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DOES SELF-COMPLEXITY PREDICT DISHONEST BEHAVIOR VIA COGNITIVE

DISSONANCE?

by

WILLIAM H. HEATH

(Under the Direction of Karen Z. Naufel)

ABSTRACT

Psychologists disagree about what, if any, benefit high self-complexity might provide. Although

Linville (1987) demonstrated that high complexity buffers against stress, other studies have

found that it leads to more negative outcomes in the long term (Diehl et al., 2001). Cognitive

dissonance is an important factor in regulating behavior, particularly moral behavior (Aronson,

Fried, & Stone, 1999), and may explain how self-complexity leads to negative life outcomes.

The present study examined if high self-complexity might buffer against the tension of cognitive

dissonance, thus increasing the likelihood of dishonest behavior. Participants completed a self-

complexity measure, and then they completed a dissonance-rousing task where they must choose

between providing honest answers or maximizing their personal gain. Regression analysis

showed that high self-complexity predicted greater dishonest behavior, but a disruption of

cognitive dissonance could not account for this relationship. The possibility of personality as a

potential mediating variable for the established relationship, and avenues for future research, are

discussed.

INDEX WORDS: Self-complexity, Cognitive dissonance, Honesty

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WILLIAM H. HEATH

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Major Professor: Karen Z. Naufel
Committee: Amy A. Hackney
                 William D. McIntosh

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CHAPTER 1

INTRODUCTION

The average person lies two times a day (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996). Although a few "untruths" may be needed for social cohesion, dishonest words and actions can have serious repercussions for those involved. Lies inhibit the connection of individuals to others (DePaulo & Kashy, 1998). Those who tell serious lies to their romantic partners are far more likely to report a dissatisfying relationship (Peterson, 1996), and those who lie often also tend to be more manipulative and more concerned with self-presentation (Kashy & DePaulo, 1996). As Kashy and DePaulo explain, the frequency of deception can predict the quality of relationships: The more lies per social interaction, the lower sociability, the lower quality of same-sex relationships, and the higher levels of manipulation. Aside from personal relationships, cheating and dishonesty have had significant impacts on society as a whole. In an academic setting, the percentage of college students who endorse the view that cheating is wrong has never dropped below 90%, yet several studies reveal that cheating prevalence is somewhere between 40% and 60% (Davis, Grover, Becker, & McGregor, 1992). Dishonest behavior is not limited to academia. Just recently, 22 FBI agents cheated on an exam that certified their knowledge of domestic spying procedures (Stein, 2010). When dishonest behavior can have such negative outcomes, it becomes important to understand why otherwise moral people behave dishonestly. In the present study, I investigated if the structure of the self allows otherwise honest people to engage in such decidedly dishonest behavior.

Self and Self-Complexity

Few topics in psychology have received more attention and research then that of the "self." Throughout the history of social psychology, models of the self have seen constant

reinvention and revision to reflect the popular thinking of the time (Linville & Carlston, 1994).

One enduring debate in the field is regarding the structure of the self. That is, researchers have

questioned if self-knowledge is a unitary entity about which one has either a positive or a

negative disposition such as high or low self-esteem, or if the self is an amalgamation of multiple

distinct components, each playing some role in the expression of the self. William James (1890)

introduced the idea of a complex, multifaceted self. James believed that "a man has as many

social selves as there are distinct groups of persons about whose opinions he cares" (as cited in

Donahue, Robins, Roberts, & John, 1993, p.834). Since that time, a number of models have been

postulated to explain one of the most fundamental, yet illusive, concepts in modern psychology.

Although many models have been developed to explain the nature of the self, one of the

more popular paradigms is what Linville termed *self-complexity* (1985; 1987). Linville viewed

the self as comprised of distinct cognitive structures called self-aspects, which represent ways in

which individuals interact with others. Self-aspects might consist of relationships, such as "best

friend" or "colleague," roles, like "researcher" or "student," or contexts, such as "at a party." The

model functions similarly to that of an associative network. Each self-aspect is a node that links

to traits, behaviors, and other semantic information, and these characteristics in turn link to other

nodes (Linville & Carlston, 1994). For example, the self-aspect "student" might link to traits like

"intelligent" or "hardworking," and these traits might link to another aspect like "employee."

Thus, the self consists of aspects and traits that link together to form a web of self-knowledge.

In addition to the number of distinct self-aspects, Linville (1987) also stressed the

importance of the overlap among them. The strength of links between aspects varies depending

on the number of traits and behaviors shared. If a trait is present in multiple self-aspects, then

those aspects overlap in that regard. The more characteristics a person's self-aspects share, the more interconnected their self-knowledge.

Linville (1987) developed a trait-sorting task to serve as a physical analogue for the structure of the self. In her task, participants received a stack of cards with traits written on them along with other cards that were left blank. Participants then sorted the cards into groups that represented important aspects of their lives. They received instructions to make as many groups as were meaningful and that they could use traits more than once or write their own traits on the blank cards. The instructions were left as open as possible so that participants formed groups of traits based on their understanding of themselves.

To measure self-complexity, Linville (1987) utilized a formula that calculates an index of dispersion, a measure of how clustered are a group of observations (see Scott, 1969).

The formula for calculating **H** is below:

$$H = log_2 n - (\sum_i (n_i * log_2 n_i))/n$$

Here, n is the total number of traits used in the sort task and n_i is the number of traits used in a particular group combination. Every trait belongs to some combination of groups. For example, one person might ascribe the attribute "honest" to groups "student" and "employee." "Student-Employee" is one group combination and so n_i would be the total number of attributes that are assigned to both "student" and employee" but no other aspects. The result of this formula is that self-complexity scores increase as the number of aspects increase and the similarity among them decreases. Linville then used this scale, Self-Complexity Dimensionality, (SC-D) to investigate the role that complexity plays in mental well-being. Scores in her first study ranged from 0.99 to 4.80 (*M* = 3.04, *SD* = .69) with the number of aspects created ranging from 3 to 12 (*M* = 6.57, *SD* = 2.16).

According to Linville, SC-D can predict emotions, attitudes, and behavior. Linville theorized that high self-complexity would serve to moderate the effects of stress and result in a lower prevalence of depression and illness. According to her theory, a negative event activates the self-aspect with which it is most closely related. For example, the loss of an important tennis match would activate the "star athlete" self-aspect. When this occurs, the negative thoughts and emotions associated with the event spill over into other self-aspects that are closely related. People who are high in self-complexity will experience less spread of negative emotions because their aspects share fewer traits (Linville, 1987). Likewise, a complex self-concept should also limit the spread of positive emotions following a joyful event. Thus, those high in self-complexity experience fewer emotional lows and highs compared to those low in self-complexity..

Linville called this idea the *buffering hypothesis*, and she theorized that those low in complexity were in a sense putting all their eggs "in one cognitive basket" (Linville, 1985, p. 94). In other words, if people's self-concept was too centered on only a few aspects, then they would be more susceptible to the stress that accompanies negative emotions. For example, for someone for whom family is a large part of their self-concept will suffer more mental and emotional harm from a divorce than someone with a number of aspects unrelated to family life. In support of her theory, Linville (1987) found that people with high self-complexity were, in fact, less susceptible to perceived stress, depression, and a host of physical symptoms such as flu, aches, and menstrual cramps. In other words, high self-complexity seemed to buffer against the effects of stressful events.

Linville's (1987) finding inspired a number of other researchers to investigate the applications that self-complexity might have in the mental health field (Rafaeli-Mor & Steinberg,

2002). However, such attempts have very mixed results. For example, a recent attempt to replicate Linville's findings found no significant correlations between SC-D and depression, anxiety, physical symptoms, or perceived stress levels (Ryan, LaGuardia, & Rawsthorne, 2005). Further, a meta-analysis of 70 self-complexity studies found very little evidence to support Linville's buffering hypothesis (Rafaeli-Mor & Steinberg, 2002). In fact, Rafaeli-Mor and Stenberg's analysis showed that as complexity increased, overall well-being actually decreased.

Thus, the direct benefits of self-complexity may not be as simple as Linville (1987) observed. One possible explanation is that the buffering effect that Linville predicted may also be buffering against the effects of positive experiences in addition to stressful ones. Linville herself suggested that such an effect may be occurring and found that those lower in the complexity suffered fewer physical ailments in the absence of life stress. Another possibility is that the benefits of complexity are moderated by a third variable such as self-aspect control, (McConnell et al., 2005), or the presence of negative life events (McConnell, Strain, Brown, & Rydell, 2009).

Other authors have put forth alternative explanations for the inconsistent support of self-complexity. First, the original SC-D measure may itself be flawed (Rafaeli-Mor, Gotlib, & Revelle, 1999). These authors argued that Linville's measure was unreliable, as it was susceptible to present affective states and has poor internal consistency. In addition, the range of possible SC-D scores change depending on the number of traits the participants are offered, so it is impossible to compare self-complexity scores from one experiment to the next unless the exact trait list is used. Rafaeli-Mor and colleagues created two separate scales that represent the two dimensions of self-complexity, the number of self-aspects (NASPECTS) and the overlap among them (OL). These two measures display considerably higher internal reliability and may be more

effective at measuring the kind of self-aspect consistency that Linville originally sought to investigate.

Another possible problem with self-complexity measurement is that scores may also be affected by the type of traits used. Woolfolk and colleagues found they could produce different self-complexity scores by changing the content of the trait list from mostly positive traits to mostly negative traits (Woolfolk, Novalany, Gara, Allen, & Polino, 1995). They suggest that complexity can be measured more accurately by splitting the score into two measures, positive and negative self-complexity, by calculating the H statistic with only that type of trait in the equations. They found that, although positive self-complexity varied with the content of the trait list, negative self-complexity was more reliable.

Another potential explanation for the lack of consistent results is a problem with the model itself. *Self-concept differentiation* is a construct very similar to self-complexity and is defined as the tendency to view oneself as having different personality characteristics in different social situations (Donahue, Robins, Roberts, & John, 1993). [1] Psychologists have argued both for and against the benefit of such differentiation. Gergen (1971) for example, argued that specialized identities allow people to respond fluidly to various roles they might need to fill in interpersonal relationships. As a result, people are more adaptive to their social surroundings, which results in greater overall well-being. In opposition to Gergen's view stands Block's (1961) view of the fragmented self. Block argues that those high in self-complexity lack a core self and instead consist merely of loosely linked fragments of identity. Block described such an individual as "an interpersonal chameleon, with no inner core of identity, fitfully reacting in all ways to all people" (1961, p. 362). In other words, people without a true self on which to base their actions will often find themselves in situations that promote hypocritical behavior because

no consistent identity exists on which to base their actions. As such, increased complexity might lead to negative rather than positive outcomes.

Research suggests that Block's negative opinion of a differentiated self may be accurate. People with high self-complexity show poor emotional adjustment and reject social norms (Donohue et al., 1993). In addition, people with low self-esteem have significantly higher self-complexity scores then those with high self-esteem (Woolfolk et al., 1995). Another study investigating the effects of self-complexity across the lifespan found that as self-complexity increased, self-acceptance, environmental mastery, life purpose, positive relations with others, personal growth, and autonomy decreased (Diehl, Hastings, & Stanton, 2001).

Although Linville (1987) provided a theoretical framework that predicted high self-complexity could be beneficial, work by others (e.g., Donohue et al., 1993) suggest that self-complexity might having some effect for which Linville's original theory does not account. For example, complexity may interfere with processes that regulate healthy behavior such as honesty. The present study investigated how these negative outcomes of a complex self might occur.

<div align="center">Cognitive Dissonance</div>

One possible explanation for self-complexity's negative outcomes may result from cognitive dissonance. Dissonance refers to the unpleasant emotional state that follows from holding contradictory beliefs (Festinger, 1957). This state is especially apparent when people act in a way contrary to their beliefs. When individuals find themselves confronted with such a discrepancy, there are two ways to resolve the situation: 1) the direct method, a change in the hypocritical behavior or attitude, or 2) the indirect method, which removes the dissonance while leaving the contradiction intact (Stone, Wiegand, Cooper, & Aronson, 1997). For example, a

student who believes in the importance of academic honesty but chooses to copy a friend's homework will experience emotional discomfort as a result of the conflict. They may choose to resolve it directly by changing their attitude on cheating ("It's not that big of a deal") or indirectly ("I'm a good student otherwise").

The indirect method can take a number of forms. Common techniques include self-affirmation, when a person focuses their attention on their positive attributes (Steele & Liu, 1983), distraction, when a person focuses their attention on something other than the self (Zanna & Aziza, 1976), the expression of positive affect, or simply acting jovial (Cooper, Fazio, & Rhodewalt, 1978), and alcohol consumption (Steele, Southwick, & Critchlow, 1981). Stone and colleagues found that, given the opportunity, a majority of people choose the direct method for resolving their dissonance thus preserving their self-concept (Stone et al., 1997). For example, students who were made to feel hypocritical about their water usage resolved their dissonance by taking significantly shorter showers (Dickerson, Thibodeau, Aronson, & Miller, 1992).This self-correction of contradictory behavior can be a powerful force for adaptive behavior and has been shown to promote healthy lifestyle choice likes condom use (Aronson, Fried, & Stone, 1999).

Elliot and Devine (1994) explained that cognitive dissonance is primarily a motivational state and as such can be measured directly as cognitive discomfort. To test this hypothesis they conducted an experiment wherein they asked students to write an essay in support of a tuition hike, an action to which the students were opposed. Experimenters told students that their essay would be taken under advisement by the administration in coming to a decision. Some students read a passage with instructions to write in favor of the tuition increase since opposing essays had already been collected. It was expected that students in this condition would not experience dissonance since it was clear their essay did not reflect their own opinion. Other students read a

passage that strongly encouraged them to write opposing essays but that the choice was ultimately theirs to make. As predicted, students who were given a choice of which essay to write experienced significantly more psychological discomfort than those who were given no choice or those who wrote essays opposed to the increase. This study provides compelling evidence that cognitive dissonance is experienced as psychological discomfort and that choice is an important factor in dissonance induction.

Cognitive dissonance theory is most effective at predicting behavior when it conflicts with the individual's sense of self (Aronson, 1999). Further, Festinger's (1957) original theory rested on an important assumption, that people generally hold a positive view of themselves. In other words, people who believe themselves immoral would not experience dissonance following a moral transgression in the same way as others because their moral transgressions do not conflict with self-concept. Because the majority of people consider themselves moral (Aquino & Reed, 2002), cognitive dissonance can therefore serve as an effective means of promoting moral behavior. However, if high self-complexity interferes with dissonance, high self-complexity may also interfere with moral regulation.

The expression of cognitive dissonance depends on people's ability to access their self-concept. There are several competing models that describe exactly how the self-concept comes into play. Aronson (1992) proposed a model that focuses on the need for self-consistency as the driving factor in dissonance arousal. According to this model, dissonance occurs when people behave in a way that is inconsistent with their self-concept. Thus the primary goal of dissonance reduction is the reintegration of the self. This model would predict that those high in self-esteem and those that value moral actions will have a more difficult time resolving dissonance following immoral action then those with low self-esteem (Stone & Cooper, 2001).

In contrast, the self-affirmation model views the self as a resource to be tapped in order to reduce dissonance (Steele & Liu, 1983). Like the previous model, dissonance occurs due to a threat to self-concept. Steele and Liu posit that the desire to maintain a positive view of the self is the primary cause of dissonance, not the desire to maintain self-consistency. In other words, people experience negative affect following an immoral action not because it is inconsistent with their self-concept, but rather that it is at odds with their desire to view themselves in a positive light. People can therefore reduce dissonance via focusing on positive aspects of the self. This model predicts that those high in self-esteem are less affected by dissonance because they have greater resources with which to combat their negative self-reflection.

A third model, the *New Look* model, suggests that the self is irrelevant to cognitive dissonance because the conflict is between actions and social norms, rather than personal standards (Cooper & Fazio, 1984). So, Stone and Cooper's (2001) *self-standards model* integrated these seemingly contradictory theories of cognitive dissonance. With the self-standards model, the method for dissonance resolution depends on the context of the behavior and which types of standards are cognitively accessible. In other words, if the behavior conflicts with personal standards, then self-esteem will serve as a moderator; but if the behavior conflicts with normative social standards, then self-esteem will not be involved.

In all of these models, the self plays an important role in the arousal and subsequent dissipation of cognitive dissonance. However most previous research has focused on how dissonance interacts with the self rather than how individual differences in the self might interfere with dissonance. The present research looked at how the structure of the self might interfere with these processes.

Morality and Dissonance

A great number of psychological theories attempt to describe why people behave morally. As reviewed by Fiske (2004), there are three major motives that lead to pro-social behavior: egoism, altruism, and collectivism. First, the *egoism hypothesis* contends that people help others only so far as it serves their own personal goals. Second, the *altruism hypothesis* suggests that people are motivated by the well-being of others rather than themselves. Third, *collectivism* suggests that people put the good of the group ahead of the self. Thus, her review suggests that group processes have a strong influence on individual pro-social behavior. In fact, a sense of group belonging is often used to explain pro-social behaviors such as volunteerism (Finkelstein, 2010).

Regardless of the motive for ethical and pro-social behavior, society provides powerful reinforcement for it. Yet there are often less ethical ways to maximize personal gain. One experiment gave participants the option of choosing one of two tasks to complete: a fun, easy, task with the possibility of monetary gain, or a long boring task with no benefits (Batson, Kobrynowicz, Dinnerstein, Kampf, & Wilson, 1997). Participants were told that that another participant would get whichever task they did not choose. In the first study, 16 of 20 students chose the positive outcome for themselves, demonstrating self-interest as the motivational factor for their decision. In the next study, participants faced the same choice, but the researcher suggested they flip a coin to decide how to assign the tasks. Half of the participants chose to flip the coin, yet of those 9 out of 10 still assigned themselves the positive task. Batson and colleagues termed this outcome "moral hypocrisy" as the participants wanted to appear moral (to conform to group norms) yet still wanted the positive outcome for themselves (p. 1335). Even

though morality and pro-social behavior have strong reinforcers, people still behave hypocritically.

This disconnect between thought and action has been studied in depth, especially in regards to morality. Ayal and Gino (2011), for instance, called the conflict between maintaining a positive moral self-image and people's dishonest behavior *ethical dissonance* (p. 3). Although ethical dissonance is similar to cognitive dissonance in most respects, the authors argued that it differed in one important aspect: Because dishonest behavior often takes place covertly, it is much easier for people to adjust their attitudes towards honesty because no one is around to witness their hypocrisy. Moral behavior, at least on a daily basis, often occurs in a grey area, allowing a person to justify their actions in the most acceptable light. For example, one study found that when a pack of soda was left in a communal kitchen the cans disappeared almost instantly (Ariely, 2008). Yet when a plate of six dollar bills was left in the kitchen, the dollars were untouched. Even though stealing a soda and a dollar are of the same value monetarily, taking a can of soda is more easily justified in the context of a communal kitchen (e.g., "people take my food all the time so this is okay"). In short, Ariely (2008) concluded that people's internal cognitive state can have a dramatic influence on how they regulate their behavior.

Self-regulation is crucial for moral behavior. Philosophers have argued for centuries that people's natural desire is to be as selfish as society will allow (e.g., Plato, trans. 1974). Evidence suggests that resisting the temptation to act immorally is an active cognitive process. When participants have their cognitive resources depleted, they are more likely to cheat for monetary gain (Mead, Baumeister, Gino, Schweitzer & Ariely, 2009). Mead and colleagues depleted the cognitive resources of participants by asking them to write an essay without using the letters A or N. Following this depletion, participants completed a complex math test and scored their own

answers. Experimenters offered to pay for each correct answer, thereby creating a conflict between personal gain and moral behavior. Mead and colleagues (2009) found that those depleted participants were far more likely to misrepresent their performance on the task. They also found that depleted participants were worse at minimizing their exposure to tempting situations then non-depleted participants.

Because morality is an active process that requires cognitive resources, people generally go about their daily lives without considering the moral implications of their actions. In this way, people can avoid dissonance by simply neglecting to view their actions in a moral light. On the other hand, behavior can be affected simply by drawing attention to the morality of the situation. For example, having students sign the honor code dramatically reduces the incidence of cheating, as does thinking about the Ten Commandments (Mazar, Amir, & Ariely, 2008). By highlighting the expectation of honest behavior, these interventions increase the likelihood that any dishonest action will conflict with the self and cause cognitive dissonance.

Though cognitive dissonance is important in regulating moral behavior, research suggests that those high in self-complexity may not experience dissonance following hypocritical behavior. In a recent study, McConnell and Brown (2010) asked college students their opinions on the importance of academic preparation. Participants then wrote a short essay endorsing the view that studying was important. Immediately after this, participants listed all the times in recent memory where they had not adequately prepared for class, creating a conflict to induce cognitive dissonance. Afterwards, experimenters administered the opinion scale once again. Those participants who were low on self-complexity rated academic preparation as less important on the second opinion scale compared to the first, thus indicating they resolved their

dissonance by adjusting their attitudes. In contrast, those high in self-complexity showed the opposite effect, their scores increased even when reminded of their contradictory behavior.

In a pilot study (Heath, 2010), I attempted to replicate McConnell and Brown's (2010) findings by investigating how attitudes towards honesty change after participants undergo a similar dissonance induction. This study failed to find any relationship between self-complexity and change in attitude, but it did provide valuable insight that informed the design of the present study. First, participants in the pilot study produced far fewer self-aspects then participants in Linville's (1987) study. This is likely a result of using a different aspect list can have a significant impact on computed complexity (Rafaeli-Mor, Gotlib,& Revelle, 1999) or a result of general personality trends in college participants since Linville's study in 1987 (Twenge & Foster, 2010). Second, the dissonance measure focused on attitude change rather than cognitive discomfort, an important component to cognitive dissonance (Elliott and Devine, 1994). The present study attempted to resolve both problems of the pilot study by using a standardized method for self-complexity measurement (Woolfolk, Gara, Allen, & Beaver, 2004) and giving participants a choice in the tasks they perform. In summary, the present study utilizes improvements from the pilot study to test if people high in self-complexity may avert dissonance without the need to engage in corrective actions.

Statement of Problem

High self-complexity means compartmentalization of the self, like firewalls in a building; this prevents the spread of "damage" to other self-aspects following threat to the self (Linville, 1987). Similarly, cognitive dissonance does not occur unless the action conflicts with the self (Stone & Cooper, 2001). When a person acts hypocritically, that action which would normally create conflict is limited to only a small aspect of the self in high complexity people. Thus, as

research shows, those individuals should experience limited or no cognitive discomfort from their actions even while it conflicts with their overall self-concept (McConnell & Brown, 2010). Because ethical action primarily relies on self-regulation, which occurs as a result of dissonance (Aronson, Fried, & Stone, 1999), those people with high complexity should be able to exhibit unethical behavior while still viewing themselves in a positive moral light, and should do so to a greater extent that those with low complexity. This behavior could have negative consequences both for the individual and for society as a whole.

The present research investigated how self-complexity's disruptive effect on cognitive dissonance might translate in to identifiable differences in real-world behavior. I propose that if high self-complexity removes or limits dissonance, then individuals high in complexity will not experience the mental discomfort that accompanies dishonest behavior. Without this discomfort, these individuals will have little motive to adjust their conduct, leading to a higher level of maladaptive and socially unacceptable behavior. In other words, I propose that higher self-complexity predicts more dishonest behavior, and cognitive dissonance serves as a mediating variable for this predicted relationship (see Figure 1).
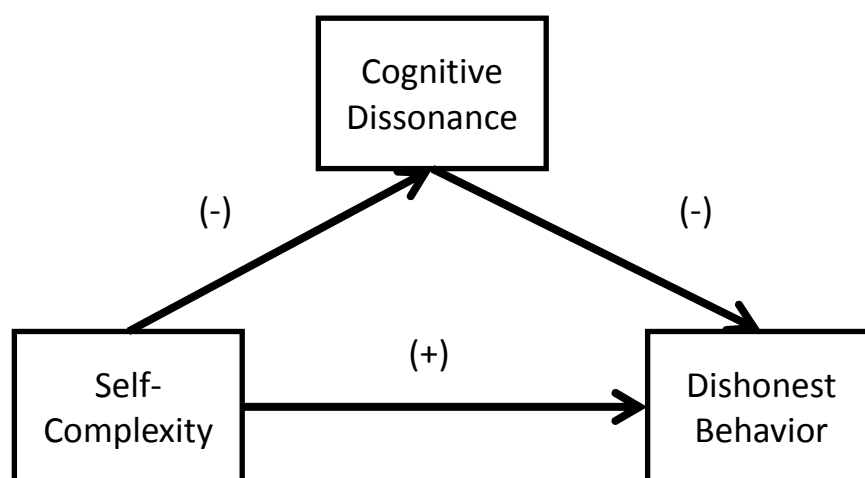
Figure 1. The proposed model: Cognitive dissonance mediates the relationship between self-complexity and dishonest behavior.

CHAPTER 2

METHOD

Participants

Fifty-five students participated in this study. Of those participants, six declined to participate in the cognitive-dissonance inducing task, two incorrectly completed the self-complexity measure, and two were unable to complete the experiment due to a computer malfunction. Those participants were removed from analysis leaving forty-five who completed all sections of the study. All participants were students at Georgia Southern University in Statesboro, Georgia. Thirty-seven were from the Introduction to Psychology participant pool and eight were from upper division psychology courses. Ages of participants ranged from 18 to 32 years old with a mean age of 20 years ($SD = 2.44$). Twenty-five participants were women, and 20 were men. Twenty-nine percent indicated they were African American ($N = 13$), 64.4% Caucasian ($N = 29$), 4.4% reported multiple ethnicities ($N = 2$), and one participant chose not to respond to this demographic question. Students in Introduction to Psychology received one credit towards the completion of their Introductory Psychology research requirement for their participation in this study; students in upper division courses received extra credit at the discretion of their professor.

Design, Materials, and Measures

Self-complexity task

The self-complexity task served as the primary predictor variable. Linville's original measure posed several problems in pilot testing (e.g., instructions were hard for participants to follow, examples contained demand characteristics, and the task was exceedingly frustrating to

participants), resulting in scores dramatically different from the normed scores Linville reported. Therefore, I used an adaptation of Linville's original card sort task (Linville, 1987).

This adaptation of the original self-complexity task is based on a measure used by Woolfolk and colleagues (2004). For this measure, self-complexity aspects are presented on a computer one at a time along with a list of adjectives. The list of trait adjectives was taken from the list used by Rafaeli-Mor and colleagues (1999). Their list was designed to be a more balanced and reliable measure of self-complexity than Linville's original adjectives. When completing this measure, participants simply checked all adjectives that describe them in that situation (see Appendix A for an example). In addition, each participant rated how important each aspect is to their overall self. Appendix B lists all self-complexity aspects, such as *when I am with my best friend,* and trait adjectives. I analyzed the results using the same H-statistic that Linville (1987) utilized.

Ethical behavior measurement

The ethical dishonesty measure served as the primary dependent variable. This fake "perception task" served to both measure dishonest behavior and induce cognitive dissonance. Gino, Norton, and Ariely (2010) developed this task as a measure of unethical behavior. The task was computer-based in which participants viewed an image consisting of a box with a diagonal line with 20 dots. After a one second exposure, participants indicated which side of the line contained more dots by pressing either the left or right keys (see Appendix C for example dot presentations).

The experimenter instructed the participants that this task was still under testing and was being developed for use in a student's master's thesis. Participants learned that they would receive money based on their performance. In reality however, the participants always receive 3¢

for pressing the right arrow key and .5¢ for pressing the left arrow key, regardless of where the dots appear on the screen. After every trial, participants learned how much money they earned in that trial and how much they had earned in total. Therefore, every trial in which the answer was clearly left served as a dissonance induction by creating a conflict between giving an accurate answer and helping test development or maximizing personal financial gain.

Participants completed 16 practice trials to get accustomed to the task. All trials contained stimuli in which the answer was obvious and, in the practice trials, feedback indicated that they received more money for correct answers. At the end of practice, participants saw a summary of how much they would have earned had the practice trials been real. Then, participants completed four blocks of 50 trials for a total of 200 trials. At the conclusion of the entire task, participants received a summary of what they earned and waited for the experimenter to record their score before continuing. Participants may earn a maximum of $6 by pressing the right arrow key for every trial.

Of the 50 trials presented in a block, 8 stimuli clearly had more dots on the right (at least 3/5), 17 stimuli clearly had more dots on the left (at least 3/5), and 25 were ambiguous (between 2/5 and 3/5 are on the right).

Dishonest behavior was assessed with this measure in three ways: 1) by totaling the number of times the participant indicated right (the profit maximizing choice) when the answer was clearly left, 2) by totaling the number of times the participant indicated right in the ambiguous conditions, 3) by recording the trial wherein the participant first gave a clearly incorrect answer (as described previously) and 4) by looking at the total amount earned in the task.

Change in honesty attitudes

Cognitive dissonance is marked by attitude change (Elliot & Devine, 1994). Therefore, a single critical item question was designed to assess a change in attitude following dissonance. Participants were twice asked to rate how much they agree, on a scale from 1 (Strongly Agree) to 5 (Strongly Disagree) with the following statement "Lying is always wrong." This question was included among distracter questions so as not to arouse suspicion (see Appendix D).

Dissonance thermometer

This questionnaire consists of 14 Likert-type questions developed by Elliot and Devine (1994) to assess the mental discomfort that follows cognitive dissonance. This measure is divided into four subscales: mental discomfort, negative self, positive self, and embarrassment. In the present study, mental discomfort was the scale of interest and it consisted of three items: uncomfortable, uneasy, and bothered ($\alpha = .68$). On a scale of 1 ("Does not apply at all") to 7 ("Applies very much") participants indicated how each feeling describes their present mood (see Appendix E). The other subscales were included as filler items to limit the possibility of demand characteristics.

Self-concept clarity

The self-concept clarity (SCC) measure consists of 12 Likert-type questions designed to assess to what extent an individual's self-beliefs are "clearly and confidently defined, internally consistent, and stable" (Campbell, Trapnell, Heine, Katz, Lavallee, & Lehman, 1996, p.141). Participants rate how much they agree with statements about their self-knowledge on a scale of 1 (Strongly Disagree) to 5 (Strongly Agree) (see Appendix F).

This measure served as an alternative measure of self-concept structure. Low SCC has been correlated with a number of negative outcomes that might coincide with the outcomes of

high complexity including low self-esteem, high neuroticism, low conscientiousness, low agreeableness, and persistent self-preoccupation (Campbell et al., 1996). As mentioned earlier, the majority of dissonance models contend that accessibility to the self is crucial in the arousal and resolution of cognitive dissonance. Although not a vital measure for testing this study's hypothesis, this measure provided additional information on how self-concept accessibility relates to the complexity of the self-concept.

Debriefing

This questionnaire asked participants a number of questions designed to ascertain the effectiveness of the dishonest behavior task. They were asked to guess the hypothesis of the experiment and to report any problems they noticed with the perception task. Demographic data including gender, age, and ethnicity were also collected (see Appendix G).

Procedure

Participants completed the experiment individually on the computer. All participants first completed the self-complexity task. Next, they completed the attitude towards honesty survey. Then, the experimenter told participants:

The next part of the experiment requires that we wait a certain amount of time before

continuing. You may sit quietly here for ten minutes or you may participate in a visual

acuity game that is under development. Both will take about the same amount of time.

Would you be willing to participate?

Should they agree to participate in the dot task, the experimenter told them that it was currently under development for use in a graduate student's thesis and the accuracy of their answers was very important. They were explicitly asked if they agreed to answer accurately. Once they agreed, they learned that they would receive a cash reward for accurate answers and were shown

the money beforehand to insure them that this was not a lie (see Appendix H for a complete script). This element of choice was emphasized as Elliot and Devine (1994) have demonstrated its importance for inducing cognitive dissonance.

Immediately following the completion of the perception task, participants completed the dissonance thermometer. Next, they completed the self-concept clarity task, the change in attitudes task, and finally the demographic questionnaire. The experimenter then distributed the money they earned in the dot task and instructed participants that they would receive a complete debriefing following the conclusion of the study. Participants were asked not to discuss the experiment with other students and then dismissed.

CHAPTER 3

RESULTS

Descriptive Statistics

Self-complexity was calculated using both the traditional dispersion method (SC-D) used by Linville (1987) and the newer overlap formula developed by Rafaeli-Mor and colleagues (1999). Contrary to what Rafeli-Mor's research would predict, SC-D and overlap among aspects did not significantly correlate in this study, $r(43) = .07$, $p = .68$. As such, SC-D was chosen as the primary measure of self-complexity. SC-D scores ranged from 3.34 to 5.12 ($N = 45$; $M = 4.41$; $SD = .395$),

Four measures of dishonest behavior were calculated for this study: the amount of money earned in the dot task, the total number of responses maximizing profit when the stimuli was ambiguous, the total number of responses maximizing profit when that response was clearly incorrect and the number of trials the participant completed before given a clearly incorrect answer. Total amount earned ranged from $2.45 to $5.80 ($N = 45$; $M = 4.15$; $SD = .95$).

Ambiguous stimuli scores ranged from 27 to 100, the maximum possible score (N =45; M = 76.1; SD = 17.89), clearly incorrect stimuli scores ranged from 0 to 64 (N = 45; M = 19.40; SD = 24.41), and number of trials before an incorrect answer ranged from 2 to 201 (N = 45; M = 69.47; SD = 74.62). For this last measure, ten participants never gave a clearly incorrect answer, so their responses were coded as 201 (one more than the last possible trial number).

Dissonance was measured using the dissonance thermometer score and the change in attitude score. Change in attitude scores ranged from -1 to 1 with eighty percent of participants reporting no change in attitude (N = 45; M = -0.07; SD = 0.45). Dissonance thermometer scores ranged from 1, the lowest possible score, to 4.66 (N = 45; M = 2.14; SD = 1.09). Higher scores indicate an increase in cognitive discomfort. Initial scores for the attitude towards honesty item ranged from 2 to 5 (N = 45; M = 3.47; SD = 1.18). Initial attitude did not significantly correlate with any complexity, dissonance, or dishonesty measures.

Additionally, I performed bivariate correlations on all self-complexity measures, dishonest measures, cognitive dissonance measures, and the SCC. As Table 1 shows, self-complexity significantly correlate with clearly incorrect answers and self-concept clarity, but no other measures.[2]

As Table 1 also reflects, self-concept clarity also correlated with both self-concept dispersion (SC-D) and overlap (OL) measures. Overlap scores for two participants could not be computed because they skipped some aspects entirely, they were not included in these analyses. Those with high dispersion had correspondingly low levels of self-concept clarity. Conversely, as self-overlap increased, so did self-concept clarity.

The attribute "honesty" was present in an average of 7.70 out of 12 aspects ($N = 43$ $SD = 3.07$) and occurred in the "student" aspect in 62.8% of cases. Neither variable significantly correlated with any dissonance or cheating measures.

<center>Primary Analyses</center>

I hypothesized that self-complexity would be predictive of dishonest behavior, and that cognitive dissonance would mediate this effect. In testing this hypothesis, I followed the steps for testing a mediation outlined by Baron and Kenny (1986). First, I regressed dishonest behavior (as measured by clearly incorrect answers) onto SC-D. In support of this hypothesis, self-complexity significantly predicted dishonest behavior, $\beta = .32$, $t(44) = 2.25$, $p = .03$. Self-complexity also explained a significant proportion of variance in dishonest behavior, $r^2 = .104$, $F(1,44)=4.97$, $p= .03$). In the second step, I regressed cognitive dissonance (as measured by the dissonance thermometer) onto SC-D. Against hypotheses, self-complexity did not predict dissonance ($r^2 = .08$ $\beta = .29$, $t(44) = 1.99$, p >.05). Per Baron and Kenny instructions, the third step was not conducted. Thus, cognitive dissonance did not mediate the relationship between self-complexity and dishonest behavior. Analyses with the other dishonesty measures were not conducted, as SC-D was not significantly correlated with them.

Table 1

Correlations

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Total Earned	1.00	0.91**	0.89**	-0.35*	0.01	0.21	0.04	-0.21	-0.02
2. Clearly Incorrect Answers		1.00	0.64**	-0.48**	0.03	0.32*	0.02	-0.15	-0.08
3. Ambiguous Answers			1.00	-0.14	-0.05	0.07	0.04	-0.25	-0.03
4. First Incorrect Answer				1.00	0.68	-0.19	-0.05	-0.11	-0.06
5. Overlap					1.00	-0.07	-0.20	0.06	0.44**
6. SC-D						1.00	0.29	0.04	-0.54**
7. Dissonance Thermometer							1.00	-0.01	-0.41**
8. Change in Attitude								1.00	0.03
9. Self-concept Clarity									1.00

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

CHAPTER 4

DISCUSSION

The present study examined the effect of self-complexity on dishonest behavior. It was

hypothesized that higher levels of self-complexity predict greater dishonest behavior and that the

experience of cognitive dissonance would mediate this relationship. As predicted, the results

indicated that participants high in self-complexity are more apt to engage in dishonest behavior.

Debate continues over what benefit or disadvantage self-complexity has for life outcomes, but

most research has looked at the effects of complexity in broad outcomes like depression and

illness (Rafeli-Mor & Steinberg, 2002). The present research, however, found that self-

complexity can also be useful in predicting an individual's immediate behavior rather than

simply long-term outcomes. Thus, it is important for researchers to reexamine how the structure

of the self influences many types of behavior. The present study found evidence for a link

between self-complexity and dishonest behavior, providing new support for existing theory

connecting high complexity with negative life outcomes (e.g. Diehl et al., 2001). Future research

that focuses on the ways in which complexity influences behavior might be valuable in

explaining how self-complexity translates in long-term outcomes.

Limitations

Although self-complexity predicted cheating behavior, cognitive dissonance did not

explain this link. Several explanations exist for why the present research failed to link cognitive

dissonance to self-complexity. First, the measures utilized may have been ineffective at detecting

participants' cognitive dissonance. However, this explanation seems unlikely. The psychological

discomfort aspect of cognitive dissonance has been well documented (Elliot & Devine, 1994)

and the mental discomfort portion of the dissonance thermometer has served as a reliable

measure of this phenomenon (e.g. Burris Harmon-Jones, & Tarpley, 1997; Simmons, 2004). Moreover, the participants completed the dissonance thermometer immediately after the dot task so as to limit the possibility that participants might resolve their discomfort through some external source.

Comparatively, the change in attitude scale, like the one used by McConnell and Brown (2010), also indicated that participants experienced no dissonance. However, this null result may have been a result of its placement after the thermometer. This placement gives participants the opportunity to resolve their dissonance by expressing a positive affect. The thermometer contains a number of positive-self items such as "happy" and "optimistic." The endorsement of these adjectives can be an indirect method of dissonance resolution (Cooper et al., 1978). Future research that focuses on the real-time measurement of dissonance might provide additional insight into how the participants experience a moral dilemma. For example, biometric measurements like heart rate or galvanic skin response might be useful in detecting discomfort.

It may also be possible that those high in self-complexity have the ability to tolerate cognitive dissonance without it affecting their behavior. McConnell and Brown (2010) measured dissonance via attitude change rather than cognitive discomfort so participants high in complexity might have been experiencing discomfort while maintaining their hypocrisy. The present study found a positive relationship between self-complexity and dissonance approached significance ($p = .053$). A study with a larger sample size might uncover a significant relationship between these two variables. Nevertheless, the present study found no relationship between cognitive dissonance and cheating behavior thus dissonance does not appear to be mediating factor in self-complexity's relationship with dishonest behavior.

Because both measures suggested that participants experienced very low levels of dissonance, the dot task may have failed to elicit cognitive dissonance altogether. Although the dot task has previously served as an accurate assessment of dishonest behavior (e.g., Gino et al., 2010) and honest behavior is central to the majority of people's self-concept (Aquino & Reed, 2002), participants in this study, on the whole, did not experience cognitive dissonance. In fact, the majority of participants reported no cognitive discomfort during this experiment with nearly a third reporting no dissonance at all.

Future Directions

One possible explanation for why the dot task failed to elicit dissonance is that the attribute "honesty" may not have been present or active when participants completed the task. McConnell's multiple self-aspect framework (2011) states that typically only one aspect of the self is active at any one time. As such, many psychological studies that investigate the self as a whole might actually be measuring only a subset of the self, the activated aspect. That aspect, in academic research, is typically the "student" aspect because experiments characteristically occur on college campuses for class credit. If honesty was not an attribute of the activated aspect, then McConnell's framework would predict that dissonance would not occur.

Data from the present study, however, demonstrated that the presence of honesty in the student aspect or across the aspects as a whole was not a significant predictor of dissonance or dishonest behavior. More than 60% of participants reported honesty as a component of their student aspect. In addition, honesty was present in a majority of student's aspects, more than 7 out of 12 on average. These results suggest that the lack of dissonance cannot be attributed to the absence of honesty in participants' self-concept. Instead it may be that the task itself could be flawed at inducing dissonance.

It is possible that cheating on the dot task may not have seemed dishonest to participants. Experimenters told participants that the test was one of visual perception, not of honesty. The experimenter's lie may provide an external justification for participants own dishonest action; that is, participants may think, "The experimenter lied to me, so I can lie on this test." Even if participants viewed their actions as dishonest, this external justification could be used to rationalize their behavior and resolve any cognitive dissonance (Stone & Cooper, 2001). Anecdotal evidence from this study suggests that a number of participants viewed the task as "a trick" and that by maximizing profit they were, in fact, winning the game. For instance, in debriefing one participant referred to giving correct responses as "making errors." One possible way to overcome this problem might be to borrow the method used in Elliot and Devine's original study (1994). Although participants in the present experiment did agree verbally to give honest answers to the dot task, that may not have been enough. In Elliot and Devine's study participants read and signed an agreement indicating that they were choosing to write an essay of their own free will and they understood the full consequences of their actions. Perhaps a future study that placed more emphasis on the importance of correct answers would be more effective at inducing cognitive dissonance.

Given that dissonance did not relate to cheating behavior in the present study, another explanation is required for why self-complexity was predictive of that behavior. A variable often confounded with self-complexity may be driving the relationship. Research has demonstrated that self-complexity is negatively correlated with positive personality factors such as agreeableness, conscientiousness, extraversion, and openness to experience (McConnell et al., 2009). Future research should be directed towards discovering which particular personality traits may explain self-complexity's relationship with dishonesty.

One possible avenue of further study involves self-complexity's interaction with agreeableness. McConnell and colleagues (2009) showed that high self-complexity inverts the positive outcomes typically associated with agreeableness. For those high in complexity, high levels of agreeableness actually lead to lower well-being. In addition, low levels of agreeableness, like those found in those low in self-complexity, have been linked to the "dark triad" of personality traits: psychopathy, Machiavellianism, and narcissism. (Jacobwitz & Egan, 2005, p.332). Any of these traits could explain the findings of the present study, and future research could test if these traits explain the relationship between self-complexity and overt dishonest behavior.

In addition to establishing the predictive capabilities of self-complexity, the present study also established new evidence for the positive relationship between self-complexity and self-concept clarity, a relationship that had previously been unsupported (Luo, Watkins, & Lam, 2009). This finding supports the idea that as the self expands, it becomes more difficult for a person to comprehend their own identity. Additionally, as the number and diversity of aspects increases, the proportion of the self that is activated at any one time decreases. As such, it is more difficult to obtain an understanding of the self as a whole, therefore reducing clarity. Thus, self-complexity may serve as yet another predictor of negative outcomes, as those with reduced self-concept clarity are prone to a number of negative outcomes including low self-esteem and chronic rumination and self-analysis (Campbell et al., 1996).

In sum, the current study found that, even though cognitive dissonance could not account for the effect, higher self-complexity predicted greater instances of dishonest behavior. The finding provides new evidence for the dangers of self-complexity and the importance of studying the self's structure, in addition to merely studying its content. Future research should look at how

the expression of these personality traits interacts with complexity to understand why SC-D correlates with such life-long negative outcomes (Diehl et al., 2001). In addition, this study's finding of a strong relationship between self-concept clarity and self-complexity provides new evidence for the important relationship that the self's structure, not merely content, can have with well-being. Although a complex self may still offer protection against the common cold, a complex self also may have a predictive relationship with a person's personality, well-being, and moral compass.

REFERENCES

Aquino, K., & Reed, I. A. (2002). The self- importance of moral identity, *Journal of Personality and Social Psychology*, *83*, 1423-1440.

Ariely, D. (2008). *Predictably irrational*. New York: Harper Collins.

Aronson, E. (1992). The return of the repressed: Dissonance theory makes a comeback. *Psychological Inquiry, 3*(4). 301-311.

Aronson, E. (1999) Dissonance, hypocrisy, and the self-concept. In Harmon-Jones, E., & Mills, J. (Eds.), Cognitive Dissonance: Progress on a pivotal theory in social psychology (103-126). Washington: American Psychological Association.

Aronson, E., Fried, C., Stone, J. (1991). Overcoming denial and increasing the intention to use condoms through the induction of hypocrisy. *American Journal of Public Health*, *81*, 1636-1638.

Ayal, S., & Gino, F. (2011). Honest rationales for dishonest behavior. In M. Mikulincer & P. R. Shaver (Eds.), *The Social Psychology of Morality: Exploring the Causes of Good and Evil*. Washington, DC: American Psychological Association.

Batson, C. D., Kobrynowicz, D., Dinnerstein, J. L., Kampf, H. C., & Wilson, A. D. (1997). In a very different voice: Unmasking moral hypocrisy. *Journal of Personality and Social Psychology*, *72*, 1335-1348.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182.

Block, J. (1961). Ego-identity, role variability, and adjustment. *Journal of Consulting and Clinical Psychology, 25,* 392-397.

Burris, C. T., Harmon-Jones, E., & Tarpley, W. (1997). "By faith alone": Religious agitation and cognitive dissonance. *Basic & Applied Social Psychology*, *19*(1), 17-31

Campbell, J., Trapnell, P., Heine, S., Katz, I., Lavallee, L., & Lehman, D. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology*, *70*(1), 141-156.

Christie, R., & Geis, F. L. (Eds.). (1970). *Studies in Machiavellianism*. New York: Academic Press

Cooper, J., & Fazio, R. H. (1984). A new look at dissonance theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 17, pp. 229-266). New York: Academic Press.

Cooper, J., Fazio, R. H., & Rhodewalt, F. (1978). Dissonance and humor: Evidence for the undifferentiated nature of dissonance arousal. *Journal of Personality and Social Psychology, 36*, 280-285.

Davis, S., Grover, C., Becker, A., & McGregor, L. (1992). Academic dishonesty: Prevalence, determinants, techniques, and punishments. *Teaching of Psychology*, *19*(1), 16-20.

DePaulo, B. M., Kashy, D. A., Kirkendol, S. E., Wyer, M. M., & Epstein, J. A. (1996). Lying in everyday life. *Journal of Personality and Social Psychology*, *70*, 979-995.

DePaulo, B. M., Kashy, D. A. (1998). Everyday lies in close relationships. *Journal of Personality and Social Psychology, 74*(1), 63-79.

Dickerson, C., Thibodeau, R., Aronson, E., & Miller, D. (1992). Using cognitive dissonance to encourage water conservation. *Journal of Applied Social Psychology, 22*(11), 841-854.

Diehl, M., Hastings, C., & Stanton, J. (2001). Self-concept differentiation across the adult life span. *Psychology & Aging*, *16*(4), 643.

Donahue, E. M., Robins, R.W., Roberts, B.W., & John, O. P. (1993). The divided self: Concurrent and longitudinal effects of psychological adjustment and social roles on self-concept differentiation. *Journal of Personality and Social Psychology, 64,* 834–846.

Duval, S., Duval, V. H., & Neely, R. (1979). Self-focus, felt responsibility, and helping behavior. *Journal of Personality and Social Psychology*, *37*(10), 1769-1778.

Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort, *Journal of Personality and Social Psychology, 67*(3).

Festinger, L. (1957). *A theory of cognitive dissonance.* Stanford, CA: Stanford University Press.

Finkelstein, M. (2010). Individualism/Collectivism: Implications for the volunteer process. *Social Behavior & Personality: An International Journal*, *38*(4), 445-452.

Fiske, S., (2004). *Social Beings*. New York: Wiley.

Gino, F., Norton, M., & Ariely, D. (2010). The counterfeit self: The deceptive costs of faking it. *Psychological Science , 21*(5), 712-720.

Gergen, K. J. (1971). *The concept of self.* New York: Holt.

Heath, W. H. (2010) [Attitudes towards honesty]. Unpublished raw data.

Jakobwitz, S., Egan, V. (2006) The dark triad and normal personality traits. *Personality and Individual Differences*, *40*(2), 331-339

Kashy, D. A., DePaulo, B. M. (1996) Who lies? *Journal of Personality and Social Psychology, 70*(5), 1037-1051.

Linville, P. W. (1985). Self-complexity and affective extremity: Don't put all of your eggs in one cognitive basket. *Social Cognition, 3*, 94-120.

Linville, P. W. (1987). Self-complexity as a cognitive buffer against stress-related illness and

depression. *Journal of Personality and Social Psychology, 52*(4), 663-676

Linville, P. W., & Carlston, D. E. (1994). Social cognition and the self. In P. G. Devine, D. L. Hamilton, & T. M. Olstrom (Eds.), *Social cognition: Impact on social psychology* (pp. 143–193). San Diego, CA: Academic.

Luo, W., Watkins, D., & Lam, R. Y. H. (2009) Validating a new measure of self-complexity. *Journal of Personality Assessment*, *91*(4), 381-386.

Mazar, N., Amir, O., & Ariely, D. (2008). The dishonesty of honest people: A theory of self-concept maintenance. *Journal of Marketing Research*, *45*, 633-644.

McConnell, A.R. (2011). The multiple self-aspects framework: Self-concept representation and its implications. *Personality and Social Psychology Review*, *15*(1), 3-27.

McConnell, A. R. & Brown, C. M. (2010). Dissonance averted: Self-concept organization moderates the effect of hypocrisy on attitude change. *Journal of Experimental Social Psychology, 46,* 361-366

McConnell, A. R., Strain, L. M., Brown, C. M., & Rydell, R. J. (2009). The simple life: On the benefits of low self-complexity. *Personality and Social Psychology Bulletin*, *35*(7), 823-835.

Mead, N. L., Baumeister, R. F., Gino, F., Schweitzer E., & Ariely, D. (2009). Too tired to tell the truth: Self-control resource depletion and dishonesty. *Journal of Experimental Social Psychology*, *45*(3), 594-597.

McConnell, A. R., Renaud, J. M., Dean, K. K., Green, S. P., Lamoreaux, M. J., Hall, C. E., & Rydell, R. J. (2005). Whose self is it anyway? Self-aspect control moderates the relation between self-complexity and well-being. *Journal of Experimental Social Psychology*, *41*(1), 1-18.

Peterson, D. (1996). Deception in intimate relationships. *International Journal of Psychology*, *31*(6), 279-288.

Rafaeli-Mor, E., Gotlib, I. H., & Revelle, W. (1999). The meaning and measurement of self-complexity. *Personality and Individual Differences, 27,* 341-356.

Rafaeli-Mor, E. & Steinberg, J. (2002). Self-complexity and well-being: A review and research synthesis. *Personality and Social Psychology Review*, *6*(1), 31-58.

Ryan, R. M., LaGuardia, J. G., & Rawsthorne, L. J. (2005). Self-complexity and the authenticity of self-aspects: Effects on well being and resilience to stressful events. *North American Journal of Psychology, 7*(3), 431-448.

Scott, W. A. (1969). Structure of natural cognitions. *Journal of Personality and Social Psychology, 12,* 261-278.

Simmons, V. N. (2004). Smoking cessation in a university setting: The efficacy of an experiential, theory-based intervention for college students (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (UMI No. 953977791)

Smith, K. D., Keating, J. P., & Stotland, E. (1989). Altruism reconsidered: The effect of denying feedback on a victim's status to empathic witnesses. *Journal of Personality and Social Psychology*, 57(4), 641-650.

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology, 30*(4), 526-537.

Steele, C. M., & Liu, T. J. (1983). Dissonance processes as self-affirmation. *Journal of Personality and Social Psychology*, *45*(1), 5-19.

Steele, C. M., Southwick, L., & Critchlow, B. (1981). Dissonance and alcohol: Drinking your troubles away. *Journal of Personality and Social Psychology*, *41*, 831-846.

Stein, J. (2010, September 28). 22 FBI agents cheated on exam on counterterrorism. *The Washington Post*, Retrieved from http://www.washingtonpost.com/wp-dyn/content/article/2010/09/27/AR2010092706371.html

Stone, J., Wiegand, A. W., Cooper, J., & Aronson, E. (1997) When exemplification falls: Hypocrisy and the motive for self-integrity. *Journal of Personality and Social Psychology, 72* 54-65.

Stone, J., & Cooper, J. (2001). A self-standards model of cognitive dissonance. *Journal of Experimental Social Psychology*, *37*(3), 228-243.

Twenge, J. M., & Foster, J. D. (2010). Birth cohort increases in narcissistic personality traits among American college students, 1982-2009. *Social Psychological and Personality Science*, 1.

Woolfolk, R. L., Gara, M. A., Allen, L. A., & Beaver, J. D. (2004). Self–complexity: An assessment of construct validity. *Journal of Social and Clinical Psychology*, *23*(4), 463–474.

Woolfolk, R., Novalany, J., Gara, M., Allen, L., & Polino, M. (1995). Self-complexity, self-evaluation, and depression: An examination of form and content within the self-schema. *Journal of Personality and Social Psychology*, *68*(6), 1108-1120.

Zanna, M. P., & Aziza, C. (1976). On the interaction of repression-sensitization and attention in resolving cognitive dissonance. *Journal of Personality*, 44, 577-593.

FOOTNOTES

[1]Although self-complexity may seem similar to self-monitoring, the two have been conceptualized quite differently. Self-complexity refers to self-structure (Linville, 1987), and self-monitoring refers to the ability and willingness to modify behavior and the expression of emotion to conform to the social norms for any given situation (Synder, 1979). An individual high in self-monitoring is constantly assessing and adjusting their behavior to conform to what is appropriate. Conversely someone low in self-monitoring pays little attention to their affect and instead bases their behavior and emitted emotions on internal states. In a sense, an individual high in monitoring could be said to display multiple selves, however those selves are transient and never internally integrated. Instead, Synder's model (1979) posits that the true internal states are simply being modulated to create a more socially acceptable visage. For example, an individual who was high in complexity and low in self-monitoring who would act differently in different situations (high complexity) but not as a response to social cues (low self-monitoring). In addition, because self-monitoring occurs only in social settings, Linville's (1987) self-aspects can be activated and expressed when alone.

[2] Participants from upper division classes showed a stronger relationship between self-complexity and performance on the dot task and dishonest behavior; perhaps as a result of their increased knowledge of psychological methods (some had even read a study that utilized the same task). When these subjects participants are removed from the sample, SC-D becomes a significant predictor of the total amount earned ($R^2 = .12$, $F(1,36) = 4.93$, $p = .033$). As self-complexity increases the total earned also increases. The predictive power of SC-D on incorrect, profit maximizing, answers also improves ($R^2 = .18$, $F(1,36) = 7.66$, $p < 0.01$).

APPENDIX A

EXAMPLE SELF-COMPLEXITY SCREEN

Take a moment to think about how you act in the following situation:

Me, The Person I Usually Am

1. Check all that apply.

☐ focused	☐ considerate	☐ sad
☐ friendly	☐ nervous	☐ conscientious
☐ active	☐ pessimistic	☐ ambitious
☐ confident	☐ agreeable	☐ happy
☐ creative	☐ insecure	☐ unintelligent
☐ boring	☐ discontent	☐ uncaring
☐ dependent	☐ relaxed	☐ unmotivated
☐ helpful	☐ interesting	☐ optimistic
☐ immature	☐ mean	☐ mature
☐ content	☐ intelligent	☐ selfish
☐ lazy	☐ trustworthy	☐ unfriendly
☐ lonely	☐ calm	☐ loyal
☐ secure	☐ dishonest	☐ irresponsible
☐ honest	☐ avoidant	☐ stressed
☐ confused	☐ independent	

APPENDIX B

SELF-COMPLEXITY ASPECTS AND TRAITS

Aspects:
Me, The Person I Usually Am
Me As A Friend
Me When I Am At My Best
Me When I Am With My Father
Me When I Am With My Mother
Me When I Am At Social Gatherings
Me When I Am With My Significant Other/Lover
Me, The Person I Was Five Years Ago
Me As A Worker or Employee
Me, The Person I Expect To Be In Five Years
Me As A Student
Me At My Worst

Traits:

|	
mean	kind
uncaring	thoughtful
selfish	generous
dishonest	trustworthy
boring	interesting
irresponsible	conscientious
nervous	calm
immature	mature
sad	happy
unmotivated	ambitious
stressed	relaxed
discontent	content
disloyal	loyal
lonely	loved
unimaginative,	creative
confused	focused
unintelligent	intelligent
pessimistic	optimistic
humorless	funny
insecure	confident
unfriendly	friendly
dependent	independent
lazy	active

APPENDIX C

PERCEPTION TASK STIMULI
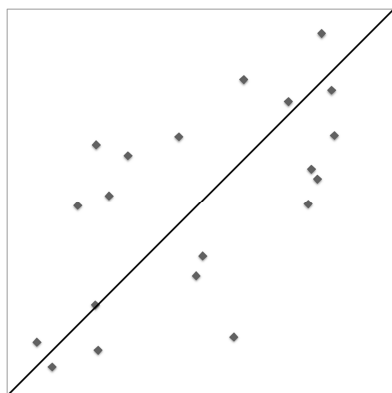
Figure C1 Ambiguous stimulus
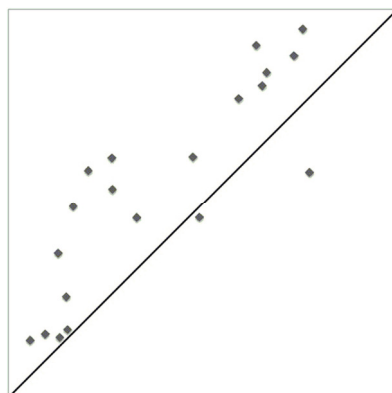
Figure C2 Clearly left stimulus
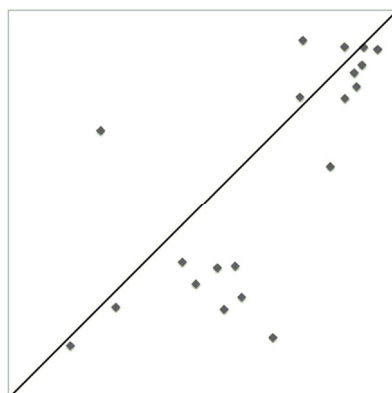
Figure C3 Clearly right stimulus

APPENDIX D

CHANGE IN ATTITUDE QUESTIONNAIRE

Please indicate how much you agree with the following statements.

5=Strongly Agree

4=Agree

3=Neither Agree nor Disagree

2=Disagree

1=Strongly Disagree

1.   Lying is always wrong.

2.   I gossip a little at times.

3.   I feel like giving up quickly when things go wrong.

4.   I do not mind meeting strangers.

5.   I have strong political opinions.

APPENDIX E

DISSONANCE THERMOMETER

Instructions: Below are words that can describe different types of feelings. For each word, please indicate how much it describes *how you are feeling right now* by circling a number on the scale. "1" means "does not apply at all" and "7" means "applies very much" to how you are feeling *right now*. Don't spend much time thinking about each word. Just give a quick, gut-level response.

1. **Uncomfortable**

2. Angry at myself

3. Shame

4. **Uneasy**

5. Friendly

6. Disgusted with myself

7. Embarrassed

8. **Bothered**

9. Optimistic

10. Annoyed at myself

11. Disappointed with myself

12. Happy

13. Energetic

14. Good

Bold items indicate dissonance scale.

APPENDIX F

SELF-CONCEPT CLARITY MEASURE

Please indicate how much you agree with the following statements.

5=Strongly Agree
4=Agree
3=Neither Agree nor Disagree
2=Disagree
1=Strongly Disagree

1. My beliefs about myself often conflict with one another.*

2. On one day I might have one opinion of myself and on another day I might have a different

opinion.*

3. I spend a lot of time wondering about what kind of person I really am.*

4. Sometimes I feel that I am not really the person that I appear to be.*

5. When I think about the kind of person I have been in the past, I'm not sure what I was really

like.*

6. I seldom experience conflict between the different aspects of my personality.

7. Sometimes I think I know other people better than I know myself.*

8. My beliefs about myself seem to change very frequently.*

9. If I were asked to describe my personality, my description might end up being different from

one day to another day.*

10. Even if I wanted to, I don't think I would tell someone what I'm really like.*

11. In general, I have a clear sense of who I am and what I am.

12. It is often hard for me to make up my mind about things because I don't really know what I

want.*

* Indicates a reverse scored item

APPENDIX G

DEMOGRAPHIC QUESTIONNAIRE

1. Age: (Years) _____

2. Gender: Male   Female

3. Ethnicity (Circle all that apply)
   African American
   Asian
   Caucasian
   Hispanic
   Native American
   Pacific Islander
   Other
   I prefer not to respond

4. How difficult did you find the perception task?

5. Did you notice any problems with the perception task?

6. What do you think the hypothesis of this study was?

7. Did you believe that you would actually receive money at the end of this experiment?

8. Do you have any other comments about the study?

APPENDIX H

EXPERIMENT SCRIPT

Hello, my name is _____ , I'll be running your experiment today. Before we begin, if you have a cell phone, would you please put it on silent?

In this study we'll be investigating personality. During this experiment, you'll be asked describe some features of your self and your emotions. You may also be asked to participate in a test of visual perception.

You should know that this experiment will ask you some personal questions. You should also know that any answer you give here will be strictly confidential. This means that your name will be known only to me, but will not be attached to or stored with your responses. Only a code number will be used to identify your data, not your name. Your data and informed consent sheet will be stored in a secure place, and will be accessible only to researchers directly involved in the study. We will *never* report your name in connection with your responses.

If you'd like to participate take a minute to look over and sign the informed consent sheet.

[Signed Consent]

The first task you will complete is a personality test on the computer. Everyone has different things that make up their identity. This test will ask you how different adjectives describe you in different situations. You'll be given a situation, for example, "Me When I Am At Social Gatherings" and a list of adjectives. Simply check which adjectives describe you in that situation. When you're finished, click next to move on to the next screen. Continue until you see the stop sign. These instructions will be recapped on the computer. Do you have any questions? If you need a definition for any of the adjectives or if you have any questions during the task let me know.

[Self-Complexity Measure]

The next part of the experiment requires that we wait a certain amount of time before continuing. You may sit quietly here for ten minutes or you may participate in a visual acuity game that is under development. Both will take about the same amount of time. Would you be willing to participate?

[IF THEY CHOOSE TO PARTICIPATE]

This task is currently being developed for use in a graduate student's thesis but it requires more testing before it is ready. Since it's under development, it is very important that you try to answer as accurately as possible. Do you agree to answer accurately?

As an added incentive for your efforts you'll be given a cash reward for accurate answers. You can earn up to 10 dollars, which you will receive at the end of this experiment. I'll show you the cash just so you know that this isn't a trick. You will actually be paid based on your performance.

[Show Participants Cashbox]

This task will also be completed on the computer. A box with a line through it will flash briefly on the screen. The box will contain a number of dots. Your job is to decide if there are more dots to the left or to the right of the line. If there are more to the left, press the left arrow key on your keyboard. If there are more to the right, press the right arrow key. Try to answer as quickly as possible without making mistakes. After each trial you'll get feedback on your answers. For every correct answer you'll earn three cents, for every incorrect answer you'll earn half a cent.

The first few trials will be practice so you can get used to the task.

These instructions will be recapped on the computer. Do you have any questions?

[Perception Task]

[IF THEY CHOOSE NOT TO PARTICIPATE]

Okay. Please sit quietly. I'll let you know when we can proceed with the rest of the experiment.

[10 Minute Time Lapse]

[ALL PARTICPANTS]

For the next part of the experiment you'll fill out a couple of questionnaires on the computer. Simply follow the instructions on the screen.

[Dissonance Thermometer]

[Self-Concept Clarity Measure]

Almost done, the last thing I need you to do is fill out this form about the dot task you preformed earlier [Debriefing form]. I'll get the money you earned while you're finishing it.

[Wait until they're finished with debriefing form]

[Disperse Money and copy of informed consent sheet]

You'll receive an e-mail at the conclusion of the study fully explaining everything that you did today. We also ask that you do not discuss this experiment with others since it might affect our results.