Cognitive dissonance theory has evolved since Leon Festinger's original proposal in 1957. Festinger believed cognitive dissonance was the result of an innate drive present in all individuals to maintain cognitive consistency. However, Cialdini, Trost, and Newson (1995) demonstrated that only individuals with a high preference for consistency (PFC) act as dissonance theory predicts. PFC can be conceptualized as an internalized need to act or seem consistent with one's previous actions. Many studies have examined and supported the relationship between PFC and cognitive dissonance, yet the underlying reasons behind high-PFC individuals' need for consistency have gone largely unexamined.

Festinger's (1957) theory of cognitive dissonance assumed that all individuals prefer cognitions consistent with their belief system, a phenomenon labeled the principle of cognitive consistency. When an individual's belief system is challenged by conflicting cognitions, that individual experiences an aversive intrapersonal state known as cognitive dissonance. Dissonance is motivational in nature, and individuals may employ three dissonance-reduction techniques to restore cognitive consistency: (a) changing beliefs, (b) changing actions, or (c) changing perception of the action. More recently, Koppers and Cato (2008) demonstrated that trivializing the source of dissonance has also been proven effective in restoring cognitive consistency. For example, Nail et al. (2001) demonstrated that individuals experienced cognitive dissonance after imagining being stood up by a friend. Being stood up by a friend clashed with the individual's belief of how a friend should behave, thus violating the principle of cognitive consistency and causing cognitive dissonance. Festinger believed this internalized need to act or seem consistent was an innate drive applicable to everyone. However, research by Cialdini et al. (1995) revealed that not everyone was subject to Festinger's principle of cognitive consistency.

ABSTRACT. Dissonance affect and behavioral intention measures were added to a dissonance-inducing, role-playing paradigm to examine the tendency of individuals with a high preference for consistency (PFC) to experience dissonance more intensely. In the present study, high- and low-PFC individuals imagined being stood up by a friend, Chris, with either sufficient justification (Chris missed dinner because of a car accident) or insufficient justification (Chris went out with another friend). Dissonance was measured by subsequent ratings of Chris as a friend. As expected, high-PFC individuals were more susceptible to dissonance effects than low-PFC individuals on the friend, \( F(1, 71) = 132.52, p < .001, \eta^2 = .65 \), and behavioral intention measures, \( F(1, 71) = 6.68, p < .02, \eta^2 = .09 \), \( F(1, 71) = 3.03, p < .09, \eta^2 = .04 \), but not on the dissonance affect measures. Responses to the behavioral intention measures indicated that dissonance is practically rather than emotionally motivated. Overall, these findings strengthened the growing consensus that cognitive dissonance theory applies more strongly to high-than low-PFC individuals.

Further Evidence That Individuals With a High Preference for Consistency Are More Susceptible to Cognitive Dissonance

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Gialdini et al. (1995) revised cognitive dissonance theory by demonstrating that an individual with a high-PFC experiences cognitive dissonance more intensely than a low-PFC individual. Cialdini et al. developed the PFC scale to measure an individual’s preference for consistency. Participants were given this scale and classified as either having a low- or high-PFC based on a either a median or tercile split. By comparing high- and low-PFC individuals’ responses to three traditional dissonance-inducing paradigms, Cialdini et al. concluded that high-PFC individuals respond to incoming information by examining its relationship with previously established information and factors, and low-PFC individuals appear relatively unconstrained by past experience, and are more likely to be responsive and receptive to new information for its own sake. These personality differences often lead to differences in behavior. For example, Council, Grant, Smith, and Matz (1997) demonstrated that high-PFC individuals were more likely than low-PFC individuals to follow through on their commitments to attend scheduled experiments as part of their introductory psychology requirements. By aligning their present behavior with past commitments, high-PFC individuals avoided the cognitive dissonance of not acting consistently.

Nail and colleagues (2001) conceptually replicated the Cialdini et al. (1995) findings using a role-playing paradigm. To induce dissonance, high and low-PFC participants were asked to vividly imagine being stood up by a friend, Chris, for either sufficient justification (Chris missed dinner because of a car accident) or insufficient justification (Chris went out with another friend). The researchers predicted that insufficient participants would experience more dissonance because, as stated earlier, being stood up for no good reason violates Festinger’s (1957) principle of cognitive consistency. Dissonance was measured by post-scenario ratings of Chris as a friend on an 11-point Likert-type scale. By derogating Chris as a friend, participants employed the dissonance reduction technique of changing their belief, thus restoring cognitive consistency between Chris’s actions and Chris’s status as a friend. Lower friend ratings indicated a greater violation of the cognitive consistency principle and higher cognitive dissonance. No derogation of Chris was necessary for sufficient participants because Chris’s good reason justified the stand-up. In accordance with Festinger’s theory, insufficient participants gave significantly lower friend ratings to Chris than sufficient participants. Furthermore, the study successfully replicated Cialdini et al.’s findings in principle because high-PFC/insufficient participants gave Chris significantly lower friend ratings ($M = 3.75, SD = 2.01$) than the low-PFC/insufficient participants ($M = 5.15, SD = 2.01$).

The results from both Nail et al. (2001) and Cialdini et al. (1995) were groundbreaking because they provided an explanation for the lack of consistent effects that had plagued cognitive dissonance researchers prior to the development of the PFC scale. All of the mentioned cognitive dissonance studies have demonstrated that there is a definite relationship between PFC and dissonance, but there has previously been no investigation of exactly why high-PFC individuals experience dissonance more intensely than low-PFC individuals. Are high-PFC individuals emotionally upset when their experiences are not consistent with their belief system, or are they practically structuring their reality to be as consistent with their belief system as possible? By examining the motives behind high-PFC participants’ derogation of Chris in the role-playing paradigm, the current study attempted to understand why a high-PFC individual experiences dissonance more intensely than a low-PFC individual.

The current study was an attempt to replicate the extant justification/PFC results in the Nail et al. (2001) role-playing paradigm, and to extend the analysis to include measures of participants’ dissonance affect and behavioral intentions. These variables were used as an attempt to gain insight into high-PFC participants’ tendency to derogate Chris as a friend. Dissonance affect was conceived as the degree to which participants were upset or offended by being stood up. The behavioral intentions measures examined the likelihood that participants would accept or be the first to invite Chris to dinner in the future. Behavioral intention measures are generally regarded as stronger dependent measures than the mere self-reported attitude change used in previous studies (Aronson, Ellsworth, Carlsmith, & Gonzales, 1990).

In accordance with the Cialdini et al. (1995) and Nail et al. (2001) findings, we predicted that high-PFC/insufficient participants would give Chris significantly lower friend ratings than low-PFC insufficient participants. Furthermore, if high-PFC participants’ cognitive dissonance was emotionally motivated, their scores on the upset and offended measures of dissonance affect would be higher.
than low-PFC individuals. Alternatively, if high-PFC participants’ dissonance was practically motivated to avoid future dissonance, their scores on the accept and first measures of behavioral intentions would be lower than low-PFC individuals. If these measures yielded significant results with respect to PFC and justification, Cialdini and colleagues’ theory of PFC’s effect on susceptibility to dissonance would be further supported. Furthermore, the dissonance affect and behavioral intentions measures determined if high-PFC individuals experienced dissonance as the result of emotional and/or practical reasons.

**Method**

**Participants**
Participants included 81 volunteers (43 men and 38 women) enrolled in either general psychology or research methods courses at a southern central state university. Approximately 95% of participants fell in the average age range of traditional college students (18–22 years). No ethnicity information was gathered. Students received bonus credit toward their final grade in exchange for their participation. Students who did not want to participate in the study had the option of writing a one-page summary of a psychological article of their choosing for the same bonus points.

**Procedure**
Students interested in volunteering for research took the short form of the Cialdini et al. (1995) PFC scale in a mass testing session near the start of the spring semester. The short form PFC scale has nine questions rated on a 9-point Likert-type scale from 1 (strongly agree) to 9 (strongly disagree). Questions included “I typically prefer to do things the same way” and “I want my close friends to be predictable.” Approximately one month later, students were told about the current project. Data collection took place during a regular class session.

All students acceded to the instructor’s invitation to participate. During the research session itself, the students were informed that they would be simply reading and responding to a brief scenario that might happen to anyone.

Two scenarios to complete a 2 (Justification: sufficient vs. insufficient) x 2 (PFC: low vs. high) factorial design were placed every other one in a stack before class so that high- and low-PFC participants were unaware of the two experimental conditions. After describing the procedure and establishing informed consent, the instructor handed the student on the first seat in each row a stack of scenarios that corresponded to the number of students in that row. Thus, the course instructor was blind as to participants’ experimental conditions. Participants were also blind because they were not informed that the scenarios were different until after the data had been collected. In the sufficient justification condition, the instructions read:

Please try to vividly imagine the following happening to you. A friend of yours, Chris, calls and asks you to go out for dinner (You see Chris as just a friend and not a potential romantic partner). The two of you agree to meet at a restaurant at a certain time. You arrive at the agreed upon time, but Chris does not. After waiting 15 minutes or so, you give Chris a call but get no answer. Later that evening, however, Chris calls you. When you ask what happened, you learn that Chris was involved in a minor traffic accident on the way to the restaurant. Although not seriously injured, Chris had to go to the police station to help fill out a lengthy accident report.

The instructions were identical in the insufficient justification condition except for the reason Chris gave for not showing up for dinner:

Later that evening, however, Chris calls you. When you ask what happened, Chris tells you that the dinner “just didn’t work out.” After inviting you, Chris had received an invitation from a different friend to go out. Chris had not seen this friend in a long time, so Chris decided to go out with him/her instead.

The scenario was followed by a questionnaire comprised of five items all measured on 11-point Likert-type scales. The first primary dependent variable, friend, measured cognitive dissonance with the question, “After hearing Chris’s explanation, to what degree would you still consider Chris a friend?” (1 = not a very good friend to 11 = a good friend). Items 2 through 5 included the dissonance affect and behavioral intention measures. The second item, offend, measured dissonance affect with “After hearing Chris’s explanation, how offended would you be for Chris missing your dinner date?” (1 = not offended at all to 11 = very offended). The third item, accept, measured behavioral intentions with “If Chris were to now ask you out again, how likely would you be to accept the invitation?” (1 = very unlikely to 11 = very likely). The fourth
item, first, also measured behavioral intentions with “How likely is it that you would be the first to invite Chris to do something?” (1 = very unlikely to 11 = very likely). The fifth item, upset, further measured dissonance affect with “After hearing Chris’s explanation, how upset with Chris would you be for missing your dinner date?” (1 = not upset at all to 11 = very upset). Finally, age and sex data were collected.

After completing the questionnaire, participants passed in their responses. Participants remained anonymous by having each identified only by a research number (the last 4 numbers of their ID numbers). A complete debriefing occurred near the middle of the semester during a regular class meeting. Participants were fully informed of the theoretical constructs, hypotheses, and results. The study was conducted with institutional review board approval (IRB) and adhered to IRB ethical standards.

Results
We computed a PFC score for each participant by taking the average of the nine items. In line with Cialdini et al. (1995) and Nail et al. (2001), participants were divided into low- and high-PFC based on a median split of the PFC scores. Four additional participants were eliminated (two men and two women) because their PFC score fell on the median, leaving 75 participants for the analyses (41 high-PFC, 34 low-PFC).

Mean post-scenario ratings for Chris as a friend as a function of justification and PFC are presented in Figure 1. A 2 x 2 Analysis of Variance (ANOVA) of these data yielded a significant main effect for justification, $F(1, 71) = 132.52$, $p < .001$, $\eta^2 = .65$. After being stood up, sufficient participants overall rated Chris as a much better friend ($M = 9.64$, $SD = 1.46$) than insufficient participants ($M = 4.89$, $SD = 2.039$). The analysis also produced a significant main effect for PFC. High-PFC participants overall rated Chris as less of a friend ($M = 6.68$, $SD = 2.97$) than did low-PFC participants ($M = 7.93$, $SD = 2.88$), $F(1, 71) = 4.16$, $p = .05$, $\eta^2 = .06$.

To explore for other potential differences, we submitted the friend, offend, accept, first, and upset ratings to a 2 (Justification: sufficient vs. insufficient) x 2 (PFC: low vs. high) multivariate analysis of variance (MANOVA). All of these variables yielded significant effects with regard to the justification main effect, with $F$s ranging from 132.52, $p < .001$, for friend to 30.35, $p < .001$, for first. More to the point, however, was the significant multivariate main effect for PFC regarding accept (see Figure 2). High-PFCs overall reported that they would be much less likely to accept a future invitation from Chris ($M = 3.73$, $SD = 3.00$) than did low-PFCs ($M = 5.56$, $SD = 3.18$), $F(1, 71) = 6.08$, $p = .012$, $\eta^2 = .09$. Furthermore, the multivariate main effect for first approached significance (see Figure 3). High-PFCs reported that they would be somewhat less likely to be first to invite Chris to do something in the future ($M = 5.15$, $SD = 2.78$) than did low-PFCs ($M = 6.38$, $SD = 2.79$), $F(1, 71) = 3.03$, $p = .086$, $\eta^2 = .04$. All other potential main and interaction effects involving PFC were nonsignificant (all absolute $F$s < 1).

Discussion
The results effectively replicated Cialdini et al.’s (1995) findings that high-PFC individuals are more susceptible to dissonance effects. As expected, Chris’s unfriendly actions in the insufficient justification scenario clashed with high-PFC participants’ internalized need for friends to act consistently friendly, because high-PFC insufficient participants derogated Chris more than low-PFC/insufficient participants. Moreover, high-PFC sufficient participants derogated Chris more than low-PFC sufficient participants regardless of the fact that Chris’s reason for missing dinner was justified (i.e., the car accident). High-PFC participants experienced more cognitive
dissonance even when justification for the stand-up was adequate. Taken with the previous findings of Cialdini et al. (1995) and Nail et al. (2001), it is clear that high-PFC participants are more susceptible to cognitive dissonance than low-PFC participants.

As for the added behavioral intentions and dissonance affect measures, only the behavioral intentions measures produced significant results (see Figures 2 and 3). High-PFC participants reported that they would be much less likely to accept a future invitation from Chris on an 11-point Likert-type scale ($M = 3.73$, $SD = 3.00$) than did low-PFC participants ($M = 5.76$, $SD = 3.18$). High-PFC participants also reported that they would be somewhat less likely to be first to invite Chris to do something in the future ($M = 5.15$, $SD = 2.78$) than did low-PFCs ($M = 6.38$, $SD = 2.79$). Participant responses to the measures of dissonance affect, upset and offended, were not significantly different. High-PFC participants concerned themselves more with planning and avoiding future interactions with Chris than emotionally responding to being stood up. Just as high-PFC participants in Council et al. (1997) followed through on their commitments more than low-PFC participants, high-PFC participants in the current study were less likely to make plans with an individual who did not follow through with a commitment. Thus, these findings, in accordance with Council et al., indicated that the dissonance experienced by high-PFC individuals resulted from a motivation to avoid future inconsistencies and subsequent dissonance. Furthermore, the responses on the behavioral intention measures were particularly significant because many of the existing dissonance studies have been limited to self-reported attitude change as dependent measures of dissonance (Nail, Bedell, & Little, 2003; Nail, McGregor, Drinkwater, Still, & Thompson, 2009).

One limitation of the present research was that, although the effect sizes, $\eta^2$, for the justification main effects were in a range usually regarded as large (.30 to .65; Cohen, 1987), the effect sizes for the PFC main effects were in a range usually regarded as small (.06 to .09). To this limitation, we point out that these small effect sizes were obtained in the context of a role-playing paradigm. Perhaps the PFC effect sizes would be somewhat larger in a context where high- and low-PFC individuals were actually stood up rather than just imagining being stood up. However, deception would have to be used in a real life scenario, which is counter-productive to the role-playing paradigm’s original intent to measure dissonance without deception. Moreover, though the experiment did not deal with participant behavior directly, it did measure behavioral intentions, thus surpassing past studies’ limitations that solely measured
The insignificant results on the dissonance affect measures were a surprising finding that could prompt further research concerning why high-PFC individuals’ dissonance was practically rather than emotionally motivated. An interesting interpretation of these results could come from the work of evolutionary psychologist David Buss. Buss (2008) proposed that communicating one’s dissatisfaction with a friend’s actions may be an evolved psychological mechanism that protects the individual from future disappointment. Thus, high-PFC individuals’ cognitive dissonance and subsequent responses to the behavioral intention measures could be interpreted as the result of an evolutionary past in which making plans with unreliable individuals resulted in lower fitness. To test this evolutionary interpretation, a future study could be run in which one group of high-PFC/insufficient participants are told Chris is a family member and another group is told he is a friend. According to Hamilton’s (1964) theory of inclusive fitness, individuals are more apt to act altruistically if the benefactor shares genes because unconditional helping of kin increases genetic fitness. Therefore, high-PFC/insufficient participants in the family condition would be more likely to accept or be the first to invite Chris out in the future than high-PFC/insufficient participants in the friend condition.

Each study building upon the one before, dissonance research has evolved as it continues to expand upon a state of mind that one experiences when expectations come at odds with reality. In 1957, Festinger first theorized and demonstrated the existence of cognitive dissonance as a state of mind. Cialdini et al. (1995) then expounded upon the theory’s basic assumptions to demonstrate that one’s experience of cognitive dissonance is relative to PFC. The current study expanded dissonance research by using behavioral intention measures to successfully demonstrate high-PFC-participants’ heightened susceptibility to dissonance with a novel approach that gained insight into the underlying cause of high-PFC individuals’ dissonance. Whereas previous studies have relied upon self-reported attitude change to demonstrate dissonance, the behavioral intention measures used in the current study are generally regarded as more reliable dependent measures, and further strengthened the link between PFC and cognitive dissonance (Aronson et al., 1990). Furthermore, responses to the behavioral intentions and dissonance affect measures revealed that dissonance was practically rather than emotionally motivated. Dissonance resulting from a practical need to avoid future inconsistencies and possibly avoid hazardous relationships is an interesting interpretation of the results that could easily translate to research in evolutionary psychology. The knowledge gained in the current study supports and strengthens years of dissonance research and raises interesting questions that may broaden dissonance research into new areas. Thus, cognitive dissonance theory continues to evolve.

References


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