

THE INFLUENCE OF MORALISTIC AND
EGOISTIC BIASES ON
CONFORMITY

by

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A DISSERTATION

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ABSTRACT

Past research has questioned whether socially desirable responding should be controlled as a confounding variable or examined as a personality variable. As a personality variable, it has the potential to help explain many behaviors, including conformity. The current study examined whether socially desirable responding, specifically the moralistic and egoistic biases, are related to conforming behavior. Preference for Consistency and Self-Monitoring were also examined in relation to both conformity and socially desirable responding to further elucidate the relationships between them. Two hundred seventy-nine students participated in an online study. Two experimental conditions were used: participants were either identified as “Participant” (anonymous) or by first name and last initial (named). A control condition was also used. Using a Crutchfield (1955) paradigm, participants rated their preferences for 30 ambiguous images while seeing the ratings of 4 other fake (programmed) participants with the expectation that they would discuss their ratings in an online chat room after the experiment, although no such interaction actually occurred. No ratings were seen in the control condition. Participants also answered personality measures. Although significant conformity effects were found between the control and experimental conditions, there was no difference in conformity between the experimental conditions. This finding supports the research that conformity can be elicited in online studies. Conformity was not related to any of the personality variables measured nor were there any significant interactions between any personality variables and experimental condition. Potential weaknesses of the study and future directions for research are discussed.

LIST OF ABBREVIATIONS AND SYMBOLS

α	Cronbach's index of internal consistency
df	Degrees of freedom: number of values free to vary after certain restrictions have been placed on the data:
M	Mean: the sum of a set of measurements divided by the number in the set
p	Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value
r	Pearson product-moment correlation
sd	Standard deviation: quantitative measure of difference from the mean
t	Computed value of t test
$<$	Less than
$=$	Equal to
BIDR	Balanced Inventory of Desirable Responding
CMC	Computer Mediated Communication
IM	Impression Management
PFC	Preference for Consistency
S-D	Self-Deception
SDD	Self-Deceptive Denial
SDE	Self-Deceptive Enhancement
SDR	Socially Desirable Responding

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Introduction

Both conformity and socially desirable responding (SDR) are important in interpersonal and social interaction. Conformity is often regarded as an adaptive mechanism in social situations; observing others in specific situations acts as a guide to appropriate behavior. SDR is also adaptive in that knowing what behaviors are viewed as appropriate in and across situations, and engaging in those behaviors, increases the likelihood that an individual will make a positive impression and be accepted by others. Research has examined both conformity and SDR as “behaviors of the moment,” or responses to situational variables. That is, some situations are more likely to elicit conforming or SDR responses than others. SDR is especially important to researchers as a situational variable because of the potential implications for contamination of research due to possible demand characteristics (Orne, 1962). However, both constructs have also been examined as enduring personality characteristics, or trait variables, implying that some people are more likely to demonstrate conformity or SDR. The current study examines the relationship between SDR and propensity to conform.

Conformity as a situational response variable has undergone much research investigating various conditions under which it occurs, such as public vs. private statements of one’s opinion (Allen, 1965; Argyle, 1957; Deutsch & Gerard, 1955; Hardy, 1957), whether the stimuli are ambiguous or unambiguous (Allen, 1965; Walker & Heyns, 1967), if the values involved are important or unimportant (Johnson, 1989), how uncertain one is about a situation (Schachter, 1951), or the unanimity of a group (Asch, 1951; Hardy, 1957). Other researchers have attempted to examine conformity from a trait perspective and determine whether or not there are specific personality characteristics that can predict conformity (e.g. Argyle, 1957; Ferguson, 1944;

Hardy, 1957; Insko, Drenan, Solomon, Smith, & Wade, 1983; McDavid & Sistrunk, 1964; Mouton, Blake, & Olmstead, 1956; Samuelson, 1958; Santee & Maslach, 1982; Steiner & Johnson, 1963), and if so, if those characteristics can be changed (Allen, 1975). A third approach, and the one adopted for use in the current study, investigates the interaction between personal characteristics and situational factors (Allen, 1975).

SDR has also been examined as both a state and trait variable. In 1968, Wiggins argued that, up to that point, SDR had been used as a definition for two distinct constructs: a property of a measurement scale (i.e. a state variable) and an individual difference variable (Wiggins, 1968). He noted the evidence indicated that SDR was related to item content and was thus a property of a scale, and that little evidence existed for the claim that SDR was an individual difference variable. Other theorists disagreed with Wiggins' statement and presented evidence for SDR as an individual difference variable. For example, Marlowe and Crowne (1961) claimed that it represented a personal desire for social approval by others, which is gained through engaging in socially appropriate behaviors. Based on their findings from the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960), the authors posited a personality variable associated with SDR, which they termed Need for Approval (Marlowe, 1962; Marlowe & Crowne, 1961). Those high in Need for Approval are unlikely to give as honest a portrayal of themselves as individuals who are low in Need for Approval (McCrae & Costa, 1983).

Later theorists argued that SDR contains characteristics of both state and trait phenomena. Paulhus and colleagues, in their creation of the Balanced Inventory of Desirable Responding (BIDR) (Paulhus, 1984, 1986, 1991; Paulhus, Braun, Jackson, & Wiley, 2002; Paulhus & John, 1998; Paulhus & Reid, 1991), found two personality factors underlying SDR: the moralistic and egoistic biases. Individuals high in moralistic bias are more sensitive to

situational cues; they tailor their behavior to what is appropriate in a given context and reject psychologically threatening information about the self. Individuals high in egoistic bias are not as susceptible to situational influences; they show more of a self-favorability bias through an exaggerated sense of self-worth and competence across situations (Paulhus et al., 2002; Paulhus & John, 1998; Paulhus & Levitt, 1987; Paulhus & Reid, 1991).

The current study examines whether SDR, as identified by egoistic and moralistic biases, is related to conformity. The study uses a computer-based Crutchfield-type conformity situation using ratings of subjective stimuli (abstract paintings and fractal images). Subjective stimuli were used because of previous findings indicating that conformity occurs more frequently when there is not a “correct” answer, such as in opinion ratings or personal judgments (Allen, 1965; Crutchfield, 1955; Griskevicius, Goldstein, Mortensen, Cialdini, & Kenrick, 2006; Walker & Heyns, 1967).

Conformity

As early as the 1930’s, conformity was studied as an aspect of group behavior (e.g. Sherif, 1936, 1937). Early studies showed that under social pressure, whether explicit or implicit, many people deliberately agreed with the majority, even if they knew the majority response was incorrect (Asch, 1951, 1952a, 1952c, 1956; Crutchfield, 1955). Thus, conformity was viewed as a situationally determined phenomenon (Walker & Heyns, 1967). Some argue that conformity occurs because we observe others’ behavior to judge what is appropriate in social settings (Asch, 1952a; Festinger, 1950; Sherif & Sherif, 1964; Turner, 1991). Deutsch and Gerard (1955) identified two potential sources of information about appropriate behavior: informational and normative influence. Informational influence occurs when people rely on others to determine what is correct or appropriate. Normative influence occurs from a strategic effort to be accepted

by others. Kelley (1952) argued that conformity that comes from informational influence is reflective of one's desire to be correct, whereas conformity based on normative influence reflects one's desire to be liked and be accepted by the group. The current study focuses exclusively on normative influence because it is the form most likely to be associated with SDR. A host of potential explanations for conformity effects have been examined, including social contact (Deutsch & Gerard, 1955; Latane & Wolf, 1981; Short, Williams, & Christie, 1976), group identity (Doosje, Ellemers, & Spears, 1995; Lott & Lott, 1965; Reicher, Spears, & Postmes, 1995; Turner, 1987, 1991), and uncertainty and insecurity (Asch, 1956; Sherif, 1936; Sherif & Harvey, 1952).

Public responding has been found to be one of the strongest predictors of conformity. Stricker and colleagues (Stricker, Messick, & Jackson, 1970) found that participants were more likely to be influenced when others were present and less likely when in a relatively private situation, although some influence occurred in both. They argued that the responses in these different situations probably reflect different group processes, but result in the same type of behavior. Allen (1975) reported that social support reduces conformity across a wide range of stimuli and attitudes.

An important distinction must be made between types of stimuli used in conformity research: objective and subjective stimuli. Objective stimuli, most often associated with Asch's studies, have correct or incorrect answers (e.g. line judgments; Asch, 1951, 1952a, 1952b, 1956). Early studies (Asch, 1952a, 1956) found that about 33% of participants conformed when the stimulus was objective and the answers were obvious. Alternately, subjective stimuli often take the form of opinion statements or preference judgments (Crutchfield, 1955; Festinger, 1950; Insko et al., 1983; Sherif, 1936, 1937; Sherif & Hovland, 1961; Stricker, Messick, & Jackson,

1968; Stricker et al., 1970). Subjective stimuli also vary in their degree of ambiguity (Allen, 1965; Asch, 1952a, 1956; Crutchfield, 1955; Tyson & Kaplowitz, 1977; Walker & Heyns, 1967). Crutchfield (1955) found that up to 79% of male participants conformed to the majority, with conformity increasing as stimulus ambiguity increased, and females showed even greater levels of conformity in subsequent studies. Festinger (1950) argued that the differences may stem from the characteristics of the stimuli. Due to the concreteness of objective stimuli, the judgments are inherently meaningful. Subjective stimuli, on the other hand, often derive their meaning from the social group, which will change depending on the make-up of the group. If the only reality of the subjective stimuli is derived from the social group, that would explain the higher levels of conformity with this type of stimuli. McGuire (1968) argued that if personality characteristics can be predictive of conforming behavior, then subjective stimuli would be the most influenced by these characteristics because they are more susceptible to group pressures. Some argue that the literature has failed to show any personality characteristics consistently associated with conformity, nor has there been evidence of individual consistency across situations (McGuire, 1968; Mischel, 1968). Some theorists argue that conformity is not necessarily a function of a certain type of stimuli or paradigm, but in fact people find it satisfying to have beliefs and attitudes that are similar to the groups with whom they identify (Kelman, 1958).

Other theorists contend that personality characteristics are related to conformity. One early example was the need for acceptance: Argyle (1957) argued that greater levels of conformity in public vs. private responding indicated that some participants were influenced by how their peers would perceive them. Individuals high in need for acceptance were more likely to conform in public situations. Similar to the need for acceptance is a need for affiliation (Schachter, 1951). Those high in affiliation motivation will conform more often because they

have a desire to be accepted and are aware that groups often reject individuals who present deviant opinions or behaviors. However, this was found to be the case only when the group was unanimous. When one or more dissenters were present, there was a decrease in the perceived necessity to conform in order to be accepted. Those low in need for affiliation exhibit behaviors that are a function of other factors and considerations. They are more likely to weigh both sides of an argument and behave based on the quality of information (Hardy, 1957). Another attempt to find personality traits associated with conformity focused on concern for appropriateness (Lennox & Wolfe, 1984). The Concern for Appropriateness Scale, developed by Lennox and Wolfe, attempted to measure the tendency to comply with perceived socially appropriate behavior and to protect against social disapproval. Scores on this scale have been found to be related to conformity. Self-esteem is another personality characteristic that has received some attention in the conformity literature. It has been argued that self-esteem and one's sense of personal worth should influence conformity, in that those who are self-assured would be more likely to express their own opinions and more likely to dissent, regardless of the group's stance (Santee & Maslach, 1982).

While some researchers were attempting to find specific personality traits that are predictive of conformity, others were attempting to find a middle ground that stresses the interaction between personality and situational factors (Helson, Blake, Mouton, & Olmstead, 1956). For example, evidence suggests that conformity in people who score high on concern for appropriateness is not universal. Indeed, one must also take into account the personal importance of a stimulus (Kaplowitz, Fink, D'Alessio, & Armstrong, 1983). Evidence shows that the more important a stimulus is to an individual, the less likely the person is to conform to a differing group opinion because of its centrality to the self-concept. Admittedly, this is more likely to be

relevant for subjective stimuli. However, the point remains: the importance of the stimulus interacts with one's propensity to conform, which might explain the difficulty researchers have had finding personality characteristics that reliably predict conformity.

Socially Desirable Responding

Intuitively, it would make sense to assume that individuals who engage in conformity would also be likely to engage in SDR, because the motivations for engaging in both are very similar – to gain social approval and/or avoid social disapproval. However, there has been a long history of disagreement as to how social desirability should be defined, and whether it should be controlled for as a nuisance variable in research. Wiggins (1968) argued that SDR should only be considered a characteristic of a measure and is not linked to individual behavior. For example, measure design, item content, and item wording could all be sources of SDR, among others. This was supported by earlier research examining how SDR occurred as a result of demand characteristics (Orne, 1962).

However, not all researchers agreed with this view. When examined as an individual difference variable, SDR is the tendency of an individual to respond to items differently depending on an item's level of social appropriateness. Those who are high in social desirability are thought to be unlikely to give as honest a portrayal of themselves as those who are low in social desirability (McCrae & Costa, 1983). Marlowe and Crowne (1961) disagreed with the idea that SDR is only related to the properties of a scale because not everyone answers the questions in a socially desirable fashion. Instead, they argued that it represented a personal desire for social approval by others, which is gained through engaging in, or claiming to engage in, socially desirable behaviors and avoiding socially undesirable behaviors, which they described as Need for Approval (Marlowe, 1962; Marlowe & Crowne, 1961).

Over the years, there has been discussion in the literature as to how to handle individual SDR tendencies when measuring other constructs of interest, especially personality measures. Early theorists argued that SDR should be controlled for because it introduces error (Orne, 1962). However, several studies have shown that correcting for SDR can actually be more harmful to one's data than helpful (Dicken, 1963; McCrae & Costa, 1983). The research has shown that controlling for SDR actually reduces the predictive validity of personality measures (Borkenau & Amelang, 1985; Kozma & Stones, 1988; McCrae & Costa, 1983; McCrae, Costa, Dahlstrom, & Barefoot, 1989; Ruch & Ruch, 1967). Paulhus (1991) argued that even though a measure of SDR is associated with the measure of a construct, it is not necessarily an indication that SDR is acting as a contaminant. It is possible that either social desirability is a component of the construct, or that the SDR scale may include content related to the construct being measured. If this is true, then the SDR becomes a variable of interest, rather than solely a source of error.

In order to further understand SDR, researchers examined the construct itself more closely. Studies have consistently shown a two-factor structure within the SDR construct □ ADDIN EN.CITE □ ADDIN EN.CITE.DATA □□(Damarin & Messick, 1965; Gur & Sackeim, 1979; Paulhus, 1984; Paulhus & John, 1998; Sackeim & Gur, 1978, 1979; Wiggins, 1964)□. Although the two aspects of SDR had been previously discussed □ ADDIN EN.CITE □ ADDIN EN.CITE.DATA □□(Edwards, Diers, & Walker, 1962; Frenkel-Brunswik, 1939; Jackson & Messick, 1958; Meehl & Hathaway, 1946; Messick, 1962; Wiggins, 1959)□, Wiggins (1964) was the first to find the two separate factors statistically, which he named Alpha and Gamma.

Wiggins' (1964) Alpha factor is associated with attempts to stand out positively in a crowd. Individuals perceive themselves as socially and intellectually competent, which they then

exhibit in their social behavior. The Gamma factor is associated with conformity to social norms in order to avoid the disapproval of others (Wiggins, 1964). This serves a self-protection function, in that it helps individuals to “fit in” and be accepted by others.

Over time, the two factors of SDR went through several incarnations, including the autistic and propagandistic biases (Damarin & Messick, 1965) and Other- and Self-Deception (Gur & Sackeim, 1979; Sackeim & Gur, 1978, 1979). In the latest step in the evolution of the understanding of the factors, Paulhus (1984, 1986) attempted to integrate previous work on the two-factor structure and other SDR scales, including Edward’s Social Desirability Scale (Edwards, 1957), the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960), and the Other- and Self-Deception Questionnaires (Gur & Sackeim, 1979; Sackeim & Gur, 1978, 1979). Based on this work, the factors of Alpha and Gamma became Self-Deception (S-D) and Impression Management (IM), respectively (Paulhus, 1984, 1986)

In order to measure the factors, Paulhus (Paulhus, 1984, 1986, 1991, 1998b) developed the Balanced Inventory of Desirable Responding (BIDR). This measure integrated the past scales into a single scale while still keeping the two-factor structure based on Alpha and Gamma. It also addressed some of the psychometric weaknesses of previous scales. Paulhus used the label Self-Deception (S-D) in place of Alpha because he argued that claims made by individuals high in S-D represent a distortion of self-information or an unconscious defensiveness, as well as an unconscious attempt to look good to one’s self. The protection of self-beliefs, including the maintenance of self-esteem, is thought to be a motivation behind S-D. This factor can be characterized by deep personal threat, indicating defensiveness toward psychologically threatening ideas. The most important point to note about S-D is that, although the information given about the self is deceiving, the individual giving the information believes that he or she

actually possesses the traits. In other words, the report given by the individual is an honest, yet positively biased, self-evaluation (Paulhus, 1984, 1998a; Verkasalo & Lindeman, 1994).

Evidence supporting this position was obtained when responses to these items were not influenced by anonymity (Paulhus, 1984; Paulhus & Reid, 1991).

Research shows that engaging in S-D may be beneficial in some respects (Edwards, 1957; Jackson & Messick, 1962; Paulhus, 1986; Paulhus, Fridhandler, & Hayes, 1997; Roth, Snyder, & Pace, 1986; Sackeim, 1983; Taylor & Brown, 1988). For example, Paulhus and colleagues (Paulhus, et al., 1997) argued that S-D could be viewed as a type of psychological defense, in that engaging in it serves to regulate painful emotions, such as anxiety and depression. Individuals with this biased view tend to ignore minor criticisms, discount failures, avoid negative thoughts, and have a high expectancy of success in activities or goal attainment. However, those who experience anxiety or depression often accept criticism and failures as being informative of their abilities and character, which then influences their self-concept. Based on these and other findings (see Paulhus, 1986, for a review), Paulhus suggests that engaging in S-D might be critical for good adjustment. However, there are limits to the benefits of S-D on adjustment: it is important for people to accept some criticism and face potential threats. If they do not, it is possible that engaging in too much S-D can lead to a situation in which the avoidance of the negative information can lead to negative consequences.

Impression management (IM), which replaced Wiggins's (1964) Gamma factor, is thought to occur when an individual is consciously deceiving others in order to present the best possible impression (Paulhus, 1984, 1986, 1991; Paulhus, et al., 2002). Paulhus and colleagues (Paulhus, 1984; Paulhus & Reid, 1991) found further evidence for this interpretation during test administration because items concerning socially desirable behaviors were influenced by

anonymity of responses. If respondents were informed that their answers would be examined, the number of socially desirable responses increased, but the opposite occurred when the responses were anonymous. Paulhus recommends that IM should be controlled for when conducting psychological measurement (Paulhus, 1984, 1988).

When the BIDR was given to participants under differing levels of anonymity, the two-factor structure of S-D and IM again emerged in the predicted manner. The S-D sub-scale of the BIDR did not show differences based on instructional differences for either anonymity or faking instructions. However, the IM sub-scale of the BIDR showed very different response patterns under differing conditions of anonymity, with lower scores in the anonymous condition and higher scores in the named condition. IM scores were also higher under instructions to fake-good than when participants were instructed to answer honestly or fake-bad (Paulhus, 1991, 1994).

In order to more fully elucidate the nature of the two factors, Paulhus and Reid (1991) examined the items of the BIDR by separating both the IM and S-D sub-scales into true- and false-keyed items, creating four sets of items: IM enhancement, IM denial, S-D enhancement (SDE), and S-D denial (SDD). They found that for IM, there was no real difference between the enhancement and denial measures. The enhancement and denial of S-D, on the other hand, showed very low intercorrelations. Interestingly, self-deceptive denial was strongly associated with IM, whereas self-deceptive enhancement remained a distinct factor. Based on this new structure, Paulhus and colleagues (Paulhus et al., 2002; Paulhus & John, 1998; Paulhus & Reid, 1991) re-interpreted the BIDR to include the constructs of the moralistic bias (created by combining items measuring IM and SDD) and the egoistic bias (from the SDE items).

Individuals who score high on the moralistic bias not only behave in ways that they believe will be accepted by others, but they also tend to reject psychologically threatening

information (Paulhus & John, 1998; Paulhus & Reid, 1991). These individuals often see and/or portray themselves as “good citizens” and attempt to gain acceptance by conforming to individual situations. Interestingly, there is some debate in the literature as to whether individuals high in moralistic bias are attempting to gain social approval or avoid social disapproval (Doherty & Schlenker, 1991). The latter seems more likely because of the inclusion of self-deceptive denial – the denial of negative traits would be used to avoid disapproval. The bias is strongly related to the Gamma factor (Wiggins, 1964) and correlates highly with the Marlowe-Crowne Social Desirability scale (Crowne & Marlowe, 1964).

Individuals high in egoistic bias often have an exaggerated sense of self-worth and social and intellectual competence. They show a self-favorability bias which influences how they perceive information, especially in regard to themselves. Often, this is because of their attempts to stand out from a crowd. There is a positive aspect to the egoistic bias: high scores on self-deceptive enhancement are highly correlated with measures of adjustment (Paulhus & John, 1998; Paulhus & Levitt, 1987; Paulhus & Reid, 1991), resulting in less anxiety and depression. As with the Alpha factor, with the advantages come long-term costs. Initially, individuals high in egoistic bias give positive first impressions and receive positive personality ratings from peers. However, over time, their peers begin to view them more negatively (Paulhus et al., 2002; Paulhus & John, 1998; Paulhus & Reid, 1991). Even when others begin to view them negatively, the high egoistic individuals will ignore any changes in others’ behavior toward them. In essence, their behaviors and perceptions are used to ‘enhance’ their self-image.

Even though the face of SDR has changed over the years, the underlying question as to whether it influences behavior is still at issue. Due to a lack of research on the egoistic and moralistic biases, it is not clear how these newer conceptualizations are related to classic

behavioral constructs like conformity. Therefore, the present study explores the relationship between this conceptualization of SDR and conformity.

Preference for Consistency

According to Cialdini and colleagues, preference for consistency (PFC) is a personality trait that measures an individual's tendency to weigh previous expectations, commitments, and choices, and adjust their subsequent responses accordingly. Individuals scoring high on the PFC scale adjust their responses based on previous choices; whereas individuals low on the PFC scale do not weigh previous choices as heavily. Thus, they are often more open to new information and experiences. Differences between high PFC and low PFC individuals have been found in multiple areas of study, including helping behaviors, dissonance, and upholding commitments (see Guadagno & Cialdini, in press). PFC has also been found to moderate compliance using the foot-in-the-door paradigm (Guadagno, Asher, Demaine, & Cialdini, 2001). As PFC has moderated compliance, it is possible that it will also moderate conformity, leading to higher conformity among individuals high in PFC whose behaviors are often guided by previous choices and commitments. The current study explores the relationships among PFC, SDR, and conformity.

Self-Monitoring

Self-monitoring theory examines individual variation in actively creating a persona in different social situations (Gangestad & Snyder, 1985, 1991; Snyder, 1974, 1979, 1987). Self-monitoring not only recognizes that people differ in how much they engage in the active creation of a particular impression of themselves (similar to IM), but also includes a consideration of one's ability to do so. The theory claims that individuals who are high in self-monitoring are concerned with the social appropriateness of their behavior and are more sensitive to social cues

across different situations and thus monitor and regulate their behavior to match what is appropriate for the situation. Conversely, individuals low in self-monitoring have not developed the same concern for social appearances and behave in ways that are reflective of their inner attitudes. In other words, they do not engage in behavior that is based on making a specific type of impression on others. Gangestad and Snyder (2000) argued that the Self-Monitoring Scale is related to status-oriented IM motives, even though the actual scale contains very few items that are directly related to IM. Individuals high in self-monitoring attempt to create specific types of public images in order to claim a certain amount of social status, similar to IM motives.

Although it would be expected that high self-monitors would be more likely to conform because the majority's opinions and behaviors would be an indication of what would be considered appropriate in a given situation, past research is inconsistent as to whether they are related.

Snyder and Monson (1975) manipulated the salience of different peer groups to measure conformity in low and high self-monitors. Participants took part in a discussion with several other students, but the researchers manipulated whether the group discussion would be private or public. The private discussion stayed within the group, but participants in the public discussion believed the discussion was being videotaped and might be shown to an undergraduate class. As predicted, they found that low self-monitors showed no difference between the two conditions. High self-monitors, on the other hand, conformed more in the private group, whereas they showed little conformity in the public group. They argued that this occurred because high self-monitors were made aware of the social norm of autonomy when the public group was salient, but they were aware of the norm of consensus in the private group. However, later research that manipulated the unanimity of peer consensus to obtain conformity found no relationship between the constructs of self-monitoring and conformity (Santee & Maslach, 1982). Therefore, self-

monitoring is included in order to examine whether a participant's tendency to engage in self-monitoring behavior is related to the moralistic and egoistic biases. The current study also investigates whether a correlation exists between self-monitoring and conformity.

Computer-Mediated Communication

Data for the proposed study were collected via a computer-based task administered through an on-line website for research participants. Although the increased use of computers for communication has created some concern about the influence of computer-mediated communication (CMC) on behavior, the use of computers to collect data online was not expected to negatively influence the quality of the data. CMC refers to any type of communication typically involving communication using the internet, such as email, chat rooms, bulletin boards, etc. (Postmes & Spears, 1998; Postmes, Spears, & Lea, 1998; Reicher, et al., 1995; Spears & Lea, 1992, 1994; Spears, Lea, Corneliussen, Postmes, & ter Haar, 2002; Spears, Lea, & Lee, 1990). The growth of this medium has created a concern about potential negative effects on behavior, such as an increase in antisocial behavior, due to a perceived lack of "social presence" (Short et al., 1976) or the reduction of social cues used in personal interactions (Kiesler, Siegel, & McGuire, 1984; Rutter, 1984). Some argue that this could lead to a perception of increased behavioral freedom, and in some cases even a sense of deindividuation, and thus a lack of accountability (see for reviews; Lea, O'Shea, Fung, & Spears, 1992; Walther, Anderson, & Park, 1994). A meta-analysis of the deindividuation research in CMC showed little evidence that deindividuation due to a lack of face-to-face interaction increased antisocial or antinormative behavior (Postmes & Spears, 1998). In fact, some research has found that CMC can increase normative behavior if a group identity is made salient (Postmes, et al., 1998).

Other recent work has examined the effects of anonymity on conformity in CMC. Spears and colleagues (Lea & Spears, 1991; Reicher et al., 1995; Spears & Lea, 1992, 1994) proposed the SIDE (Social Identity model of Deindividuation Effects) model to examine how media effects are produced by an interaction between the characteristics of a communication and social context. One area of research within CMC has examined whether the potential anonymity of the CMC has an influence on individual conformity. It is possible that deindividuation occurs because of a lack of direct interpersonal interaction (Hiltz, Turoff, & Johnson, 1989; Jessup, Connolly, & Tansik, 1990; Kiesler et al., 1984). Research on the SIDE model has not shown negative effects of depersonalization through CMC. Many of the restraints and boundaries experienced in face-to-face interactions remain intact, primarily because the individuals engaging in the CMC choose to retain boundaries and group identifications, or create identification with new groups, although the group structures may differ (Postmes et al., 1998). Thus, the effects of interpersonal interaction, such as the influence of social norms, stereotyping, and conformity, remain intact. The group structure itself is still there, it is just in a different form.

Researchers have also expressed concern about the quality of data collected using on-line methods. However, research has found that data collected on-line are comparable in validity and reliability to data collected using traditional methods (Gosling, Vazire, Srivastava, & John, 2004). In a comparison between on-line data from several studies and published articles from *Journal of Personality and Social Psychology*, Gosling and colleagues found that samples from on-line studies are often more diverse than traditionally published studies. The ratio of males and females is more equal, mean age is less skewed, and racial characteristics of the sample are more similar to those reported on U.S. census records. Another issue with on-line research is motivation; many researchers argue that participants in an on-line study are potentially less

motivated and are more likely to report fake or dishonest information. Although this may be true, it is important to keep in mind that traditional studies have similar weaknesses. Traditional paper-and-pencil measures are also susceptible to false answers, especially if demand characteristics are present. Moreover, early researchers commented on participants' potential attitudes toward experiments and experimenters in traditional research methods: student participants are often suspicious of the research (Argyris, 1968; Jourard, 1968; Orne, 1962), and a majority of studies with traditional research methods use undergraduate student samples. Therefore, it is fair to conclude that both methods have their strengths and weaknesses, and careful methodological planning and further studies that address the issues can reduce the impact of the weaknesses.

The Present Study

The purpose of the present study was to examine egoistic and moralistic biases within the framework of SDR and their relation to conformity using a behavioral conformity paradigm. This study contributes to a better understanding of conformity by examining the interaction between personality characteristics (the egoistic and moralistic biases) and a key situational variable (presence or lack of anonymity), whereas most previous research has concentrated on a single aspect. It is critical to examine both situational and personality variables rather than a single aspect because motivations for behavior, although based in the personality, can vary by situation. For example, there may be times in which an individual would be motivated to blend in with whatever situation he or she is in, yet be motivated at other times to stand out from a crowd. Examining only one potential motivator of conformity would result in a limited view of the behavior. Thus, it is critical that as many aspects as possible are examined. To this end, a computer-based Crutchfield-type conformity situation using subjective stimuli was used.

Subjective stimuli were used because previous findings indicate that conformity occurs more frequently when there is not a “correct” answer, such as in opinion ratings (Crutchfield, 1955). Moralistic and egoistic biases, PFC, and self-monitoring were measured and participants were assigned to either an anonymous condition, one in which names were used (named condition), or a control condition. Hypotheses for the study were as follows:

Hypothesis 1: Individuals who score higher on moralistic bias will show greater conformity compared to those lower in moralistic bias in both the anonymous and named conditions, but the rate of conformity will be somewhat lower in the anonymous condition (Paulhus & John, 1998). When others know their name, those high on moralistic bias will be more motivated to avoid disapproval.

Hypothesis 1a: When asked whether their answers were influenced by the reported opinions of other students, individuals higher in moralistic bias will indicate some influence in the named condition, but will deny influence in the anonymous condition. If they are aware that they engage in IM, which is thought to be mostly conscious in nature (Paulhus, 1982, 1984; Paulhus et al., 2002; Paulhus & John, 1998; Paulhus & Reid, 1991), then they will report being influenced. Alternately, in the anonymous condition, the motivation for changing their opinion to fit the group’s will be gone, but research has shown that characteristics associated with self-presentational strategies do not completely disappear for those high in moralistic bias even in anonymous conditions. This may be due to the unconscious nature of the self-deceptive denial involved in high moralistic bias (see Paulhus & John, 1998).

Hypothesis 2: Individuals scoring higher in egoistic bias will show less conformity compared to those low in egoistic bias in both the anonymous and named conditions. A factor that might influence nonconformity is the tendency of those high in egoistic bias to want to stand

out from a crowd, thus creating a situation in which they purposefully attempt to be different from the group.

Hypothesis 2a: When asked whether they were influenced by the opinions of the other students, individuals higher in egoistic bias will claim to have not been influenced by the opinions of others regardless of their responses.

Hypothesis 3: Past research has found that PFC moderated compliance and conformity (Cialdini, Trost, & Newsom, 1995). It was expected that PFC would moderate conformity; specifically, individuals higher in PFC will engage in less conformity because many of their choices are predicated on personal choices rather than on group behavior.

Hypothesis 3a: Although some research has examined the relationship between PFC and SDR (Bator, Guadagno, & Cialdini, 1996), no research has examined whether PFC is related to the egoistic and moralistic biases. It was hypothesized that PFC will be positively related to the egoistic bias and negatively related to the moralistic bias. Individuals high in PFC are more likely to base their actions on previous actions or personal beliefs, and not on the situation. As individuals high in egoistic bias are prone to the self-favorability bias in which they are concerned with standing out, being consistent with their own attitudes in a conformity situation would enable them to remain different from the crowd. Those who are high in moralistic bias, on the other hand, are more prone to base their behavior on the situation, and are thus not as concerned with consistency. Thus, in a conformity situation, they will be more likely to conform and ignore previous choices, especially with ambiguous stimuli.

Hypothesis 4: Past research has been inconclusive as to whether a relationship exists between self-monitoring and conformity (Santee & Maslach, 1982; Snyder & Monson, 1975). In a task study similar to the current design, Santee and Maslach found that self-monitoring was

unrelated to conformity across all analyses. The Crutchfield-type conformity situation is similar to that used by Santee and Maslach in that group opinion was manipulated. Based on their findings, it was predicted that self-monitoring will not influence conformity.

Hypothesis 4a: No research has been conducted to directly examine whether self-monitoring is related to the egoistic and moralistic biases. However, processes involved in self-monitoring are very similar to those present in IM. Although the Self-Monitoring Scale contains few items that are directly related to IM, the scale itself relates to similar status-oriented IM motives (Gangestad & Snyder, 2000). Thus, it was predicted that self-monitoring will be more correlated with the moralistic bias than the egoistic bias.

Method

Pilot Study

The pilot study was conducted in order to determine which images would be used as stimuli in the main study. Two hundred twenty five students (62 male, 163 female) were recruited from Introductory Psychology classes for partial credit toward a course requirement. One hundred fifty eight images were collected from the internet and included fractals and abstract paintings. Images varied in design complexity and color in order to present as much variation as possible. Participants rated the images using a scale from -4 (dislike very much) to +4 (like very much) with 0 as neutral. The means of all images ranged between -1.0 and +1.0, all with standard deviations of approximately 2.5. Thus, since there was little variation in ratings of the images, 30 images were randomly chosen for use in the conformity study. Once chosen, images were checked for variation in pattern complexity and color so that no two images would be similar. From the 30 images, 10 of them were randomly chosen to be used as critical images in the main study.

Main Conformity Study

Participants

Two-hundred seventy nine participants were recruited from the Introductory Psychology students at The University of Alabama as a partial fulfillment of a course requirement and the University of West Alabama for extra credit in their course. Participants consisted of 166 females (59.5%), 112 males (40.1%), and 1 (.40%) participant did not answer. The mean age for females was 19.90 (s.d. = 3.36), mean age of males was 19.82 (s.d. = 2.12). Racial breakdown of

participants included 223 Caucasian (79.9%), 46 African-American (16.5%), 4 Hispanic/Latino (1.4%), 2 Mixed race (.7%), 2 Other (.7%), and 2 declined to answer (.7%).

Materials

Image rating task. Similar to the methodology used by Griskevicius and colleagues (2006), participants were asked to rate how much they liked each of 30 images on a 9-point scale (-4 = dislike very much, 4 = like very much, 0 = neutral). The images were collected from the internet and included examples of modern art and fractal images. The 30 items were randomly chosen from a pool of 158, and 10 of the 30 items were randomly chosen as the critical items. During the image rating, participants rated the images with 4 other participants, who were in actuality programmed confederates. For each image, participants made their ratings in turn with each subsequent rating appearing after earlier ratings. Depending on when the real participant rated the image, he or she would see no one else's ratings, or between 1 and 4 others. A random number generator was used to choose all confederate ratings. For the non-critical items, the values of the ratings were chosen from a range of -4 to 4, including 0. Each of the non-critical items included both positive and negative ratings. Five of the critical items were rated as unanimously positive (using a combination of +3s and +4s, or all +4), and 5 were rated as unanimously negative (using a combination of -3s and -4s, or all -4s). The values and order were again determined using a random number generator, with the condition that there were always at least 3 ratings of +4 or -4, respectively.

Balanced Inventory of Desirable Responding (BIDR) (Paulhus, 1991, 1994). The BIDR was used to measure participants' levels of egoistic and moralistic biases. The measure consists of 40 statements about an individual on which the respondent rates the extent to which the statement is true for him or her using a 7-point scale (1 = Not True; 7 = Very True). The scoring

is balanced to avoid response set effects. After negatively keyed items were reversed, two scores were calculated for each participant: moralistic bias and egoistic bias. The original scoring rubric for the BIDR counted only the most extreme answers on either end of the scale (extremely low = 1 or 2; extremely high = 6 or 7) toward a participant's score. This scoring method guarantees that only participants who have given exaggerated responses to socially desirable items will be counted. However, the current study used continuous scoring based on evidence that it increases the validity and reliability of the scores (Booth-Kewley, Edwards, & Rosenfeld, 1992; Cohen, 1983; Paulhus, 1984; Stober, Dette, & Musch, 2002 (Becker & Cherny, 1992). For IM, Paulhus reported Cronbach's alphas ranging from .75 to .80 using dichotomous scoring, and .80 to .86 using continuous scoring. For SDE, alphas ranged from .65 to .75 and .70 to .82 using dichotomous and continuous scoring, respectively. For IM, Stöber and colleagues (Stöber, et al., 2002) reported Cronbach's alphas of .55 and .67 for dichotomous and continuous, respectively. Reported alphas for S-D were .46 and .66, respectively (see Appendix A).

Preference for Consistency Scale (PFC) (Cialdini et al., 1995). The PFC was used as a measure of the strength of a participants' preference to appear consistent. Each statement is rated on a 9-point scale (1 = Strongly Disagree; 9 = Strongly Agree; 4 = Neither Agree nor Disagree). The 18-item PFC is highly reliable ($\alpha = .89$) (See Appendix B).

Self-Monitoring Scale (Snyder, 1974; Snyder & Gangestad, 1986). The Self-Monitoring Scale was designed to measure one's tendency to engage in self-monitoring behavior. The 18-item scale used in the current study has been found to have a reliability of $\alpha = .70$, which is higher than the original 25-item scale. Each item is answered as being either true or false for the individual (See Appendix C).

Perception of Conformity and Manipulation Check: After completing the image rating task, participants in the anonymous and named conditions were asked several questions regarding their attention to and perception of the other participants' answers. Question 1 was used to assess whether the presence of the confederates was strong enough to gain attention and thus acted as the manipulation check. Questions 2 and 4 were used to compute participants' perception of conformity by computing the mean of the 2 questions (see Appendix D).

Demographics Questionnaire. Basic demographic information was collected in order to describe group characteristics (see Appendix E).

Procedure

Participants were recruited from The University of Alabama and the University of West Alabama. Participants signed up to participate in the study at a specific date and time because of the "group" portion of the study. The link to the study was made available to the student for approximately 15 minutes in order to provide face validity to the study; the students were led to believe that other students might be joining them in a chat-room and they all needed to be online at the same time. Thus, it was necessary that they begin the study as close to the scheduled time as possible. The study took approximately 45 minutes to an hour to complete.

After following the link to the study, participants read an information sheet that explained the study. After giving consent to participate, they were shown instructions for each task in the study (see Appendix F). Participants began the study with the image rating task, and were randomly assigned to one of three conditions: anonymous, named, or control. The anonymous condition had the participants' responses labeled as "Participant 1," "Participant 2," etc. The named condition used participants' first names and first initial of the last name to label the responses. Both conditions had 4 programmed confederates, and all of the names were bogus

except for the participant's own name, and they matched the sex of the true participant.

Participants were told that all the participants could see each others' answers, and they would answer in succession. In order to maintain face validity of the study, participants answered in a different position for different images, similar to the Crutchfield paradigm (Crutchfield, 1955). However, they always responded last on the critical images in order to measure the influence of the fake participants (Breger & Ruiz, 1966; Crutchfield, 1955). Finally, after all of the images were rated, there was a small follow-up questionnaire used to measure participants' perceptions of their own conformity (see Appendix D). This was used to examine how moralistic and egoistic biases were related to consistency between actual degree of conformity and perceptions of their own behavior. All critical images were presented with unanimous responses from the fake participants, with half the images rated positively and the other half rated negatively (Griskevicius et al., 2006). For the non-critical items, five of the items were presented as unanimous responses and the remaining 15 were mixed responses. Thus, half of the items were presented as unanimous, and half were mixed responses. Participants in the control group also rated the images, but they were not included in a chat-room environment, thus they saw no other ratings of the images, nor were they asked about conforming behavior.

After the group rating task, participants were asked to complete the BIDR, PFC, and Self-Monitoring Scale, and demographic questionnaires. Participants were then probed for suspicion (see Appendix G).

Debriefing. Participants were fully debriefed as to the purpose of the study and were told that the other 'participants' were not actually other students, but rather pre-programmed answers. The experimenter's contact information was given so participants were able to ask questions they had about the study (see Appendix H).

Results

Conformity Measure

An overall conformity score was calculated by computing the mean of the difference scores between the extreme of the false ratings and the participants' own ratings for each of the 10 critical items. The overall reliability of the scale was moderate ($\alpha = .39$). Scores for the participants in the control condition were also calculated by subtracting their scores from the extreme scores. The positive critical item ratings were subtracted from +4 and the negative critical items were subtracted from -4. As the subtraction from the negative extreme resulted in negative values, the absolute values of all difference scores were used. With this method, higher values indicated less conformity because the ratings were farther from the extreme. For clarity, all scores were then reverse-coded so that higher values represented more conformity. Possible scores ranged from 0 (no difference from the extreme) to 8 (farthest possible point from the extreme).

Answers to the suspicion probe questions were examined to determine if any participants were aware of the conformity manipulation or were able to guess the hypothesis. Thirty four (12.2%) indicated an awareness of the manipulation or that the fake participants were not really other students but part of the computer program. Conformity was compared between the suspicious and non-suspicious participants for the conformity scale, and no differences were found in conformity between the groups (see Table 1). However, all suspicious participants were excluded from the analyses. Suspicion was evenly distributed between conditions: 13 participants (13.5%) in the anonymous and 21 (21%) of participants in the named condition

reported suspicion. Suspicion also did not differ as a function of sex: 15 males (13.4%) and 19 females (11.4%) reported suspicion.

Manipulation Check. After completing the rating task, participants in the anonymous and named conditions were asked using a 5-point scale whether they were aware of the other participants' ratings when they rated the images themselves. The mean across experimental conditions ($M = 3.25$, $s.d. = 1.22$) indicated that the manipulation was effective. There was no difference between the groups for type of manipulation [$t(1,160) = -1.75$, $n.s.$].

Conformity. Gender differences were examined to determine if conformity was different as a function of sex. No differences were found, so all analyses were collapsed across sex.

A one-way analysis of variance (ANOVA) was computed for the conformity scale to determine whether conformity occurred. The analysis showed a significant difference among the groups, ($F(2,242) = 19.88$, $p < .001$). LSD post-hoc tests revealed that the control ($M = 3.92$, $s.d. = .66$) condition differed from both the anonymous ($M = 4.56$, $s.d. = .94$) and named ($M = 4.75$, $s.d. = 1.03$), but there was no difference between the anonymous and named condition (see Table 2a). Correlations for conformity, perception of conformity, moralistic bias, egoistic bias, PFC, and self-monitoring are presented in Table 2b.

Hypothesis 1. A hierarchical regression analysis was computed to examine hypothesis 1, which predicted that individuals higher as opposed to lower on moralistic bias would show greater conformity in both the anonymous and named conditions. The predictor variables entered into the regression were moralistic bias as a continuous variable, condition as a categorical variable (using 2 dummy-coded variables), and the interaction effect. The hypothesis was somewhat supported: on its own, moralistic bias was marginally related to conformity [$t(1,243) = 1.94$, $p = .053$] and condition had a significant effect, but the interaction of moralistic bias and

conformity condition was not significant (see Table 3). However, a planned contrast regression analysis compared the control group with the combined manipulated groups. The variables entered into the regression were moralistic bias as a continuous variable, the comparison between the control and experimental groups (a dummy coded variable) and the interaction effect. This showed differences in conformity between the control group and the two manipulated groups [$t(2,242) = 6.06, p < .001$] (see Table 4). The contrast analysis revealed that those in the manipulated groups had a higher predicted rate of conformity (predicted $M = 4.82$) than the baseline control group (predicted $M = 4.09$). There were no differences in rate of conformity between the anonymous and named groups [$t(2,159) = 1.25, n.s.$].

Hypothesis 1a. A hierarchical regression analysis was computed to test the hypothesis that participants high in moralistic bias would perceive more influence from the other participants in the named condition, but deny influence of the confederates in the anonymous condition. The predictor variables entered into the regression were the mean conformity score as a continuous variable, moralistic bias as a continuous variable, comparison between the anonymous and named conditions, and the interaction effect. The hypothesis was not supported as moralistic bias was not related to perception of conformity, thus showing no difference in impact of the confederates between the anonymous and named conditions [$t(3,161) = 1.11, n.s.$]. Further, no interaction effects were significantly related to perception of conformity. However, it is interesting to note that the only predictor of perception of conformity was actual conformity [$t(1,160) = 2.63, p < .01$] (see Table 5). In a similar model in which conformity itself was removed as a covariate, moralistic bias still did not account for any perception of conformity nor was the interaction significant.

Hypothesis 2: A hierarchical regression analysis was computed to examine the hypothesis that individuals higher in egoistic bias would show less conformity compared to those low in egoistic bias in both the anonymous and named conditions. The predictor variables entered into the regression were egoistic bias as a continuous variable, condition as a categorical variable, and the interaction effect. The hypothesis was not supported: egoistic bias was not related to conformity [$t(1,243) = 0.31$, n.s.] nor was the interaction between egoistic bias and condition significant (see Table 6). The planned contrast regression analysis comparing the control group with the combined manipulated group included egoistic bias as a continuous variable, the comparison between the control and experimental groups (dummy coded) and the interaction effect. As in hypothesis 1, this showed differences in conformity between the control group and the two manipulated groups [$t(2,242) = 6.12$, $p < .001$] (see Table 7). The contrast analysis revealed that with egoistic bias in the equation, those in the manipulated groups had a higher predicted rate of conformity (predicted $M = 4.67$) than the baseline control group (predicted $M = 3.93$). There were no differences in rate of conformity between the manipulated groups [$t(2,159) = 1.24$, n.s.].

Hypothesis 2a: A hierarchical regression analysis was conducted to test the hypothesis that individuals higher in egoistic bias compared to lower egoistic bias will claim to have not been influenced by the opinions of others regardless of conformity. The hypothesis was not supported as egoistic bias showed no relation to the perception of conformity [$t(2,161) = -1.74$, n.s.] and the interaction effect was not significant [$t(4,157) = .48$, n.s.]. Again, as in hypothesis 1a, only conformity was a predictor of perception of conformity [$t(1,160) = 2.63$, $p < .010$] (See Table 8). Again, a similar model was computed in which conformity itself was removed as a

covariate, but egoistic bias still did not account for any perception of conformity nor was the interaction significant.

Hypothesis 3: Another hierarchical regression analysis was used to examine whether PFC moderated conformity such that individuals higher in PFC would engage in less conformity compared to those lower in PFC. The predictor variables entered into the regression were PFC as a continuous variable, condition as a categorical variable, and the interaction effect. Further, it was tested whether individuals high in PFC showed a difference in conformity in any of the conditions. The hypothesis was not supported: PFC was not related to conformity [$t(1,243) = .042$, n.s.]. The interaction between group and PFC was also not significant, indicating that score on the PFC measure did not moderate conformity (see Table 9). A contrast analysis showed the same differences between the control condition and the experimental conditions [$t(2,242) = 6.15$, $p < .001$] as seen in the previous analyses (See Table 10). Specifically, those in the manipulated groups had a higher predicted rate of conformity (predicted $M = 4.64$) than the baseline control group (predicted $M = 3.90$). There were no differences in rate of conformity between the manipulated groups [$t(2,159) = 1.24$, n.s.].

Hypothesis 3a: Correlations were computed to test the hypothesis that PFC was positively related to egoistic and negatively related to moralistic bias. Contrary to the hypothesis, PFC was not significantly related to egoistic bias ($r = .03$, n.s.), and was marginally positively correlated with moralistic bias ($r = .112$, $p < .08$).

Hypothesis 4: A hierarchical regression analysis was used to test the hypothesis that self-monitoring was not related to conformity. Predictor variables entered into the equation included self-monitoring as a continuous variable, condition as a categorical variable, and the interaction

effect. The hypothesis was supported [$t(1,243) = .10$, n.s.], indicating that self-monitoring was not related to conformity (see Table 11).

Hypothesis 4a: Bivariate correlations were computed in order to examine the hypothesis that self-monitoring was more strongly related to the moralistic bias than the egoistic bias. The hypothesis was partially supported: moralistic bias was more strongly correlated with self-monitoring ($r = -.30$, $p < .001$), but in the opposite direction than hypothesized. Although also significant, egoistic bias was less related ($r = -.16$, $p < .02$), also in the opposite direction than predicted. A comparison of the correlations to each other was significant ($z = -2.15$, $p < .02$), indicating that the correlations are indeed different from each other, thus the difference is not a product of the current sample.

Discussion

The present study attempted to examine how the interaction of situational and personality variables influence conformity. Personality was measured using the moralistic and egoistic subscales of the BIDR (Paulhus, 1991), the Self-Monitoring Scale (Snyder, 1974; Snyder & Gangestad, 1986), and the Preference for Consistency Scale (Cialdini, et al., 1995). Situational context was manipulated by putting participants in a conformity situation in which they were either anonymous or used their name. The basic findings were that conformity occurred in both the anonymous and named conditions, but there were no differences between the conditions. Furthermore, there were no effects related to the personality variables or the interactions of the personality variables with experimental condition.

It was predicted that the moralistic and egoistic biases would influence conformity in opposite ways. Specifically, the moralistic bias was predicted to influence conformity differently in the anonymous and named conditions. The prediction was partially supported; moralistic bias was marginally related to conformity, but the difference was found between the control and both experimental conditions. As predicted, the relationship was positive, indicating that those higher in moralistic bias were more likely to conform. However, the prediction that those higher in moralistic bias would show more conformity in the named condition than the anonymous condition because they are sensitive to situational cues and will often tailor their behavior to what is socially appropriate was not supported. If people high in moralistic bias are looking to the situation for cues to behavior, it might be partially motivated by a desire to avoid disapproval. Paulhus and colleagues (Paulhus & John, 1998, Paulhus & Levitt, 1987; Paulhus & Reid, 1991) argued that avoidance of disapproval is likely a large part of their motivation

because they tend to deny personal negative traits. If they are identifiable through the use of their name, they would perceive more potential disapproval when others know who they are than if they are anonymous, thus an interaction between moralistic bias and experimental condition was expected. However, since moralistic bias was not only marginally related to conformity, nor was and the interaction was not significant, it appears that moralistic bias apparently had no little impact, regardless of experimental condition. Moralistic bias also had no impact on perceptions of conformity regardless of condition

Alternatively, individuals scoring higher in egoistic bias were predicted to show less conformity compared to those low in egoistic bias in both the anonymous and named conditions. Individuals high in egoistic bias show a desire to stand out from the crowd, and thus would be less likely to conform. The hypothesis was not supported. It was further hypothesized that those high in egoistic bias would deny being influenced by the group because of their independent view of themselves if they did engage in conformity. Because egoistic bias was not related to conformity, it was not possible to examine this relationship. However, the evidence surrounding the egoistic bias is difficult to interpret because, when examined closely, those high in egoistic bias would be more likely to go against a group rather than conform because of their desire to stand out from the crowd. The present study did not measure conformity in a way that would allow for an examination of potential anti-conformity, but this serves as a starting point in the examination of the relationship between the egoistic bias and conformity.

It was predicted that PFC would moderate conformity such that individuals higher in PFC would conform less than those low in PFC. This was predicated on the previous findings that PFC moderates compliance and conformity behavior (Cialdini, et al., 1995). Although the current study did not use a pre-post design in order to directly test consistency, the lack of

relationship between PFC and conformity is not consistent with past research. Based on past PFC research, it is reasonable to infer that those high in PFC were less reliant on the opinions of others, and in a novel situation with ambiguous stimuli would still be less likely to conform. However, this effect was not found, and there was no indication of a relationship between PFC and conformity in this situation. The lack of relationship must be interpreted with caution, however, because the current study did not use a pre-post measurement from which consistency could be directly measured (see Matz & Hinsz, 2003).

Some previous research has examined the relationship between PFC and SDR and no relationship was found between the constructs (Bator, et al., 1996). However, no research has looked specifically at the relationship between the moralistic and egoistic biases and PFC. It may be the case that looking at the specific sub-scales will be more informative than looking at an overall scale. It was predicted that PFC would show a positive correlation with the egoistic bias; those high in egoistic bias are less likely to conform because their choices are not dictated by the situation, but rather by a desire to stand out from the crowd. The moralistic bias, on the other hand, was predicted to be negatively correlated to PFC because those high in moralistic bias often base their behavior on situational variables. The predicted effect was not found: the egoistic bias was not correlated with PFC, and the moralistic bias was only marginally correlated, but positively rather than negatively. A lack of relationship might be explained because a pre-post measure of conformity was not used, and thus there was no situation that would necessarily cue consistency behavior.

Several studies have examined self-monitoring and its relationship to conformity, but the findings are mixed. Some studies have found no evidence of a relationship (e.g. Snyder & Monson, 1975), but others have found evidence for a relationship (e.g. Santee & Maslach, 1982).

Intuitively, it would make sense that an individual whose self-image is very salient because he or she is attempting to create a specific persona would also be very aware of environmental cues and have a greater propensity to conform. Thus, self-monitoring was included in this study to examine whether it was predictive of conformity in order to generate more evidence regarding the relationship. Based on much of the past literature, it was predicted that self-monitoring would not be related to conformity. The hypothesis was supported: self-monitoring showed no relationship with conformity [$t(1, 243) = .10$, n.s.]. This can be taken as further evidence that self-monitoring is not related to conformity. One potential explanation of why self-monitoring is not predictive of conformity is that simply stating that one is attempting to create a persona in different situations fails to take into account the motivation behind each persona. Some who are high in self-monitoring might be concerned with making a positive impression while others are more concerned with appearing independent. This issue is explored further in the next analysis.

To my knowledge, no research has examined the relationship between self-monitoring and the moralistic and egoistic biases. Understanding how self-monitoring is related to the egoistic and moralistic biases could potentially aid in explaining the lack of a relationship between self-monitoring and conformity; when the sub-scales are examined independently, they show opposite types of behavior. Hence, if the entire BIDR scale is examined, the effects of the sub-scales might cancel each other out. It was predicted that self-monitoring would be more related to moralistic bias because of the traditional view that high self-monitoring is related to an attempt to engage in situationally appropriate behavior (Gangestad & Snyder, 2000). Self-monitoring was significantly related to both moralistic and egoistic biases, with a stronger correlation to the moralistic bias. However, both of the correlations were negative, which was contrary to prediction. In other words, the higher an individual is on the Self-Monitoring Scale,

the lower he or she scored on both the egoistic and moralistic biases. The fact that both sub-scales are negatively correlated is interesting because, based on the characteristics associated with the sub-scales, it would make sense that one is negatively correlated and the other positively correlated with self-monitoring. The negative correlation between self-monitoring and the moralistic bias is counterintuitive: those who are attempting to create a persona of going along with the group should be more sensitive to situational cues. One potential explanation for this unexpected finding is that those high in self-monitoring are not necessarily looking to fit in, as was previous thought. Again, the type of persona one attempts to create may differ across situations. The traditional view of self-monitoring has been that those with high scores on the measure are concerned with interpersonal and social acceptance. However, it is possible that some individuals are attempting to create a persona that characterizes them as independent. Thus, the creation of a specific persona is occurring, but the motivation is different.

Using the traditional view of self-monitoring, the negative relationship between self-monitoring and egoistic bias makes sense: individuals who are more concerned with creating a persona are less likely to engage in the self-favorability bias and attempt to stand out, which supports the idea that self-monitoring involves a concern for situational and interpersonal appropriateness (Snyder & Gangestad, 1986; Snyder & Monson, 1975). However, contrary to the traditional definition of self-monitoring, if one is motivated to create an independent persona, then the salience of his or her actions would also need to be strong. Due to the lack of clarity of the self-monitoring construct, this relationship is difficult to interpret. However, motivation for persona management might account for the inconsistency in the literature.

Although none of the personality measures used predicted conformity, it is clear that there was a robust difference between the ratings in the control conditions and those in both of

the manipulated conformity conditions. This is an indication that these images, when used in the Crutchfield (1955) paradigm, can elicit conformity. This is especially interesting due to the relatively high suspicion rate. Although approximately 12% of the participants indicated some suspicion of the true purpose of the study, their conformity rates were no different than those participants who did not report suspicion. This replicates findings by Guadagno, Allmendinger, Blascovich, Beall, and Young (unpublished data), who found similar results using the Asch paradigm (Asch, 1951).

There were several weaknesses to this study. First, it is important to interpret the present findings with caution because none of the personality variables predicted to be related to conformity actually predicted conformity. This could be taken as evidence that none of these variables are related to conformity, but there were some indications that it is most likely a methodological issue. The only variable that consistently predicted conformity was condition, specifically the difference between the controls and the manipulated conditions. Both of the manipulated conditions showed significantly different scores than the control, but were not different from each other. This might be an indication that the manipulation was effective in obtaining conformity, but not strong enough to influence conformity between the anonymous and named conditions. A potential explanation for this is that identical directions were used for both conditions. The only difference in the directions was a description of how participants would be identified during the task (i.e., as “Participant” or their name). The directions in the named condition might have been written such that it made the fact that their names were being used more salient, thus making them more self-conscious of their answers. Other manipulations, such as meeting face-to-face, could have strengthened the difference between the named and anonymous conditions.

Another critical weakness is that conformity is better measured in a pre-post design when examining its relationship with PFC and when the relationship between conformity and the egoistic bias is being examined because of the potential for those high in egoistic bias to engage in anti-conformity. Specifically, the design would have the participants rate their opinion of the image independently, and then put them in the conformity situation. This would also allow for an examination of anti-conformity, which might be involved in the egoistic bias. Those who prefer to stand out in a crowd might be likely to change their opinion if the rest of the group was unanimous in order to appear to be independent, especially if ambiguous stimuli are used.

The lack of predictability on the part of the personality measures might also be an effect of the high suspicion rate. However, all analyses were conducted both with and without the suspicious participants included, and the analyses were virtually identical with or without the suspicious participants; none of the personality variables were predictive of conformity or perception of conformity. Hence, suspicion is not a likely confounding factor. However, it is still problematic and a concern for future research. When examining the comments of some of the suspicious participants, there were some issues that were mentioned by multiple participants. One in particular regarded the time-lag between the confederates' ratings. The program was designed so that there was a 5-second lag in between each rating on every image, and several participants noted that this was too long to be real. Further, if they answered in one of the first 4 positions (i.e. for the non-critical items), the participants were able to change their ratings even after the next rating appeared. Several noted that they changed their ratings, but none of the other participants ever did, thus making it appear suspect.

Another potential explanation for the suspicion is when the study was conducted. As the participants were Introductory Psychology students and the study was conducted near the end of

the semester, many of them may have learned about conformity in their classes. Although no participants indicated this directly, several stated that they thought the study was about conformity. However, several participants indicated that they were suspicious because psychological studies often hid the real purpose, so they were sure there was some type of deception.

It is unlikely that conducting the study online decreased the strength of the manipulation based on past research on CMC and conformity (e.g. Postmes, et al., 1998). However, it would be interesting to see if the results were consistent using the same methodology in a lab setting. The participants would need to be separated in a way that they could not see each other, similar to Crutchfield's (1955) design. The mere presence of others might make the manipulation more effective because it is in participants' minds that there is a chance the others will see them, and it would make the impending discussion seem real. However, this could also have a negative effect on the manipulation in that those in the anonymous condition might fear that they will be seen by the others and thus lose their anonymity. Thus, it is not a foregone conclusion that bringing this study into the lab would be any more effective.

Another potential weakness of the study, and a potential explanation for the lack of many predicted effects, could have been due to a lack of motivation to take the image ratings seriously. Those in the manipulated conditions were told that they would be joining the other participants in the chat-room after they rated the images, but were not reminded of it subsequently. It may have been beneficial to give them more detailed information regarding what would happen and how it would work immediately before the task rating, thus making it more salient. Unfortunately, no manipulation check was taken for this aspect of the study and so it is difficult to determine if this was an issue. It would have been beneficial for the control participants to

have expected the chat-room interaction, as well. This would have led to a better comparison between the controls and the manipulated conditions because they would have all had the same expectation and motivation to take the image-rating more seriously.

Overall, the lack of predicted personality effects can be explained methodologically. Enough past research has found relationships between conformity and many of the examined personality characteristics that further research is justified and indeed necessary. It is critical that all possible related aspects of behavior, including personality and situational, be examined. Only through the examination of multiple influences will the basis of any behavior, but especially group behavior, be understood. Examining a single aspect of behavior, although informative, cannot possibly give the entire picture.

Future directions for research in this area are plentiful. It would be of the utmost importance to replicate the study with a stronger manipulation. There is still a potential that there is a relationship between conformity and the moralistic and egoistic biases. It would also be a stronger test of these constructs and hypotheses if a pre-post design were used in which participants rated the images independently and then in a group setting. The issues with the timing between ratings and the ability to change one's rating would also need to be addressed.

Further investigation of the unexpected and puzzling finding of a negative relationship between self-monitoring and the moralistic and egoistic biases would also be worth pursuing. It may also be beneficial if the measures of SDR, PFC, and self-monitoring were taken at a different time than the conformity portion of the study. Suspicion might have influenced the answers to these measures. If the measures were taken separately, this would not be an issue.

In conclusion, this study lends more evidence to the viability of using CMC to obtain conformity, even with a mild manipulation. Although no differences were found in regard to

anonymity, conformity did indeed occur. Alternatively, this study does not allow for any firm conclusion regarding the specific effects of the personality variables examined on conformity. This is probably due, at least in part, to the weakness of the manipulation. However, it is also possible to state that the situation may have been powerful enough to overpower any effects of personality on conformity. Regardless of the reason, it is too early to declare that the interaction between the situation and personality variables is not influential on conforming behavior. The interaction will need to be reexamined using a stronger manipulation, both online and in the lab.

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Table 1: Conformity Scores Between Suspicious and Non-Suspicious Participants.

Suspicion Group	Mean	s.d.	<i>T</i>	<i>p</i>
Suspicious	4.39	1.06		
Non-Suspicious	4.65	0.99	1.39	.17

Table 2a: Means and Standard Deviations for Conformity

	Control	Anonymous	Named
Conformity	3.92 (.66) ^a	4.56 (.94) ^b	4.75 (1.03) ^b

Means with the same superscript are not significantly different.

Table 2b: Correlations between Conformity, Perception of Conformity, Manipulation Check, and Personality Variables.

	Conformity	Perception of Conformity	Manipulation Check	Moralistic Bias	Egoistic Bias	PFC	Self-Monitoring
Conformity		.203**	.144	.124	.020	.003	.006
Perception of Conformity			.350**	-.079	-.136	.167*	.027
Manipulation Check				-.028	-.084	.142	.042
Moralistic Bias					.432**	.112	-.300**
Egoistic Bias						.029	-.158*
PFC							-.082

*Correlation is significant at the 0.05 level

**Correlation is significant at the 0.01 level

Table 3: Regression Table for Hypothesis 1: Conformity and Moralistic Bias

Variable Set	Variable	β	t	p
Step 1	Moralistic Bias	.124	t(1,243) = 1.94	.053
$R^2 = .015, F(1,243) = 3.77, p=.053$				
Step 2	Moralistic Bias	.103	t(3,241) = 1.73	.086
	G1 ^a	.314	t(3,241) = 4.60	.000
	G2 ^a	.404	t(2,241) = 5.92	.000
$R^2 \text{ Change} = .136, F(2,241) = 19.37, p<.001$				
Step 3	Moralistic Bias	-.046	t(5,239) = -.450	.653
	G1 ^a	-.105	t(2, 239) = -.330	.742
	G2 ^a	-.141	t(2, 239) = -.444	.657
	Moralistic*G1 ^a	.442	t(2, 239) = 1.36	.176
	Moralistic*G2 ^a	.573	t(2, 239) = 1.76	.079
$\text{Change} = .012, F(5,239) = 1.71, p=.183$				

^aG1 and G2 were dummy coded variables used to represent the 3 levels of the condition variable.

Table 4: Regression Table for Conformity and Moralistic Bias Planned Contrast by Condition

Variable Set	Variable	β	t	p
Step 1	Moralistic Bias	.124	$t(1,244) = 1.94$	.053
	$R^2 = .015, F(1,243) = 3.77, p=.053$			
Step 2	Moralistic Bias	.103	$t(2,242) = 1.73$	.085
	Planned Contrast ^a	.361	$t(2,242) = 6.06$	.000
	$R^2 \text{ Change} = .130, F(1,242) = 36.69, p=.001$			
Step 3	Moralistic	-.046	$t(3,244) = -.046$	.653
	Planned Contrast ^a	.020	$t(3,244) = -.45$	.650
	Moralistic*Planned Contrast ^a	.336	$t(3,244) = 1.81$	.072
	$R^2 \text{ Change} = .011, F(1,241) = 3.26, p=.072$			

^aPlanned Contrast is the contrast between the control and the combination of the anonymous and named conditions

Table 5: Regression Table for Hypothesis 1a: Conformity Perception and Moralistic Bias

Variable Set	Variable	β	t	p
Step 1	Conformity	.203	t(1,160) = 2.63	.009
	$R^2 = .041, F(1,160) = 6.90, p=.009$			
Step 2	Conformity	.224	t(2,159) = 2.86	.005
	Moralistic	-.118	t(2,159) = -1.50	.135
	$R^2 \text{ Change} = .013, F(1,159) = 2.26, p=.135$			
Step 3	Conformity	.215	t(3,158) = 2.74	.007
	Moralistic	-.116	t(3,158) = -1.49	.139
	Comparison ^a	.086	t(3,158) = 1.11	.269
	$R^2 \text{ Change} = .007, F(1,158) = 1.23, p=.269$			
Step 4	Conformity	.217	t(4,157) = 2.76	.007
	Moralistic	-.057	t(4,157) = -.52	.604
	Comparison ^a	.370	t(4,157) = 1.01	.315
	Moralistic*Comparison ^a	-.297	t(4,157) = -.79	.430
	$R^2 \text{ Change} = .004, F(1,157) = 0.63, p=.430$			

^aComparison between the anonymous and named groups

Table 6: Regression Table for Hypothesis 2: Conformity and Egoistic Bias

Variable Set	Variable	β	t	p
Step 1	Egoistic Bias	.020	$t(1,243) = .31$	.756
$R^2 = .000, F(1,243) = 0.18, p=.676$				
Step 2	Egoistic Bias	-.002	$t(3,241) = -.03$	.973
	G1 ^a	.320	$t(3,241) = 4.65$	.000
	G2 ^a	.411	$t(3,241) = 5.97$	.000
$R^2 \text{ Change} = .109, F(2,241) = 19.75, p<.001$				
Step 3	Egoistic Bias	.018	$t(5,239) = .16$	.874
	G1 ^a	.503	$t(5,239) = 1.08$	.282
	G2 ^a	.389	$t(5,239) = .823$	.411
	Egoistic*G1 ^a	-.188	$t(5,239) = -.40$	.693
	Egoistic*G2 ^a	.021	$t(5,239) = .04$	.965
$R^2 \text{ Change} = .001, F(2,239) = 0.13, p=.881$				

^aG1 and G2 were dummy coded variables used to represent the 3 levels of the condition variable.

Table 7: Regression Table for Hypothesis 2: Conformity and Egoistic Bias Planned Contrast by Condition

Variable Set	Variable	β	t	p
Step 1	Egoistic Bias	.001	$t(1,244) = .31$	.756
$R^2 = .000, F(1,243) = 0.097, p=.756$				
Step 2	Egoistic Bias	-.003	$t(2,242) = -.04$	.967
	Planned Contrast ^a	.367	$t(2,242) = 6.12$	.000
$R^2 \text{ Change} = .134, F(1,242) = 37.45, p<.001$				
Step 3	Egoistic Bias	.018	$t(3,241) = .16$	.874
	Planned Contrast ^a	.455	$t(3,241) = 1.10$	.273
	Egoistic*Planned Contrast ^a	-.093	$t(3,241) = -.22$	.830
$R^2 \text{ Change} = .000, F(1,241) = .05, p=.830$				

^bPlanned Contrast is the contrast between the control and the combination of the anonymous and named conditions

Table 8: Regression Table for Hypothesis 2a: Conformity Perception and Egoistic Bias

Variable Set	Variable	β	t	p
Step 1	Conformity	.203	t(1,160) = 2.638	.009
	$R^2 = .041, F(1,160) = 6.93, p=.009$			
Step 2	Conformity	.202	t(2,159) = 2.62	.010
	Egoistic Bias	-.134	t(2,159) = -1.74	.083
$R^2 \text{ Change} = .018, F(1,159) = 3.04, p=.083$				
Step 3	Conformity	.193	t(3,158) = 2.50	.013
	Egoistic Bias	-.134	t(3,158) = -1.74	.084
	Comparison ^a	.087	t(3,158) = 1.12	.264
$R^2 \text{ Change} = .007, F(1,158) = 1.25, p=.264$				
Step 4	Conformity	.192	t(4,157) = 2.48	.014
	Egoistic Bias	-.165	t(4,157) = -1.56	.121
	Comparison ^a	-.130	t(4,157) = -.26	.796
	Egoistic*Comparison ^a	.221	t(4,157) = .44	.663
$R^2 \text{ Change} = .001, F(1,157) = 0.19, p=.663$				

^aComparison between the anonymous and named groups

Table 9 Regression Table for Hypothesis 3: Conformity and Preference for Consistency

Variable Set	Variable	β	t	p
Step 1	PFC	.003	t(1,2437) = .42	.966
$R^2 = .003, F(1,243) = .002, p=.966$				
Step 2	PFC	.025	t(3,241) = .42	.675
	G1 ^a	.321	t(3,241) = 4.68	.000
	G2 ^a	.412	t(3,241) = 6.00	.000
$R^2 \text{ Change} = .142, F(2,241) = 19.90, p<.001$				
Step 3	PFC	.007	t(5,239) = .67	.947
	G1 ^a	.334	t(5,239) = 1.00	.319
	G2 ^a	.261	t(5,239) = .76	.446
	PFC *G1 ^a	-.014	t(5,239) = .041	.967
	PFC *G2 ^a	.154	t(5,239) = .454	.651
$R^2 \text{ Change} = .001, F(2,239) = 0.15, p=.864$				

^aG1 and G2 were dummy coded variables used to represent the 3 levels of the condition variable.

Table 10: Regression Table for Conformity and Preference for Consistency Planned Contrast by Condition

Variable Set	Variable	β	t	p
Step 1	PFC	.003	t(1,243) = .42	.966
$R^2 = .000, F(1,243) = 0.002, p=.966$				
Step 2	PFC	.025	t(2,242) = .42	.675
	Planned Contrast ^a	.368	t(2,242) = 6.15	.000
$R^2 \text{ Change} = .135, F(1,242) = 37.76, p<.001$				
Step 3	PFC	.007	t(3,241) = .07	.947
	Planned Contrast ^a	.304	t(3,241) = 1.03	.302
	PFC*Planned Contrast ^a	.067	t(3,241) = .22	.823
$R^2 \text{ Change} = .000, F(1,241) = .05, p=.823$				

^bPlanned Contrast is the contrast between the control and the combination of the anonymous and named conditions

Table 11: Regression Table for Hypothesis 4: Conformity and Self-Monitoring

Variable Set	Variable	β	t	p
Step 1	Self-Monitoring	.006	$t(1,243) = .10$	.924
$R^2 = .000, F(1,243) = 0.01, p=.924$				
Step 2	Self-Monitoring	-.033	$t(3,241) = -.56$	.579
	G1 ^a	.323	$t(3,241) = 4.69$	.000
	G2 ^a	.414	$t(3,241) = 6.01$	.000
$R^2 \text{ Change} = .142, F(2,241) = 19.98, p<.000$				
Step 3	Self-Monitoring	.011	$t(5,239) = .18$	.861
	G1 ^a	-.016	$t(5,239) = -.07$	.947
	G2 ^a	-.057	$t(5,239) = -.23$	.817
	Self-Monitoring *G1 ^a	.346	$t(5,239) = 1.47$	.143
	Self-Monitoring *G2 ^a	.482	$t(5,239) = 2.00$	.047
$R^2 \text{ Change} = .021, F(2,239) = 2.97, p=.053$				

^aG1 and G2 were dummy coded variables used to represent the 3 levels of the condition variable.

Appendices

- ___ 23. There have been occasions when I have taken advantage of someone.*
- ___ 24. I never swear.
- ___ 25. I sometimes try to get even rather than forgive and forget.*
- ___ 26. I always obey laws, even if I'm unlikely to get caught.
- ___ 27. I have said something bad about a friend behind his or her back.*
- ___ 28. When I hear people talking privately, I avoid listening.
- ___ 29. I have received too much change from a salesperson without telling him or her.*
- ___ 30. I always declare everything at customs.
- ___ 31. When I was young I sometimes stole things.*
- ___ 32. I have never dropped litter on the street.
- ___ 33. I sometimes drive faster than the speed limit.*
- ___ 34. I never read sexy books or magazines.
- ___ 35. I have done things that I don't tell other people about.*
- ___ 36. I never take things that don't belong to me.
- ___ 37. I have taken sick-leave from work or school even though I wasn't really sick.*
- ___ 38. I have never damaged a library book or store merchandise without reporting it.
- ___ 39. I have some pretty awful habits.*
- ___ 40. I don't gossip about other people's business.

*Items keyed in the negative direction

Appendix B:

Preference for Consistency Scale

Please rate your opinion on the following items based on the following scale:

-4 -3 -2 -1 0 1 2 3 4
Strongly Disagree Neutral Strongly Agree

1. I prefer to be around people whose reactions I can anticipate.
2. It is important to me that my actions are consistent with my beliefs.
3. Even if my attitudes and actions seemed consistent with one another to me, it would bother me if they did not seem consistent in the eyes of others.
4. It is important to me that those who know me can predict what I will do.
5. I want to be described by others as a stable, predictable person.
6. Admirable people are consistent and predictable.
7. The appearance of consistency is an important part of the image I present to the world.
8. It bothers me when someone I depend on is unpredictable.
9. I don't like to appear as if I am inconsistent.
10. I get uncomfortable when I find my behavior contradicts my beliefs.
11. An important requirement for any friend of mine is personal consistency.
12. I typically prefer to do things the same way.
13. I dislike people who are constantly changing their opinions.
14. I want my close friends to be predictable.
15. It is important to me that others view me as a stable person.
16. I make an effort to appear consistent to others.
17. I'm uncomfortable holding two beliefs that are inconsistent.
18. It doesn't bother me much if my actions are inconsistent.*

*Reverse scored

Appendix C:

Self-Monitoring Scale (18-item Version)

The following statements concern your personal reactions to a number of different situations. No two statements are exactly alike, so consider each statement carefully before answering. If a statement is True or Mostly True of you, choose True (T). If a statement is False or Not Usually True for you, choose False (F). It is important that you answer as honestly as possible. Remember that your answers are completely confidential.

1. I find it hard to imitate the behavior of other people. (F)
2. At parties and social gatherings, I do not attempt to do or say things that others will like. (F)
3. I can only argue for ideas which I already believe. (F)
4. I can make impromptu speeches even on topics about which I have almost no information.(T)
5. I guess I put on a show to impress or entertain others. (T)
6. I would probably make a good actor. (T)
7. In a group of people I am rarely the center of attention. (F)
8. In different situations and with different people, I often act like very different persons. (T)
9. I am not particularly good at making other people like me. (F)
10. I'm not always the person I appear to be. (T)
11. I would not change my opinions (or the way I do things) in order to please someone or win their favor. (F)
12. I have considered being an entertainer. (T)
13. I have never been good at games like charades or improvisational acting. (F)
14. I have trouble changing my behavior to suit different people and different situations. (F)
15. At a party I let others keep the jokes and stories going. (F)
16. I feel a bit awkward in public and do not show up quite as well as I should. (F)
17. I can look anyone in the eye and tell a lie with a straight face (if for a right end). (T)
18. I may deceive people by being friendly when I really dislike them. (T)

Note: Keying is given by either T (true) or F (false) in parentheses following items. High self-monitoring individuals tend to answer in the keyed direction; low self-monitoring individuals tend to answer in the alternative direction.

Appendix E:

Demographics Questionnaire

Demographic Items:

Your current age: ____ years old

Gender: ____ Male ____ Female

Year in college: ____ Freshman ____ Sophomore ____ Junior ____ Senior

Are you: ____ Married
____ Single
____ Dating
____ In a long-term relationship

Are you: ____ American-Indian or Alaska Native
____ Asian-American
____ Black or African-American
____ Hispanic or Latino
____ Native Hawaiian or Other Pacific Islander
____ White or Caucasian
____ Other _____

Appendix F:

Instructions to Participants

Perception of Images (anonymous condition): We would like you to rate how much you like some images. There are no correct answers: we are interested in how much *you* like each image. You have been randomly assigned to join an on-line chat-room during the study. You will be joining 4 other students who are also currently participating in this study and will rate the images together as a group. You will be able to see everyone else's ratings, and they will be able to see yours, but no names will be used. All participants will be labeled as "Participant" followed by a number. That number will be determined based on when you joined the chat-room. In other words, if you are the 2nd participant to join the chat-room, your ratings will appear as "Participant 2". All participants will rate the images one-at-a-time, and the computer will prompt you when it is your turn to rate the image. You will rate the images at different times, so there might be times that you will rate the item first, other times second, etc. Please rate the images using the following scale: -4 (dislike very much) to +4 (like very much), with 0 being neutral. At the end of the image rating portion of the study, all of the participants will continue in the chat-room discuss everyone's thought processes while rating the images. This is so that we can gain a better understanding of what types of images college students prefer, and why.

Perception of Images (named condition): We would like you to rate how much you like some images. There are no correct answers: we are interested in how much *you* like each image. You have been randomly assigned to join an on-line chat-room during the study. You will be joining 4 other students who are also currently participating in this study and will rate the images together as a group. You will be able to see everyone else's ratings, and they will be able to see yours. The first name and initial of the last names of all participants will be visible to everyone. However, when the computer records your data, it will not record your name. All participants will rate the images one-at-a-time, and the computer will prompt you when it is your turn to rate the image. You will rate the images at different times, so there might be times that you will rate the item first, other times second, etc. Please rate the images using the

following scale: -4 (dislike very much) to +4 (like very much), with 0 being neutral. At the end of the image rating portion of the study, all of the participants will continue in the chat-room discuss everyone's thought processes while rating the images. This is so that we can gain a better understanding of what types of images college students prefer, and why. Please enter your first name and first initial of your last name as it appears on the Psychology Subject Pool Website. (*A box will be provided for them to enter the name*).

Perception of Images (control condition): We would like you to rate how much you like some images. Based on random assignment, you will not be joining a chat-room with other participants. You will rate the images one at a time. The computer will prompt you when it is your turn to rate the image. There are no correct answers: we are interested in how much *you* like each image. Please rate the images using the following scale: -4 (dislike very much) to +4 (like very much), with 0 being neutral.

Final Questionnaires (all conditions): In this section, you will be asked questions on a wide range of topics about yourself and your behavior. We are interested in what you truly think and/or feel so please answer as honestly as possible. Different questions may include different rating scales, so it is critical that you read the instructions, each question, and the possible answers very carefully. There is no time limit for this portion of the study.

Appendix G

Suspicion Probe

1. Did you have any questions about anything that wasn't clear to you?
2. Did everything make sense to you?
3. What do you think was the purpose of the experiment?
4. Did it ever occur to you that there was more to this experiment than meets the eye?

Something we didn't tell you about? If yes, what?

5. Please write any comments you have about the study.

Appendix H

Debriefing

Before you finish, I'd like to tell you a little more about this study. In this study, some individuals just rated the images, and some individuals joined an on-line chat-room where they rated the images with other participants. The other participants in the study were not real participants. The ratings were part of a computer program. The false ratings were given in order to determine whether the opinions of students' perceived peers might influence their own ratings. Past research has found that when people are part of a group, their opinions can be influenced by the others in a group. The current study is examining whether this also occurs when people are in a virtual group. Further, some participants saw names of other participants, and some saw the other participants labeled with participant numbers. We are also examining whether remaining anonymous in a virtual group influences the likelihood that students' ratings will be influenced by other perceived students.

All participants filled out some questionnaires asking questions about themselves. Most of these questionnaires asked you questions about your personality or your opinions. This information will be used to examine whether there are any personality variables that are related to whether an individual is influenced by others in a virtual setting.

If you have any questions about this study, please feel free to contact either Kelly Pivik at pivik001@crimson.ua.edu or Dr. Debra McCallum at dmccallu@bama.ua.edu. We would be happy to answer any of your questions or concerns about your participation in this study. You know that all of your responses are completely anonymous and your name won't be associated in any way with our findings.

Finally, I'd like to ask you not to tell anyone else about what happens during this study or what the real purpose of the study is. If people come into the study with any sort of suspicions or prior expectations, it could really bias our results. Even if you told someone who isn't in PY 101, word could get around and have severe effects on our results. *(A box will be placed here for them to check "I understand and agree not to discuss this study with other students")*

In the box below, please leave any comments you have about the study in general. The feedback on the study is very helpful to us. *(A comment box will be placed here for the written comments.)*

Thank you for participating in our study. Please print this sheet for your records. Please click "continue" to move to the last page of the study.