) variable.

Fleeson and Gallagher (2009) tested Fleeson's (2001) three assumptions in a meta-analysis of 15 experience sampling studies conducted by their research group over the previous 8 years. Using experience sampling (Fleeson, 2001; 2007; Fleeson & Gallagher, 2009), participants were asked many times a day for several days to complete state measures of Big Five personality traits based on trait-relevant behaviors from the previous 20-60 minutes, producing 40-50 data points per individual per study. Means and standard deviations were calculated for each individual, from which his or her density distribution of behavior could be constructed. Analyses using unconditional multilevel modeling were often conducted with experience sampling data to differentiate between variance explained by within and between person factors. Following Fleeson (2001), Fleeson and Gallagher (2009) hypothesized that participants would display 1) variability in their daily state scores, 2) intra-individual consistency in state measures across time, and 3) reliable inter-individual differences in aggregated state scores. Fleeson and Gallagher found that individuals displayed variation in their day-to-day personality states

(or daily trait-relevant behaviors) but still displayed reliable mean trait scores that made them distinguishable from other participants, consistent with their first hypothesis. They further found that individuals displayed consistency in trait measures—with correlations between .42 and .55 between an individual's aggregate of personality states (daily trait-relevant behaviors) and an overall trait score, supporting their second hypothesis of stable intra-individual patterns of personality responding. Fleeson and Gallagher also noted significant differences between individual aggregates of given Big Five trait measures, supporting their final hypothesis that individuals would reliably differ.

Fleeson (2007) extended these findings to include self-reported situational factors. In addition to providing multiple daily ratings of Big-Five trait-relevant behaviors over several days, participants also rated the presence of situational factors including the number of people with whom the participants interacted with during the past half hour, how much the participant liked those individuals, and whether the previous half hour was structured or unstructured. In addition to finding average inter-item correlations between .58 and .68 for key trait-relevant behaviors, Fleeson found that situational factors were associated with personality traits. For example, the friendliness of an interpersonal exchange significantly predicted extraversion scores. These findings indicate that situational factors may be related to the expression of a given personality trait. Further, Fleeson found that personality states varied with the situation in which they were expressed, indicating that traits and situations could be studied in interaction.

Meindl, Jayawickreme, Furr, and Fleeson (2013) extended Fleeson and Gallagher's (2009) work on personality to the study of character traits. Meindl et al. used experience sampling to measure participants' actions and thoughts along four key

character traits: honesty, compassion, fairness, and moral courage. They found evidence that self-reported moral behaviors displayed temporal consistency and could be represented as density distributions with reliable means and relatively small standard deviations for three of their four traits (honesty, compassion, and fairness). Further, they found that people displayed consistent individual differences in average levels of moral behavior. These findings provide the basis for applying the density distribution model beyond personality to the study of character traits.

Conceptualizing traits as density distributions provides an interactionist answer to the trait/situation debate. Seen in this light, a trait expresses a pattern of behavior that is *expected* to vary systematically with situational factors. The density distribution model can thus account for both the expression of traits and the apparent inconsistency in behavior by conceptualizing them as expected inter- or intra-individual variations from established norms. Where an exclusively situationist model may expect all or nearly all individuals to respond similarly to a given situational inducement and an exclusively trait model may expect individuals to inflexibly exercise their traits regardless of the situation they are in, the density distribution model bridges these perspectives by expecting that individuals will respond somewhat consistently to situations but allowing that individuals will differ in their responses to these situations based on their given trait characteristics.

The density distribution model is not without its limitations. Although the density distribution model incorporates situational and trait perspectives, the manifestation of the interaction between situational factors and traits has not been sufficiently explored. Fleeson (2007) showed that personality traits and situational factors can be related, but

predictive models of how personality traits and situational factors are expected to interact to produce changes in behavior have yet to be explored.

Another limitation is that although there has been much empirical support for the density distribution model, all of the supporting studies have been based on self-report measures of behavior. Participants are typically asked to report personality states, traits, and relevant behaviors. Although personality states and traits have been found to correlate with reported behavior, this correlation may be exaggerated due to presentation bias in self-report measures of behavior. Further research needs to be conducted evaluating the connection between traits, situational factors, and observed behavior.

Research on the density distribution model has focused primarily on personality traits, to the near exclusion of character. Character traits, such as kindness, gratitude, or courage, involve moral evaluations in that their presence is generally seen as praiseworthy while their absence is often seen as blameworthy. Personality traits, such as extraversion or neuroticism, on the other hand, are presumed to be morally neutral. Since Allport (1937) led a shift from character to personality, psychologists have shied away from the study of character because they perceived it as subjective or biased. However, contemporary researchers have indicated that personality constructs may be equally fraught with values (e.g., John, 2008). Thus, there is no reason to exclude the study of character *a priori*.

In fact, the opposite may well be the case. Theoretically, character traits are expected to exhibit strong correlations with relevant moral behaviors. For example, an individual scoring high on a kindness measure would be expected to help more than someone who scored low on the same measure. Thus, examining character traits may

provide insight into behavior above and beyond what has been found in personality research. To date, only one study (Meindl et al., 2013) has examined the application of the density distribution model to character traits. More research is needed to better elucidate the promising role of character traits in predicting behavior.

Contemporary measures of traits. Contemporary trait theorists are beginning to address the impact of character and personality traits on behavior using interactionist approaches. Character and personality trait researchers have used the Values in Action inventory and the Big Five Inventory to find evidence for the existence of traits. Some researchers have taken an interactionist approach and included measures of situational factors with these traits to examine their impact on behavior.

Values in Action. In 2004, positive psychologists launched an extensive effort to measure character traits with the release of the Values in Action (VIA) questionnaire (Peterson & Seligman, 2004). The VIA was developed to measure 24 signature character strengths, is currently being followed online by 2.6 million people in 190 countries (VIA Institute, 2014), and has been used in several research studies (e.g. Park, Peterson, & Seligman, 2004; Peterson, Ruch, Beerman, Park, & Seligman, 2007). Different scales of the VIA have been linked with various outcome measures: hope and zest have been found to positively predict life satisfaction (Brdar & Kashdan, 2010; Proctor, Maltby, & Linley, 2011), kindness and additional other-directed strengths have been found to negatively predict symptoms of depression (Gillham et al., 2011), and strengths like hope, spirituality, and appreciation of beauty have been linked to post-treatment recovery from depression (Huta & Hawley, 2010). Further, the VIA has been translated into a variety of languages so that it can be used with diverse populations (e.g., Ruch et al., 2010).

Of the VIA scales, Kindness appears to be most likely linked to helping behavior. Peterson and Seligman (2004) discuss kindness as altruism, meaning that "an individual acts for the others' sake as an end in itself, rather than as a means to public recognition or individual well-being" (p. 327). Though this definition is not without its theoretical flaws, it is clear that kindness, as defined by Peterson and Seligman, is related to thinking of and helping others. Further, Peterson and Seligman use Kindness to measure prosocial behavior as a trait, further bolstering the expectation that kindness should be related to observed helping behavior.

Despite its broad use, the VIA is not without its limitations. Items on the VIA assess various aspects of traits such as self-ascription of traits, descriptions of others' reactions to self, and past behavior (Fowers, 2014). Theoretically, these items correlate with present and future behavior. For example, an individual's score on the Kindness scale of the VIA should correlate with helping a friend in a time of need. However, the link between the scales and observed behavior has not been studied. Better understanding this relationship could increase the validity of the VIA and provide insight into the way that traits affect behavior.

Big Five Personality Traits. Costa and McCrae's (1985) Big Five Personality Inventory has been widely used to study personality traits. The Big Five—neuroticism, extraversion, openness, conscientiousness, and agreeableness—have been increasingly linked to observed behavior.

Of the Big Five, agreeableness appears to be the most consistently linked with helping behavior. Agreeableness is measured using natural language adjectives such as polite, trustful, warm, kind, and cooperative (Goldberg, 1992; Graziano et al., 2007).

Several authors have found Agreeableness to be positively correlated with helping behavior (Caprara, Alessandri, di Giunta, Panerai, & Eisenberg, 2010; Graziano & Eisenberg, 1997; Volk, Thöni, & Ruigrok, 2011). These findings have led researchers to search for mediating variables between Agreeableness and helping behavior. Though many have been explored—including prosocial value orientation and empathy—no variable has been found that fully mediates the relationship between Agreeableness and helping (Caprara et al., 2010; Carlo et al., 2005).

In a pioneering effort to understand the interaction between agreeableness and situational factors, Graziano, Habashi, Sheese, and Tobin (2007) conducted four studies examining the relationships among agreeableness, empathy, prosocial motivation, and willingness to help. In their first study, Graziano and colleagues established that there was a group difference in willingness to help between participants in the top and bottom 25% of the sample for Agreeableness. Those high in Agreeableness were found to offer significantly more time to "Katie Banks," a fictitious woman in distress. Next, Graziano and colleagues manipulated the in/outgroup status of Katie. When Katie was categorized as an outgroup member, Agreeableness was found to be a significant predictor of willingness to help, whereas when she was an ingroup member, Agreeableness did not reliably predict willingness to help. These results were replicated across two additional studies that added measures of empathy and attentional focus. Additionally, Graziano and colleagues found that participants high in Agreeableness tended to focus on the feelings of the person in distress, ranking empathy as a potential mediator of verbal commitments to helping. They interpreted their results to provide support for agreeableness as a predisposition to helping by predisposing participants to greater empathy for those in

need. In particular, Graziano et al.'s results suggest that participants low in Agreeableness are more likely to be influenced by situational inducements to help while those high in Agreeableness offer help consistently. They concluded that there was evidence that "situational factors interact with dispositional agreeableness" (p. 597), providing support for an interactionist model of situational and trait perspectives.

Graziano et al.'s study (2007) provides support for the existence of an interaction between single-shot trait measures and situational factors in their influence on volunteering for future helping behavior. Nonetheless, like many before them, Graziano et al. relied on participants' self-report of future helping behavior. Though this has led to fruitful work, participants have been found to consistently over-report prosocial behavior (Batson, 1991; Galen, 2012; Wilson, 2002). Data on observed helping behavior needs to be collected to shed additional light on the interaction of trait and situational factors on helping behavior.

The Present Study

Taken together, the literature reviewed indicates that traits and situational factors influence helping behavior. Additionally, there is emerging evidence that the interaction between traits and situations also influences helping behavior. The exact impact of these factors and the nature of the interaction have yet to be explored.

Previous studies have been plagued with three major limitations. 1) Nearly all of the studies on traits examined helping behavior with self-report or hypothetical helping behavior. None of the studies that reported observed helping included a measure of personality or character traits. 2) Few studies examine interaction effects; more research needs to be done to extend the tentative conclusions supported by the studies that have

documented an interaction. Experimental studies of actual helping behavior most frequently test situations that either induce or inhibit helping but never both. Examining levels of helping behavior across a situation that discourages helping, a control group, and a situation that encourages helping would allow for a greater understanding of the interaction between traits and situational factors. 3) Existing research on the interaction between traits and situational factors largely focuses on personality traits. Extending this work to character by including a commonly used measure of character may help expand this work.

The present study addresses these limitations and extends the literature on the influence of traits and situational factors on helping behavior. In the present study, I employed a paradigm frequently used in the study of situational factors, manipulation of mood using false feedback, in conjunction with respected trait measures, the VIA questionnaire and the Big Five questionnaire. I employed a mood manipulation through false feedback as it is one of the most commonly used manipulations of situational factors. In the present study, I explored the impact of feedback condition, kindness, agreeableness, and their interaction on observed helping behavior, measured as the number of the experimenter's pencils picked up by the participant. Results from the present study provide a better understanding of the interaction between situational factors and character traits on observed helping behavior.

In the present study, I propose three main hypotheses, derived from my review of the literature. 1) There will be a main effect for trait measures on helping behavior. In particular, there will be a main effect for 1a) Agreeableness (measured through the Agreeableness scale of the Big-Five Inventory) and 1b) Kindness (measured through the

Kindness scale of the VIA Inventory). Further, research has consistently found Agreeableness to have a greater main effect on helping behavior than other traits related to prosociality (Carlo et al., 2005; Caprara et al., 2010) and thus I expect that 1c) Agreeableness will emerge as a better predictor of helping behavior than the Kindness scale of the VIA. 2) There will be a main effect for situational factors such that 2a) positive feedback will yield greater helping than the control condition and 2b) negative feedback will yield significantly less helping than the control condition. 3) There will be an interaction effect between trait measures and situational factors such that 3a) there will be a significant interaction between Agreeableness and feedback condition such that those high in Agreeableness will help more than those low in Agreeableness in both negative feedback and control conditions but the magnitude of this difference will be greater in the negative feedback condition than in the control condition (see Figure 1). I predict that 3b) there will be a significant interaction between Agreeableness and feedback condition such that those high in Agreeableness will help more than those low in Agreeableness in both positive feedback and control conditions but the magnitude of this difference will be greater in the control condition than in the positive feedback condition (see Figure 2). Further, I predict that 3c) and 3d) the effects described in 3a and 3b will also occur for Kindness in place of Agreeableness.

CHAPTER THREE

METHODS

Participants

One hundred and twenty one students were recruited from a range of undergraduate psychology, education, sports science, and other classes at a private university in the southeastern region of the United States in exchange for course credit. The sample was 59% female with a mean age of 20.82 (*SD* = 2.64), ranging from 18 to 45. Participants primarily identified as White (58.7%), though the sample was ethnically diverse with participants identifying as Hispanic (15.7%), Asian (6.7%), non-Caribbean Black (8.3%), Caribbean Black (7.4%), and biracial (2.5%). One participant failed to report ethnicity.

Procedure

Participants were provided with a consent form that detailed the risks and benefits of participating in the study and outlined the procedures that would be taken to ensure the privacy and confidentiality of the data (see Appendix A). Participants were informed that they could elect to withdraw from the study at any time without fear of negative repercussions.

As part of the procedure for obtaining informed consent, participants were provided with the cover story for the experiment. They were informed that researchers were interested in the relationship between personality and intelligence. Deception was judged necessary for the present study as participant behavior may be altered if study purposes were known. Using a benign cover story masking study purposes is common in studies requiring deception (e.g., Harris & Huang, 1973; Isen, 1970).

Intelligence test. The experimenter began by informing participants that the initial phase of the study involved the completion of a novel method of assessing intelligence called the Miller-Holt General Aptitude Test (Webster, Powel, Duvall, & Smith, 2006). Participants were informed that the Miller-Holt is an unbiased measure of intelligence that requires minimal verbal skills and thus is not influenced by vocabulary like most measures of intelligence. Thus, participants were informed that they should not expect their score on the Miller-Holt to correlate with previous measures of achievement such as the SAT or the American College Test (ACT).

In actuality, the Miller-Holt General Aptitude Test is a 17-item test that was designed to be ambiguous such that the "correct" answer is not readily apparent and may be contested. Thus, upon completion, participants are expected to be relatively unable to draw their own conclusions about their performance. Participants were given 10 minutes to complete all 17 items of the test.

Trait measures. Upon completion of the Miller-Holt, participants completed trait measures on a computer. Participants completed the Values in Action Inventory-120 (VIA-120) from a platform used by the Values in Action Institute and the 44-item Big Five Inventory (John & Srivastava, 1999) using Qualtrics.

False feedback manipulation. When participants finished the trait measures, the experimenter gave participants the results of the intelligence test. Feedback papers were prepared ahead of time to enable experimenter blindness to the participants' experimental condition. Feedback papers contained a single sheet with "normative data" for the Miller-Holt, the participant's score, and an interpretive paragraph explaining how the participant

stacked up against others who have taken this novel measure of intelligence (see Appendix B).

The first paragraph of the feedback read: "The Miller-Holt General IQ Aptitude Test is a new, non-verbal alternative to intelligence testing. Unlike other measures of intelligence that are influenced by verbal reasoning, the Miller-Holt offers a less biased measure of intelligence as it does not rely on verbal reasoning. Research conducted among college students at universities across the United States of America has indicated that the Miller-Holt General IQ Aptitude Test is a reliable and valid measure of intelligence that is not correlated with scores on the ACT or SAT. However, this research has indicated that performance on the Miller-Holt is correlated with other key outcomes for college students such as employability (measured as length of time between graduation and placement in first full-time job), earning potential (measured by 5-year follow-up assessment of current annual earnings), and social intelligence (measured by 5-year follow-up social assessment)."

For the positive and negative feedback condition groups, the second paragraph of the feedback contained the experimental manipulation and read: "The Miller-Holt was specifically designed to be used to discriminate intelligence among college undergraduates. Research conducted with University of Miami undergraduates has yielded a mean of 10/17 thus far. Your score of ___/17 means that you performed better/worse than approximately ___% of participants who have taken the measure."

Blanks were left in the response sheet to give participants the impression that they were filled in by the experimenter upon scoring the Miller-Holt. In actuality, feedback papers were prepared ahead of time according to experimental condition. Participants in

the positive feedback condition were informed that the mean score was 5/17, indicating that they performed better than approximately 85% of participants who have taken the measure. Participants in the negative feedback condition were informed that the mean score was 15/17, indicating that they performed worse than approximately 85% of participants who have taken the measures.

For the neutral feedback condition, participants were informed that they obtained a score of 10/17 on the test but that normative data has yet to be collected and thus it is difficult to interpret whether a score of 10/17 is above or below the mean. They were informed that normative data would be provided to them after all participants have been tested if they wished.

Upon delivering the feedback form, the experimenter left the room to retrieve the manipulation check. Before leaving, he informed the participants that he could address any questions they had regarding the feedback at the conclusion of the experiment to maintain blindness to experimental condition.

Helping manipulation. The experimenter returned to the room with the paper-and-pencil manipulation check mood questionnaire for the participants (see Appendix C). Once participants completed the manipulation check, the experimenter reached to retrieve the manipulation check from the participant, and "accidentally" knocked over a cup of 20 pencils situated at the desk the participant is seated at. The experimenter then muttered "shoot" under his breath and looked down while shaking his head and began to retrieve the pencils at the rate of one pencil per second. The number of pencils retrieved by participants was recorded.

Debriefing. Following the helping manipulation, the experimenter informed participants that they had successfully completed the study. The experimenter then debriefed the participants while probing for suspicion following a funnel debriefing model. First, the experimenter asked participants what they thought the purpose of the study was. Then, the experimenter asked what the participant would guess the purpose of the study is if the avowed nature of the study was not actually the purpose. Finally, the experimenter asked if there was anything about the study that seemed suspect. After asking these three questions and noting the answers, the experimenter fully disclosed the nature and purposes of the study. Participants were informed that the Miller-Holt is a bogus test of intelligence and that participants' scores on the intelligence test were not a reflection of their actual performance. Participants were asked to not reveal the true nature and design of the study to others until the completion of the study. All participants participated in the experiment in a three month time span to decrease the probability that information about the study would be leaked between participants. No participants reported having heard about the nature of the study prior to participation.

Instrumentation

Big Five Inventory. Agreeableness was measured using the Agreeableness scale of the Big Five Inventory (John & Srivastava, 1999; see Appendix C). The Big Five Inventory is a 44-item scale developed through expert ratings and factor analysis to measure five core dimensions of personality: neuroticism, extraversion, openness, conscientiousness, and agreeableness. The entire Big Five Inventory was administered to mask interest in agreeableness and reduce the possible effects of priming.

The Agreeableness scale consists of nine items, four of which are reversed scored. Participants were instructed to respond to the stem, "I see myself as someone who…", using a five-point Likert scale (1 – "strongly disagree" to 5 – "strongly agree"). Sample items include "Is helpful and unselfish to others," "Is considerate and kind to almost everyone," and "Can be cold and aloof" (reverse scored). Internal consistency for the Agreeableness scale is .79, and concurrent validity with other established measures of agreeableness—Goldberg's (1992) trait descriptive adjectives and Costa and McCrae's (1992) NEO questionnaires—was .95 and .92 respectively (John & Srivastava, 1999). In the present study, the internal consistency for the Agreeableness scales was .77.

Values in Action Inventory. Kindness was measured using the Kindness scale of the Values in Action Inventory (Peterson & Seligman, 2004; see Appendix C). The Values in Action Inventory is a 120-item scale developed to measure 24 character strengths including bravery, hope, kindness, and love. The entire inventory was administered to mask interest in kindness and reduce the possible effects of priming. Further, administering the entire VIA allowed the researcher to give participants a report of their 24 character strengths at the conclusion of the study.

The Kindness scale consists of six items. Participants indicated how well each statement described themselves on a five-point Likert scale (1 – "very much like me" to 5 – "very much unlike me"). Sample items include "I really enjoy doing small favors for friends" and "I enjoy being kind to others." Internal consistency for the entire scale is .79 and for the Kindness scale is .71 (McGrath, 2013). Research has indicated that the Kindness scale is among the most endorsed of the VIA scales (Karris & Craighead, 2012)

making it a prime choice for studying kindness. In the present study, the internal consistency for the Kindness scale was .79.

Mood Questionnaire. As a manipulation check, participants' mood was measured using a mood questionnaire adapted from Webster et al. (2006). The mood questionnaire contains a list of ten adjectives, five related to positive affect and five related to negative affect and has reported internal consistencies of .89 and .90 in previous studies (Webster et al., 2006). Participants responded to the following stem using a seven-point Likert scale with "not at all" and "very much" as anchors: "regarding my performance on the Miller-Holt General IQ Aptitude Test, I feel…". In the present study, the internal consistency for the Mood Questionnaire was .85.

Study Design

The present study is a double-blind, randomized experimental study using a convenience sample of college students. All data were analyzed using the Statistical Package for the Social Sciences version 21 (SPSS).

CHAPTER FOUR

RESULTS

Preliminary Analyses

Missing Data. Due to experimenter error, four participants did not have the data for the number of pencils picked up. These data were removed from further analyses, resulting in a final sample size of 117 participants. Additionally, one participant did not have data for the Agreeableness variable, and six did not have data for Kindness. These data points were excluded from relevant analyses.

Power. Power analyses were conducted separately for each study hypothesis. Study hypotheses focus on three effects: the main effect of feedback, the main effect of personality and character traits, and the interaction between feedback and traits on helping behavior. Previous studies on the effects of mood manipulations using false feedback techniques on helping behavior consistently yield medium effect sizes (e.g., McMillen, Sanders, & Solomon, 1977; Strenta & Dejong, 1981). Research on the effects of personality and character traits on helping behavior is limited. However, previous research not using aggregation techniques (e.g., Mischel, 1969) indicates that self-report measures of traits typically yield effects around of $r = .3$, which is also a medium effect. The interaction between mood manipulations and traits has not been explored in relation to observed helping behavior. Studies examining the interaction between Agreeableness, group status, and willingness to help have found small-to-medium effects (Graziano et al., 2007). Using a priori power estimates with a medium effect size of $R^2 = .09$, and an expected power of $\beta = .80$, based on a linear multiple regression with three predictors, it

was found that 41 participants were required in each of the three groups, for a total of 123 participants, to detect a medium-sized effect.

Assumptions. Assumptions for ANOVA and regression were tested. Participant random assignment to conditions coupled with experimenter and participant blindness to condition ensured independence of observations. To test normality, a normalized P-P plot was constructed (see Figure 3). All data points fell close to the diagonal line, indicating normality of the data. Homogeneity of variance was assessed by creating a scatterplot of the standardized predicted values against the dependent variable of helping behavior (see Figure 4). No discernible patterns emerged, indicating homogeneity of variance. Multicollinearity was assessed by examining the Variable Inflation Factor (VIF) of each predictor variable. All predictors had VIFs of less than 4, indicating that the assumption was met.

Descriptive Statistics. A correlation matrix of the primary variables is provided in Table 1 and descriptive statistics for key variables are provided in Table 2. The Kindness and Agreeableness scales were significantly related at $r = .52$, $p < .01$. Kindness was also significantly correlated with the number of pencils participants picked up at $r = .29$, $p < .01$, indicating that higher scores on the Kindness scale corresponded to more pencils retrieved.

Manipulation Check. Participants filled out the 10-item Mood Questionnaire to verify the success of the mood manipulation. The Mood Questionnaire contains 5 items measuring positive affect and 5 items measuring negative affect. The items measuring negative affect were reverse coded, and the scale was examined as a unidimensional scale as is typical in the literature (Webster et al., 2006). A factor analysis using varimax

rotation confirmed that a one-factor interpretation of the Mood Questionnaire was most appropriate and explained 63% of the variance in the scale. This interpretation was confirmed by visual examination of a scree plot. All items loaded on this factor in the expected direction with factor loadings greater than .60.

A one-way Analyses of Variance was then conducted using feedback condition (positive, negative, neutral) as the independent variable and Mood Questionnaire scores as the dependent variable. The ANOVA for feedback condition was significant, $F(2, 118) = 29.23$, $p < .01$. Post-hoc comparisons were conducted using Tukey's HSD test. I found that participants in the positive feedback condition experienced more positive mood ($M = 19.76$, $SD = 6.07$) than participants in the neutral feedback condition ($M = 10.65$, $SD = 11.16$) and that the difference in mood between positive and neutral feedback was significant ($M_D = 9.11$, $SE = 2.51$, $p < .01$, $d = 1.01$). Further, participants in the positive feedback experienced more positive mood than participants in the negative feedback condition ($M = .55$, $SD = 14.98$) and that difference was significant ($M_D = 19.21$, $SE = 2.51$, $p < .01$, $d = 1.68$). Participants in the neutral feedback condition also experienced significantly more positive mood than participants in the negative feedback condition ($M_D = 10.1$, $SE = 2.53$, $p < .01$, $d = .76$).

Hypothesis 1: Main Effect of Traits on Helping

In hypothesis 1, I predicted a main effect for traits on helping behavior such that there would be a main effect for 1a) the Agreeableness scale of the Big-Five Inventory and 1b) the Kindness scale of the VIA Inventory. Further, I predicted that 1c) Agreeableness would emerge as a better predictor of helping behavior than Kindness. Hypothesis 1 was tested using a series of linear regression analyses (see Table 3). A

simultaneous linear regression with Agreeableness and Kindness as predictor variables and the number of pencils picked up as the dependent variable was conducted. This model was significant, $F(2, 107) = 5.02$, $p < .01$, $R^2 = .09$. The standardized beta for Kindness ($\beta = .30$) was significant, $t = 2.73$, $p < .01$, but the standardized beta for Agreeableness ($\beta = -.02$) was not significant, $t = -.14$, $p = .89$. In order to more directly examine the magnitude of the effects of Kindness and Agreeableness separately on helping, semi-partial correlations for Kindness ($\rho = .25$) and Agreeableness ($\rho = -.01$) were computed. For the sake of thoroughness, I examined the correlations between helping behavior and the other four Big 5 traits (Conscientiousness, Neuroticism, Openness, and Extraversion) and found that none of the other Big 5 traits correlated with helping (all $p > .05$).

Because Agreeableness and Kindness were significantly correlated ($r = .52$, $p < .01$), separate one-variable regression analyses were conducted to see if Agreeableness and Kindness alone were predictive of helping behavior. In a simple linear regression, Agreeableness was not predictive of helping behavior, $F(1, 108) = 2.44$, $p = .12$, $R^2 = .02$. In a simple linear regression, Kindness was predictive of helping behavior, $F(1, 108) = 10.12$, $p < .01$, $R^2 = .09$. The standardized beta in this analysis was also significant, $\beta = .29$, $t = 3.18$, $p < .01$.

These results provide partial support to hypothesis 1. Specifically, they fail to support hypothesis 1a that Agreeableness is significantly related to helping. Although the results of the simple regression analysis between Agreeableness and helping behavior approached significance, in a simultaneous regression where Kindness was included, Agreeableness fell out as a significant predictor. The results do, however, support

hypothesis 1b that Kindness is significantly related to helping. In both a simple and simultaneous regression analysis, Kindness emerged as a significant predictor of helping behavior. The results fail to support hypothesis 1c that Agreeableness will be a better predictor of helping than Kindness. On the contrary, they indicate that Kindness is a better predictor of helping than Agreeableness. This is evident as the regression model including only Kindness reached significance while the regression model including only Agreeableness did not. Further, both the standardized beta and semi-partial correlation for Kindness in the simultaneous regression model were larger than the corresponding values for Agreeableness.

Hypothesis 2: Main Effect of Feedback Condition on Helping

In hypothesis 2, I predicted that there would be a main effect for feedback condition on helping such that 2a) positive feedback would yield greater helping than the control condition and that 2b) negative feedback would yield less helping than the control condition. Hypothesis 2 was tested using a one-way Analyses of Variance (ANOVA) using feedback condition as the independent variable (positive, control, negative) and helping behavior as the dependent variable. The ANOVA failed to reach significance, $F(2, 114) = .13$, $p = .87$, $\eta^2 < .01$, indicating that there was not a main effect for feedback condition on helping (see Table 4).

This results fails to support hypothesis 2 that there would be a main effect of feedback condition on helping. Because the overall ANOVA was non-significant, no further tests were conducted between the positive feedback and control conditions (hypothesis 2a) or the negative feedback and the control conditions (hypothesis 2b).

Hypothesis 3: Interaction Effects between Traits and Feedback on Helping

In hypothesis 3, I predicted an interaction effect between trait measures and situational factors such that 3a) there would be a significant interaction between Agreeableness and feedback condition such that those high in Agreeableness would help more than those low in Agreeableness in both negative feedback and control conditions but the magnitude of this difference would be greater in the negative feedback condition than in the control condition. I predicted that 3b) there would be a significant interaction between Agreeableness and feedback condition such that those high in Agreeableness would help more than those low in Agreeableness in both positive feedback and control conditions but the magnitude of this difference would be greater in the control condition than in the positive feedback condition. Further, I predicted that 3c and 3d) the effects described in 3a and 3b would also occur for Kindness in place of Agreeableness.

In preparation for the analyses for hypothesis 3, feedback condition was dummy coded into two separate variables such that in one (Positive), "0" corresponded to the control condition and "1" corresponded to the positive feedback condition, and in the other (Negative), "0" corresponded to the control condition and "1" corresponded to the negative feedback condition. Agreeableness and Kindness were then centered within each dataset to enable an interpretation based on mean Agreeableness and Kindness scores. Interaction terms were created by multiplying the centered Agreeableness and Kindness variables by the dummy variables created for feedback condition. Two separate linear regressions were then conducted using feedback condition, either Kindness or Agreeableness, and the interaction between conditions and traits as predictors and helping behavior as the predicted variable.

Hypotheses 3a and 3b were tested using a simultaneous linear regression with Agreeableness, feedback condition (negative vs. neutral vs. positive), and the interaction between them as predictors and helping behavior as the dependent variable (see Table 5). The regression model was not significant, $F(5, 110) = 1.01$, $p = .41$, $R^2 = .04$ indicating that the model including the interaction between Agreeableness and feedback condition was not a significant predictor of helping behavior. This fails to support hypotheses 3a and 3b.

Hypotheses 3c and 3d were tested using a simultaneous linear regression with Kindness, feedback conditions (negative vs. neutral vs. positive), and the interaction between them as predictors and helping behavior as the dependent variable (see Table 6). The regression model was significant, $F(5, 105) = 2.91$, $p = .02$, $R^2 = .12$ indicating that the model including the interaction between Kindness and feedback conditions was a significant predictor of helping behavior. None of the betas were significant, although the betas for the interaction between Kindness and negative feedback ($\beta = .21$, $p = .10$) and Kindness and positive feedback ($\beta = .27$, $p = .07$) trended significance.

These two results do not support hypothesis 3c and 3d. However, they do indicate that participants' helping behavior varied according to the interaction of Kindness and feedback condition. An interaction plot is depicted in Figure 5, which indicates that among participants low in Kindness, negative feedback led to significantly less helping than did neutral feedback. No effects were observed for participants high in Kindness. Hypothesis 3c predicted that there would be significant differences in helping among participants in both conditions and was thus not supported. The plot also indicates that among participants low in Kindness, positive feedback led to significantly more helping

than did neutral feedback. However, for participants higher in Kindness, the effects of feedback on helping are less pronounced. This effect was opposite that predicted by hypothesis 3d.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

This study was guided by the question, are traits, situational factors, and their interaction all necessary to explain helping behavior? I discussed an era of traits, an era of situational factors, and an interactionist paradigm to set the stage for my primary hypotheses that all three elements are necessary to explain helping behavior. In this section, I will review each of my three hypotheses, the inferences I make from the data about each, and the implications that these inferences have for the study of traits, situational factors, and their interaction.

The Study of Traits

My first hypothesis was that there would be a main effect of kindness and agreeableness on helping behavior. The data partially supported this hypothesis. Kindness was found to be significantly related to helping behavior, but Agreeableness was not found to be significantly related to helping behavior. When compared in a simultaneous regression model, the standardized beta for Kindness was much larger than the beta for Agreeableness, indicating that Kindness was a better predictor of helping behavior than Agreeableness.

The lack of significance for Agreeableness is interesting in light of previous research that has found relationships between Agreeableness and helping behavior. In these studies, various measures of helping have been found to be significantly related to Agreeableness including willingness to help a stranger in distress (Graziano et al., 2007), self-reported prosociality (Caprara et al., 2010), and self-reported volunteering (Carlo et al., 2005). Although theoretically similar to the present study, each of these studies

measured slightly different aspects of helping. None of the studies cited measured observed helping behavior but studied either self-reported past helping, willingness to help, or a disposition to helpfulness. It is possible that Agreeableness is more highly correlated with presenting oneself as a helpful person or being willing to help than with observed helping behavior. As this is one of the first studies to measure observed instead of self-report helping behavior in the context of agreeableness, further research is needed to see if these observations replicate.

The significance of Kindness as a predictor of helping behavior is both consistent with previous research and an indicator of a promising new area of study. Scales of the Values in Action Inventory have been found to consistently be linked with self-reported outcomes such as life satisfaction (Brdar & Kashdan, 2010; Proctor et al., 2011) and depression (Gillham et al., 2011; Huta & Hawley, 2010). Theoretically, the Kindness scale should be linked with outcomes like helping behavior as items from that scale focus on things like doing favors for friends or being kind to others. This study is the first, however, to find an empirical link between the Kindness scale of the VIA and observed helping behavior. This finding adds to the validity of the Kindness scale of the VIA as a predictor of behavior.

Further, measurement error within the VIA suggests that the VIA may underestimate the relationship between trait kindness and helping. The validity of the VIA is threatened by the heterogeneity of items, social desirability, and positive illusions (Fowers, 2014). The Kindness scale of the VIA is also susceptible to these threats as it is composed of items that measure attitudes toward helping, past helping behavior, and self-ascription of kindness. It is also susceptible to social desirability bias as all of its items

appear socially desirable. Because items are socially desirable, participants are more likely to have inaccurate positive illusions about their possession of a trait. Though not rendering the scale invalid, each of these three elements threatens the validity of the VIA and may attenuate the correlations between any of the scales of the VIA and other measures. Thus, it is possible that the relationship between kindness and helping behavior was underestimated due to measurement error of the Kindness scale of the VIA.

Perhaps the most interesting finding from this first hypothesis is that kindness is a *better* predictor of helping behavior than agreeableness. The multiple regression analysis including both Kindness and Agreeableness found that Kindness had a semi-partial correlation of $\rho = .25$ with helping behavior while Agreeableness had a semi-partial correlation of $\rho = -.01$ with helping behavior. These correlations can be interpreted as the unique amount of variance that Kindness (or Agreeableness) explains in helping behavior. It is evident that Kindness explains more of the variation in helping behavior than Agreeableness. This finding can perhaps be explained best by the specificity of the Kindness measure compared to the Agreeableness measure. The Agreeableness scale of the BFI is designed to measure agreeableness, which includes facets such as politeness, trust, warmth, cooperation, and kindness. Thus, although the Agreeableness scale of the BFI measures kindness, it is only one of the facets encapsulated by Agreeableness. Other aspects of Agreeableness such as trust or warmth are less theoretically relevant to helping behavior than is kindness. The Kindness scale of the VIA on the other hand was designed to measure kindness in particular and would be expected to correlate more strongly with helping behavior. Thus, although both the Agreeableness scale of the BFI and the Kindness scale of the VIA theoretically relate to helping behavior, the specificity of the

Kindness scale may be the reason that Kindness was significantly related to helping behavior where Agreeableness was not. The specificity of the scale may be an especially important factor due to the lack of sensitivity of the measure of helping. If picking up pencils were a less sensitive measure of helping, it would be unsurprising to fail to find a main effect for a less specific predictor (Agreeableness) while still finding a main effect for a more specific predictor (Kindness).

The significance of Kindness as a predictor has implications for the study of character traits more generally. Few studies to date have studied the correlation between character traits, such as kindness, and observed behavior. Though there is some evidence that personality trait models can be successfully applied to character traits (Meindl et al., 2013), little research has been done on the relationship between character traits and actual behavior. This trend has been encouraged by the unsubstantiated view of character traits as less objective than personality traits (Nicholson, 1998), which is ironic as several "value neutral" personality traits such as agreeableness often rely on moral concepts in their measurement (John, 2008). The results of the present study indicate that character traits may not only be relevant to the study of behavior but may be *more* relevant in the study of some kinds of behavior than personality traits. Although further research is needed before making conclusions about the relationship between character traits and behavior in general, the results of this study indicate that the study of character should not be excluded on the basis of the moral concepts that character entails.

The Study of Situational Factors

My second hypothesis was that situational factors, feedback in this case, would exert a main effect on helping behavior. The data did not support this hypothesis. A one-

way ANOVA with feedback condition as the independent variable and helping behavior as the dependent variable failed to find a significant impact of feedback condition on helping behavior. Because the overall ANOVA was not significant, group comparisons between different feedback conditions (positive, negative, neutral) were not undertaken.

The lack of effect for feedback is in conflict with a multitude of studies that have established a significant effect for mood on helping behavior (Carlson et al., 1987; Carlson & Miller, 1988). After a careful analysis of the data from the present study and a thorough review of the literature on mood effects on helping behavior, three possible explanations emerged for the incongruence: the measure of helping behavior was not sensitive to the differences in mood, the feedback manipulation was not strong enough to produce differences in behavior, and the study was underpowered.

Sensitivity of Helping Measure. Perhaps the most likely reason that the present study failed to find a significant effect for feedback on helping behavior where other studies in the literature have found this effect is that the dependent variable was not sufficiently sensitive. The manipulation in the present study differed slightly from manipulations used in the literature in ways that may have made it less sensitive. In the present study, participants spent approximately 30 minutes with the experimenter filling out various measures for the study prior to the measurement of helping behavior. At this point, the experimenter "accidentally" knocked over a cup containing 20 pencils and started to pick them up, recording the number of pencils retrieved by participants as the primary measure of helping.

Retrieving dropped items is a commonly used paradigm in the study of helping behavior. The majority of studies using dropped items involve a confederate of the

researcher dropping items (Batson, 1979; Dovidio & Campbell, 1983; Dovidio & Morris, 1975; Greitemeyer, 2009; Katzev, Edelsack, Steinmetz, Walker, & Wright, 1978; Ruiz & Tanaka, 2001; Van den Bos, Müller, & van Bussel, 2009) making it so there is no interaction between the participant and the person requesting help prior to the critical incident. Because of the time spent with the experimenter in the room prior to the critical incident, participants may have felt increased social expectation to help, which could have made the measure of helping a less sensitive measure. Other studies using dropped items as the primary measure of helping have been conducted in public places (Brockner, Altman, & Chalek, 1982; Cunningham, 1978), which may mitigate the impact of expectations to help on helping. In a study designed similarly to the present study, Bell and Doyle (1983) failed to find significant effects for their mood manipulation on helping behavior, even though the manipulation check indicated that mood had successfully been manipulated. Similar to the present study, Bell and Doyle's primary dependent variable was the number of pencils that participants helped an experimenter retrieve at the conclusion of a period of time spent with the researcher.

False feedback has been consistently used to successfully manipulate mood but has been typically used with different dependent variables. For example, Twenge, Baumeister, DeWall, Ciarocco, and Bartels (2007) misinterpreted participants' personality test and found significant differences in the amount of money donated based on the interpretation given. Others have provided false feedback of success or failure on an experimental task and found significant differences in outcomes such as productivity in an optional experimental task (Berkowitz & Connor, 1966; Harris & Huang, 1973), donations (Isen, 1970), and helping in an emergency (McMillen et al., 1970). Each of

these studies used a dependent variable that was different from the present study, and the significance of their results may be due to their use of a different dependent variable.

Taken together, the studies cited indicate that retrieving pencils for an experimenter with whom participants have spent a prolonged period of time may not be a very sensitive measure of helping behavior. In a study conducted with a similar experimental design, no effects were found. On the other hand, studies done using the same dependent variable with a slightly different context found significant effects for situational factors on helping behavior.

Strength of Mood Manipulation. A second and non-mutually exclusive explanation for the failure to find significant results for situational factors in the present study is that the mood manipulation was not sufficiently strong. Other studies have sought to manipulate mood and found substantial significant effects in the number of dropped items retrieved by participants (Konecni, 1972; Porath & Erez, 2007). Because these studies did not report data from a mood manipulation check, it is not possible to compare the results of the present study directly with them. However, the effect sizes from the mood manipulation in the present study of $d = 1.01$ and 0.76 seem to be large enough to produce notable changes in behavior, indicating the success of the mood manipulation. Thus, the explanation of having a weak mood manipulation is a poor one.

Power of the Present Study. A final explanation for the lack of significant differences may be the lack of power in the present study. Although power analyses were undertaken at the outset of the study, they were conducted expecting a medium effect size of $d = .3$ between feedback groups. This indicated that a sample size of 123 participants would be sufficient to detect a significant difference in mood effects. If the actual effect

had been smaller, more participants would be necessary to detect a significant effect. This explanation is plausible as mean differences in helping behavior between feedback condition groups were minimal, but medium effect sizes are common in this literature, and 123 participants is more than is typically used in these studies to find significant effects. Though there are studies using dropped items as a dependent variable in which researchers failed to find significant effects (Blevins & Murphy, 1974; Geller & Malia, 1981; Vrugt & Nauta, 1995), a meta-analysis of studies measuring helping behavior using dropped items, Lefevor and Ahn (2015) found that the average effect size for studies using dropped items as a dependent variable was an odds ratio of 2.71, which is approximately equal to a Cohen's *d* value of .55. Thus, the power analyses of the present study, which were undertaken with the conservative *d* value of .3, indicate that there was sufficient power to detect an effect if it was present.

Overall, the findings from this study do not support the second hypothesis of a main effect for situational factors. However, it seems most likely that this is due to the lack of sensitivity of the measure of helping behavior. Especially given the history of the effects of mood manipulations on helping behavior, it seems unwise to conclude that mood does not have a significant effect on helping behavior in general even when it did not have a significant effect in the present study.

Interactions between Traits and Situational Factors

My third hypothesis was that there would be significant interactions between kindness and agreeableness and feedback condition on helping behavior. I made several sub-hypotheses about specific interactions between feedback conditions and specific traits. This hypothesis was not supported by the data. The interactions between negative

vs. neutral feedback and Agreeableness and positive vs. neutral feedback and Agreeableness were not significantly related to helping behavior. The interactions between negative vs. neutral feedback and Kindness and between positive vs. neutral feedback and Kindness trended significance. These results, however, do not support hypothesis 3 as the interactions merely trended significance and were not in the directions hypothesized.

The most likely explanation for the overall lack of significant interaction terms concerns the limitations of the dependent variable. In other studies finding interaction effects between traits and situational factors (e.g., Graziano et al., 2007), there was a main effect for both traits and situational factors in addition to an interaction effect. However, in the present study, there was no main effect for feedback on helping behavior. The insensitivity of the dependent variable may have also made it more difficult to discern interaction effects. Further research needs to be conducted to understand the nature and parameters of the interaction between situational factors and traits.

Conclusion

This study set out to understand the impact of agreeableness, kindness, feedback conditions, and their interaction on helping behavior. It was guided by an interactionist perspective (Fleeson, 2007; Graziano et al., 2007) and was the first exploration of the interaction between character traits and a situational factor on helping behavior. Additionally, the present study was among the first to explore the impact of both traits and situational factors on observed helping behavior.

In the present study, Kindness was significantly related to subsequent helping behavior, providing evidence that character traits may be useful in predicting subsequent behavior. In particular, this study suggests that additional research is warranted to examine whether the scales of the VIA correlate with the behaviors associated with the character traits they measure. Further, the relationship between Kindness and helping behavior was of a much greater magnitude than the relationship between Agreeableness and helping behavior, indicating that measures of character may be more appropriate than measures of personality to measure certain behaviors.

The study also has limitations that should be taken into account when interpreting the results. First, the measure of helping behavior used in the present study may not have been a sensitive measure of helping behavior, leading to insignificant effects for feedback, Agreeableness, and some interaction effects. Second, this is the first study to measure character traits, personality traits, the effects of feedback, and their interaction. As such, results should be seen as exploratory and should be subjected to replication. Finally, the study was conducted using a sample of emerging adult college students that was primarily White and may not be generalizable beyond these groups. The study was undertaken in a laboratory setting while helping strangers. Though it did not differ significantly from typical protocol in the field, the use of an artificial laboratory setting may also limit the generalizability of the study.

The results of the present study taken together with the presence of its limitations indicate several areas for future study. First, future studies should investigate the interaction between kindness, agreeableness, and feedback using a more sensitive measure of helping behavior such as emergency helping, or helping a stranger retrieve

dropped items in a public space. A more sensitive measure of helping behavior would be more likely to find additional effects if they exist. Second, future studies should continue to explore the interaction between traits and situational factors using behavioral helping measures. In particular, in the present study, Agreeableness did not relate to observed helping but Kindness did. Future studies could use both observed helping behavior and willingness to help in order to understand if agreeableness and kindness correlate differently with those two measures. Finally, future studies should continue to explore the interaction between other traits, situational factors, and behavior. Although there is some promising support for an interactionist paradigm in the literature, there is still relatively little evidence for the paradigm. Additional research should be conducted to investigate the plausibility of such an approach.

So, to what do we best attribute Welles Crowther's decision to ascend into the burning tower to help strangers to safety that cost him his life? Compassion? His training? A combination of the two? The results of this study indicate that traits should not be eliminated as a possible explanation. Decades of research indicate that situational factors should not be discounted as a possible explanation. Though more research is needed to reach decisive conclusions about the role of these factors, neither can be eliminated as possible explanations for Crowther's behavior.

Table 1. Correlations between Variables of Interest.

	Pencils Picked up	Kindness
Pencils Picked up		
Kindness	.29**	
Agreeableness	.12	.52**

** $p < .01$

Table 2. Descriptive Statistics.

	N	Min	Max	Mean	Std. Dev	Skewness		Kurtosis	
						Statistic	Std. Dev	Statistic	Std. Dev
Kindness	115	2.20	5.00	4.32	0.56	-.97	.23	.96	.45
Agreeableness	120	2.00	5.00	3.92	0.64	-.60	.22	.08	.44
Pencils Picked up	117	0	16	9.35	3.70	-.96	.22	.77	.44

Table 3. Regression Analyses for Hypothesis 1.

Variable	β	*t*	*p*	Semi-partial correlation	*F*-value	*p*-value	R^2
Simultaneous model					5.02	< .01	.09
Agreeableness	-.02	-.14	.89	-.01			
Kindness	.30	2.73	< .01	.25			
Agreeableness only					2.44	.12	.02
Agreeableness	.15	1.56	.12	.15			
Kindness only					10.12	< .01	.09
Kindness	.29	3.18	< .01	.29			

Table 4. Analysis of Variance for Hypothesis 2.

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Condition	3.81	2	1.91	.14	.87	< .01
Error	1580.82	114	13.87			
Total	1584.63	116				

Table 5. Regression Analysis for Hypotheses 3a and 3b.

Variable	β	*t*	*p*	*F*	*p*	R^2
Model				1.01	.41	.04
Agreeableness	-.15	-.77	.44			
Negative Feedback	-.05	-.46	.65			
Positive Feedback	-.05	-.46	.65			
Agreeableness x Neg	.25	1.81	.07			
Agreeableness x Pos	.18	1.61	.25			

Table 6. Regression Analysis for Hypotheses 3c and 3d.

Variable	β	*t*	*p*	*F*	*p*	R^2
Model				2.91	.02	.12
Kindness	.01	.08	.94			
Negative Feedback	-.10	-.91	.36			
Positive Feedback	-.04	-.37	.72			
Kindness x Neg	.21	1.67	.10			
Kindness x Pos	.27	1.81	.07			

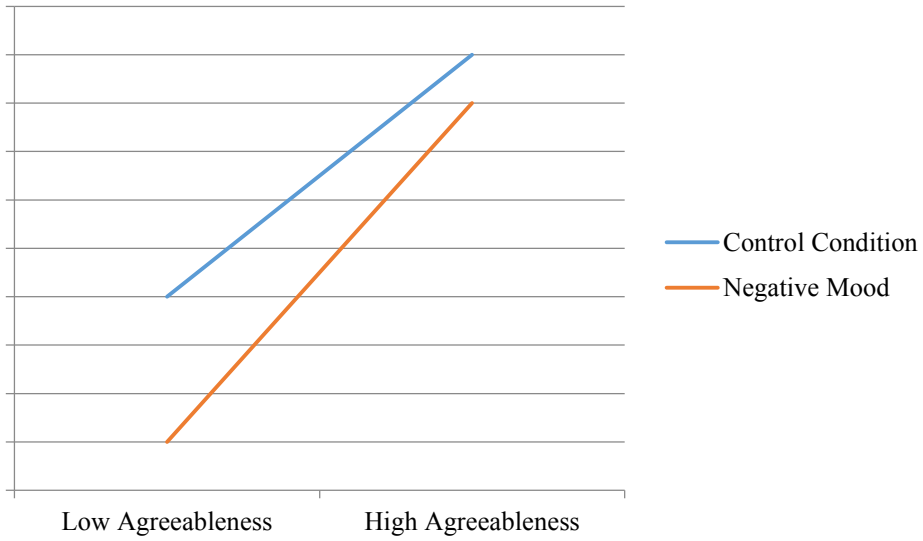

Figure 1. Hypotheses 3a and 3c: the hypothesized effects of Agreeableness and feedback (negative or neutral) on helping behavior. Similar results are expected for Kindness.

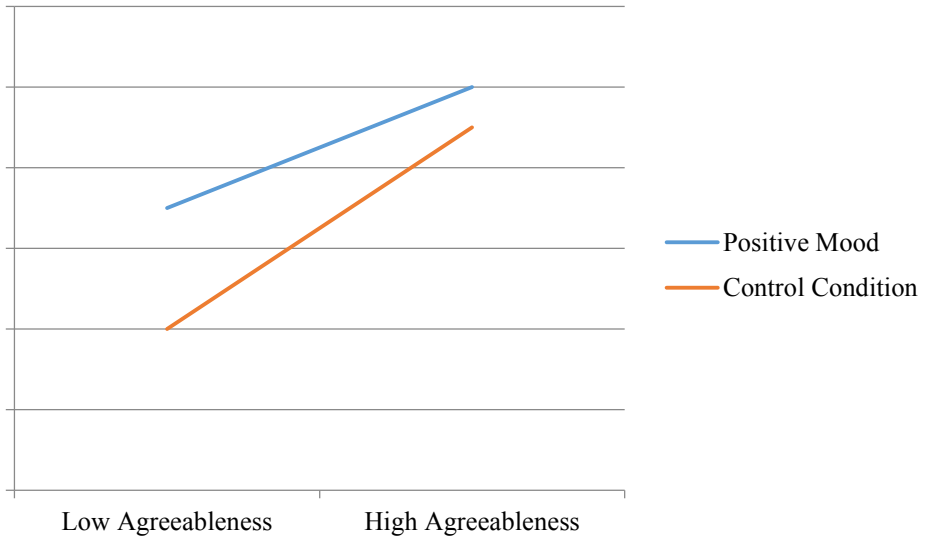

Figure 2. Hypotheses 3b and 3d: the hypothesized effects of Agreeableness and feedback (positive or control) on helping behavior. Similar results are expected for Kindness.

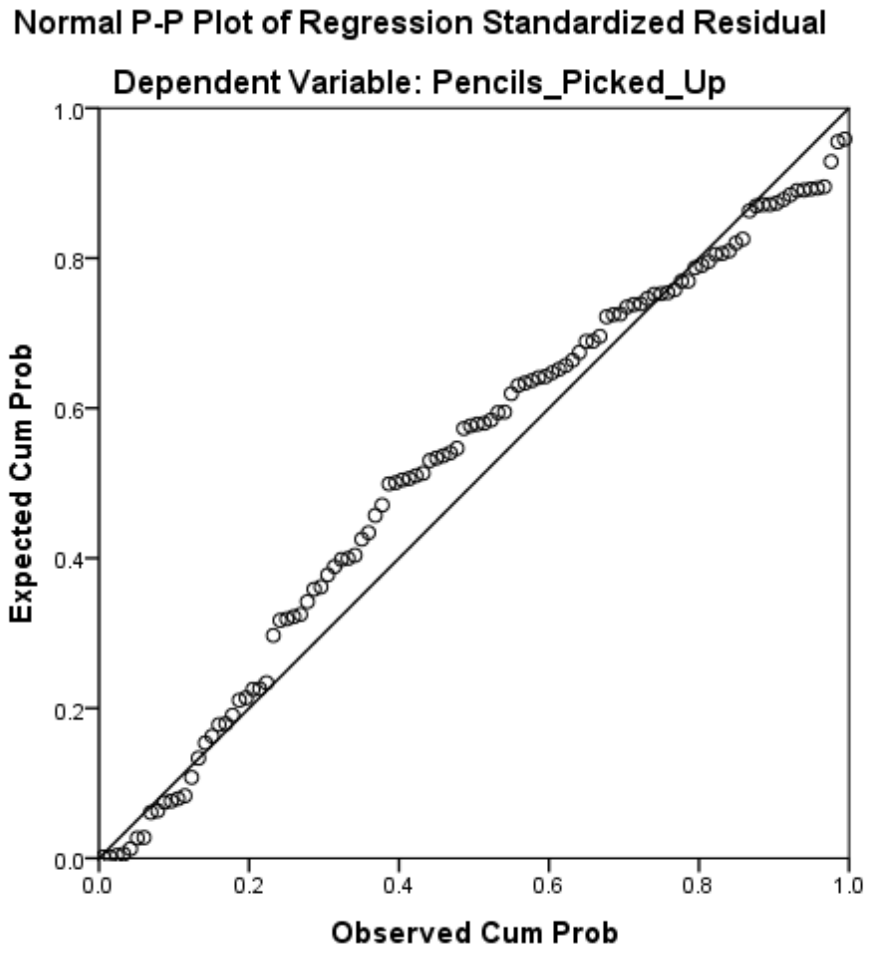

Figure 3. Normal P-P Plot.

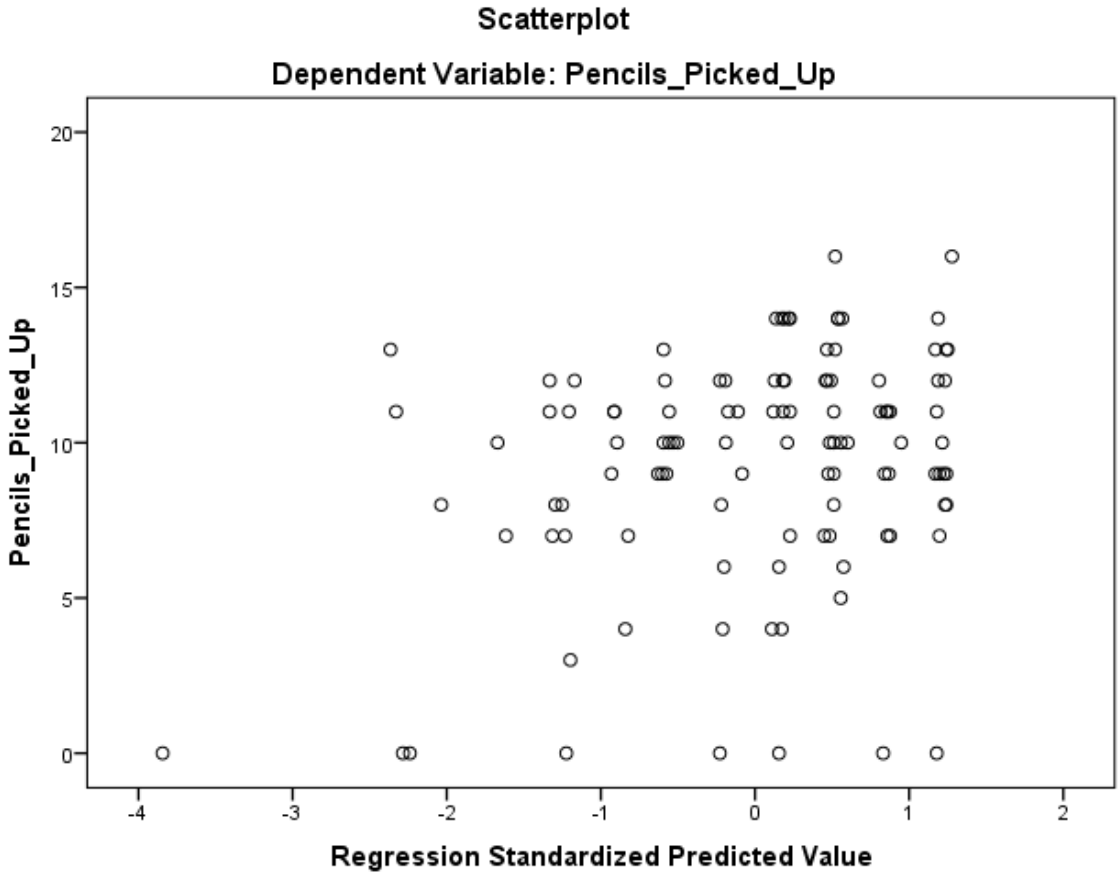

Figure 4. Standardized Predicted Values against Helping Behavior.

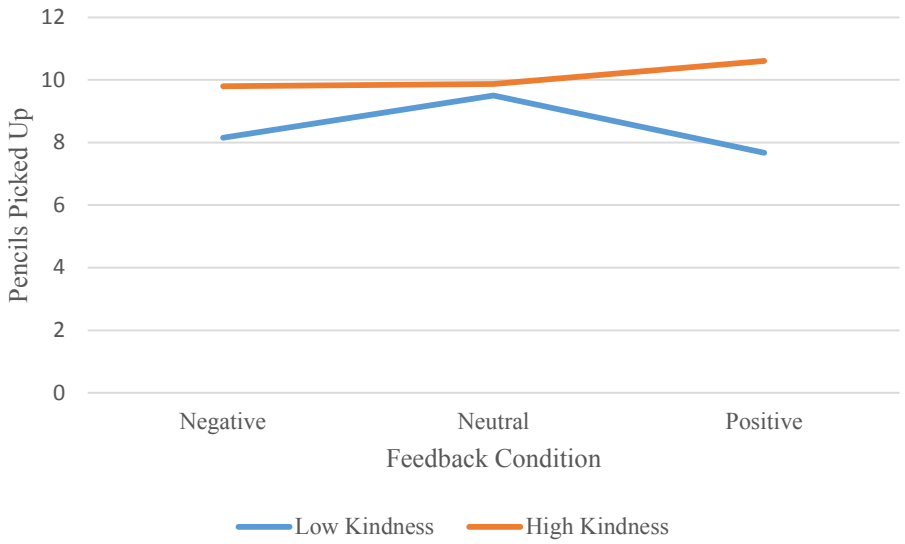

Figure 5. The Interaction between Kindness and Feedback on Helping Behavior.

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Appendix A

Informed Consent

University of Miami
CONSENT TO PARTICIPATE IN A RESEARCH STUDY

The following information describes the research study in which you are being asked to participate. Please read the information carefully. At the end, you will be asked to indicate your agreement to participate.

We are asking you to participate in a research study about personality and intelligence. The purpose of this research is to learn more about how personality and intelligence are related.

Participation in this study involves completing a series of questionnaires, which will take approximately one hour. You will complete these questionnaires on the computer and by hand in the research office. You will be asked several questions about varying aspects of your personality, including questions about current mood states. You will also complete a novel measure of intelligence that will provide a base assessment of your intellectual functioning.

We do not anticipate significant risks to you related to this study, but it is possible that some questions could be distressing. Your participation in this study is voluntary. If you decline to participate or stop participating in this study, there will be no negative consequences to you and your standing as a student at the University of Miami will not be affected.

Through your participation in the study, you will be provided with a character strengths profile from the Values in Action Inventory. This profile may be helpful for you in understanding the role various character strengths plan in your life and represents a benefit to you for study participation.

If you are participating for credit, you will receive research participation credit in your course as a result of your completion of this study. There are other studies being conducted that can allow you to receive extra credit as well. If you are participating for money, you will receive the indicated amount as a result of your completion of this study.

The investigator and his assistants will consider your records confidential to the extent permitted by law. The U. S. Department of Health and Human Services may request to review and obtain copies of your records. Your records may also be reviewed for audit purposes by authorized University employees or other agents who will be bound by the same provisions of confidentiality. The information that you provide to us will be linked to a list with your name on it. That list will be kept in a separate secure data base from

your responses to the questionnaires.

You may ask and will receive answers to any questions during your participation in this study. The investigator will give you a copy of this consent form if you request it. If you have any questions about this study, please contact Tyler Lefevor at 801-573-4370 or Dr. Blaine Fowers at 305-284-5261. If you have any questions about your rights as a research participant, you may contact The Human Subjects Research Office at 305-243-3195.

PARTICIPANT AGREEMENT:

I have read the information in this consent form and agree to participate in this study. I have had the chance to ask any questions I have about this study, and they have been answered for me. I am entitled to a copy of this form after it has been read. By signing below, I give my consent to participate in this study.

Signature of participant _____ Date _____

Signature of researcher _____ Date _____

Appendix B

The Miller-Holt General IQ Aptitude Test

Directions: Work as fast as possible and try to finish each problem. Even if you don't know the answer--- take your best guess. You have 10 minutes to finish the exam.

Flat turning

On each line below, underline the pair of shapes which, if turned around, could represent the same one.

Example:

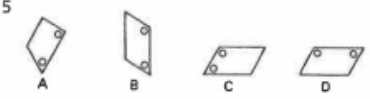
SA 1

SA 2

SA 3

SA 4

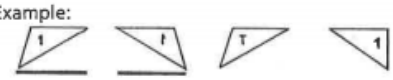
SA 5



Reflected forms

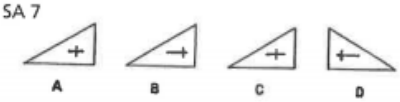
In each of these rows, two of the shapes represent mirror images of the same shape. Underline that pair.

Example:

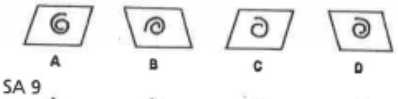


SA 6

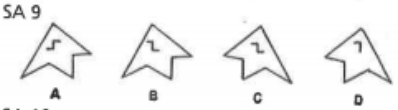
SA 7



SA 8



SA 9

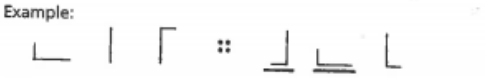


SA 10

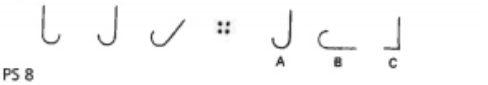
Rotation

In each row, two out of the three shapes on the left represent the same shape turned around—as on a potter's wheel, but not turned over. Underline the two shapes on the right that are rotated versions of a similar pair on the left.

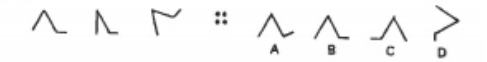
Example:



PS 7



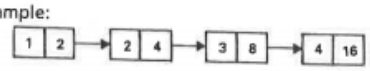
PS 8



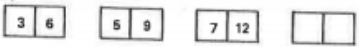
Double squares

The numbers in each row run in series. Write the two numbers that should appear in the blanks on the right-hand double square. In the example the left-hand numbers increase by one at each step. The right-hand numbers are multiplied by two at each step.

Example:



NA 44



NA 45

NA 46

NA 47

NA 48

Participant Feedback Sheet

Participant ID:_____

The Miller-Holt General IQ Aptitude Test

Gayle R. Miller & C. Jonathan Holt

A Joint Production of Harvard University and Stanford University

The Miller-Holt General IQ Aptitude Test is a new, non-verbal alternative to intelligence testing. Unlike other measures of intelligence that are influenced by verbal reasoning, the Miller-Holt offers a less biased measure of intelligence as it does not rely on verbal reasoning. Research conducted among college students at universities across the United States of America has indicated that the Miller-Holt General IQ Aptitude Test is a reliable and valid measure of intelligence that is not correlated with scores on the ACT or SAT. However, this research has indicated that performance on the Miller-Holt is correlated with other key outcomes for college students such as employability (measured as length of time between graduation and placement in first full-time job), earning potential (measured by 5-year follow-up assessment of current annual earnings), and social intelligence (measured by 5-year follow-up social assessment).

The Miller-Holt was specifically designed to be used to discriminate intelligence among college undergraduates. Research conducted with University of Miami undergraduates has yielded a mean of 10/17 thus far. Your score of ___/17 means that you performed better/worse than approximately ___% of participants who have taken the measure.

Scores on the Miller-Holt have been shown to be relatively stable over time. Though it is possible that performance improves upon retesting, the Miller-Holt has been shown to have a test-retest reliability of $\alpha = .90$. This value indicates a very high correlation between scores on first administration and subsequent administrations of the Miller-Holt.

Appendix C

Demographic Questionnaire

1. What is your age? _____

2. What is your gender?

   ____ Male
   ____ Female
   ____ Transgender
   ____ Other

3. Which best describes your ethnicity?

   ____ Hispanic
   ____ White
   ____ Asian
   ____ Black, Non-Caribbean
   ____ Black, Caribbean
   ____ Biracial
   ____ Other, please specify _____

4. What is your major? (List all declared majors)

   Major #1 _____
   Major #2 _____
   Major #3 _____

The Big Five Inventory (BFI)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to send time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Disagree strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree Strongly
1	2	3	4	5

I see Myself as Someone Who…

____1. Is talkative

____2. Tends to find fault with others*

____3. Does a thorough job

____4. Is depressed, blue

____5. Is original, comes up with new ideas

____6. Is reserved

____7. Is helpful and unselfish with others*

____8. Can be somewhat careless

____9. Is relaxed, handles stress well

____10. Is curious about many different things

____11. Is full of energy

____12. Starts quarrels with others*

____13. Is a reliable worker

____14. Can be tense

____15. Is ingenious, a deep thinker

____16. Generates a lot of enthusiasm

____17. Has a forgiving nature*

____18. Tends to be disorganized

____19. Worries a lot

____20. Has an active imagination

____21. Tends to be quiet

____22. Is generally trusting*

____23. Tends to be lazy

____24. Is emotionally stable, not easily upset

____25. Is inventive

____26. Has an assertive personality

____27. Can be cold and aloof*

____28. Perseveres until the task is finished

____29. Can be moody

____30. Values artistic, aesthetic experiences

____31. Is sometimes shy, inhibited

____32. Is considerate and kind to almost everyone*

____33. Does things efficiently

____34. Remains calm in tense situations

____35. Prefers work that is routine

____36. Is outgoing, sociable

____37. Is sometimes rude to others*

____38. Makes plans and follows through with them

____39. Gets nervous easily

____40. Likes to reflect, play with ideas

____41. Has few artistic interests

____42. Likes to cooperate with others*

____43. Is easily distracted

____44. Is sophisticated in art, music, or literature

*Denotes items comprising the Agreeableness scale. Items 2, 12, 27, and 32 are reverse scored

Mood Questionnaire

Here are a number of adjectives that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you feel that it describes your current mood.

Not at all			Neutral			Very much
1	2	3	4	5	6	7

Regarding my performance on the Miller-Holt General IQ Aptitude Test, I feel…

____1. Calm

____2. Ashamed

____3. Bad

____4. Dissatisfied

____5. Peaceful

____6. Successful

____7. Encouraged

____8. Sad

____9. Delighted

____10. Displeased