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Report

Dissonance averted: Self-concept organization moderates the effect of hypocrisy on attitude change

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ABSTRACT

The current work explored how self-concept representation affects how experiencing dissonance results in changing one's attitudes in response to acknowledging hypocrisy. We found a relation between self-complexity and attitude change after admitting past hypocritical actions. Specifically, people lower in self-complexity changed their attitudes to bring them more in line with their transgressions (presumably to quell the especially strong feelings of unpleasantness resulting from their acknowledging behavior-belief discrepancies) whereas those greater in self-complexity showed more bolstering of their attitudes following hypocrisy. This relation between self-complexity and attitude change following hypocrisy was eliminated when participants were given a chance to reaffirm their sense of personal value and integrity through other means (i.e., self-affirmation). Implications for how self-concept representation may play a role in moderating a number of psychological phenomena, ranging from goal attainment to stereotype threat, are discussed.

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Introduction

Acting in ways that are inconsistent with one's beliefs and ideals produces powerful psychological consequences. Specifically, people experience cognitive dissonance, an aversive state of psychological tension and discomfort, when their thoughts and actions are in conflict (Cooper & Fazio, 1984; Elliot & Devine, 1994; Festinger, 1957; Stone & Cooper, 2001). These negative affective experiences not only make people feel uncomfortable, but they motivate people to achieve their goals, to reduce unpleasant selfawareness, and to change their attitudes and beliefs (Carver, 2004; Duval & Wicklund, 1972; Higgins, 1987). For instance, people who promote safety yet acknowledge past unsafe sexual practices later buy more condoms (Stone, Aronson, Crain, Winslow, & Fried, 1994) and individuals who make sexist assumptions that violate their egalitarian beliefs provide more generous affirmative action judgments in the wake of their guilt (Sherman & Gorkin, 1980). In addition to changing behaviors, people can respond to dissonance by changing their attitudes to promote consistency too (Fried, 1998; McKimmie et al., 2003). In short, acting in ways that contradict one's ideals compels people to modify their beliefs or actions to eliminate inconsistencies and restore psychological consonance (Aronson, 1997; Stone & Fernandez, 2008).

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Yet, not everyone experiences this psychological discord in the same way. Hypocrisy disturbs some people quite profoundly, whereas others seem unfazed by it. Some people respond swiftly and forcefully to cognitive dissonance by changing their attitudes to justify their actions, whereas others seem relatively indifferent to their transgressions. The current work explores individual and situational conditions that affect how acts of hypocrisy result in changing one's attitudes to bring about greater consonance with one's behaviors, and in particular, it explores the role of self-concept representation in these outcomes.

At the heart of experiencing cognitive dissonance is the self. For example, dissonance and its resulting consequences (e.g., changing beliefs to produce consistency following hypocrisy) are more likely for people who violate personally important values (e.g., Sherman & Gorkin, 1980). Also, if people can reaffirm other positive qualities of the self that are unrelated to their transgressions, these self-affirming acts can bolster the perception that they are decent, moral individuals and subsequent changes to one's beliefs or behaviors can be averted (McQueen & Klein, 2006; Sherman & Cohen, 2006; Steele, 1988). Indeed, the self is central to triggering dissonance, to how its discomfort is translated into action, and even to its forbearance.

In the current work, we extend this theme of the centrality of the self in cognitive dissonance by considering how the *organization* of one's self-concept plays an important role in dissonance-related responses. Specifically, we propose that the representation of the self in memory will influence how hypocritical acts lead people

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to modify their attitudes. The basis of this prediction is research on self-complexity, which has shown that self-concept organization influences how self-relevant feedback is experienced (for reviews, McConnell & Strain, 2007; Rafaeli-Mor & Steinberg, 2002). Self-complexity captures two features of self-concept representation: the number of meaningful self-aspects one has (e.g., one's roles, important relationships, group memberships) and the extent to which each self-aspect is relatively unique (i.e., shares few attributes with other self-aspects). People are greater in self-complexity when they report a greater number of self-aspects (e.g., spouse, parent, employee, athlete) comprised of relatively unique attributes (i.e., the attributes one exhibits in each self-aspect show little redundancy with one's other self-aspects).

Research has demonstrated that individuals lower in self-complexity experience greater affective responses following self-relevant feedback, with people receiving positive feedback revealing especially positive affect and people receiving negative feedback reporting especially negative affect (Linville, 1985; McConnell, Rydell, & Brown, 2009). People lower in self-complexity show this affective spillover effect because feedback about a particular self-aspect represents a larger proportion of their overall self-concept when they have fewer self-aspects, and because feedback concerning one self-aspect also implicates (i.e., spills over onto) other self-aspects that share attributes with the self-aspect implicated by the feedback. Thus, the organization of one's self-concept amplifies the impact of self-relevant experiences for people lower in self-complexity (e.g., McConnell, Rydell et al., 2009; McConnell, Strain, Brown, & Rydell, 2009; Renaud & McConnell, 2002).

Because self-complexity moderates the experience of affect, we anticipated that it would play a role in how dissonance arousal is translated into responses to restore consonance within the individual. In the current work, we used a hypocrisy induction to produce cognitive dissonance (for a review, Stone & Fernandez, 2008). Instead of examining behavioral implications of hypocrisy (e.g., water conservation, condom purchasing), we explored how acknowledging one's hypocritical actions leads to changes in one's attitudes, which typically results in attitude bolstering (i.e., adopting an even stronger attitude in the wake of hypocrisy). In the current work, we considered two possible outcomes. The straightforward pure bolstering response hypothesis predicts that because hypocrisy should promote greater attitude bolstering, those lower in self-complexity following the induction of dissonance would feel the most self-directed negative affect and thus show more attitude bolstering than those greater in self-complexity, who themselves should show some degree of attitude bolstering relative to people who do not experience any hypocrisy at all.

However, a second more complex possibility exists, which we refer to as the *mixed response hypothesis*. Specifically, although many people reveal attitude bolstering in the wake of dissonance, those who are lower in self-complexity may feel overwhelmed by the especially intense negative affect that results from their hypocrisy and look for an immediate response to eliminate their especially strong negative affect, leading them to weaken their attitudes (i.e., shift them to be more consistent with their acknowledged transgressions) rather than to bolster their attitudes. Why would this occur? People who are lower in self-complexity experience stronger affect (Linville, 1985; McConnell, Rydell et al., 2009), experience greater difficulty in getting their shortcomings off their mind (Renaud & McConnell, 2002), and "listen to their affect" more when acting (Brown & McConnell, 2009a) than those greater in self-complexity.

As a result, following hypocrisy, those lower in self-complexity will feel a more intense sting and be highly motivated to quell this relatively strong negativity. Yet, when people do not have an avenue for immediate action (e.g., a behavioral option that instantly restores consonance, such as buying condoms following an

acknowledgement of past unsafe sexual practices), attitude bolstering requires that they face their inconsistencies in the anticipation that down the road opportunities will provide them with occasions to "right their wrongs." However, for those lower in self-complexity, such a long-term orientation will be less attractive because the sting of their own hypocrisy will be especially acute and focusing on improvements down the road does not eliminate current inconsistencies, making short-term solutions (e.g., attitude weakening) more attractive in restoring consonance immediately rather than vowing to do better in the future. In other words, a long-term solution will be less appealing when the negativity of one's own hypocrisy is especially poignant (the case for those lower in self-complexity), compelling such people to immediately resolve their inconsistencies (i.e., attitude weakening) instead of looking toward the future for improvement. Indeed, Dixon and Baumeister (1991) found that people lower in self-complexity acted quickly to minimize their discomfort following an academic failure by leaving a room faster (i.e., in order to reduce painful selfawareness) than those greater in self-complexity. Hence, this second possibility anticipates that those lower in self-complexity would be eager to act quickly to restore consonance and eliminate strong negative affect, and changing their attitudes to be more in line with their hypocritical acts is the most immediate response to eliminate the dissonance when other behavioral opportunities are not available.

For those greater in self-complexity, although they will still feel some negativity resulting from acknowledging their hypocrisy, they will not feel the intense pressure to respond immediately (Dixon & Baumeister, 1991), allowing them to bolster their preexisting beliefs (i.e., the more-typical response to dissonance) instead of weakening their beliefs. In line with this reasoning, research has shown that people greater in self-complexity, on average, respond to academic-skill failures (the same domain investigated in the current work) by working harder (e.g., greater preparation for an upcoming test) than those lower in self-complexity (Brown & McConnell, 2009a). In other words, instead of taking an act-immediately orientation to quell the sting of hypocrisy like those lower in self-complexity, people greater in self-complexity should respond to their shortcomings with a more longrange mindset, and in such cases, attitude bolstering should serve that objective. To summarize, the hypotheses under exploration predict a correspondence between self-complexity and attitude change following hypocrisy, though the direction of the relation differs between the two accounts. The pure bolstering response hypothesis predicts that attitude bolstering (i.e., strengthening of one's pre-existing attitudes) will increase as self-complexity decreases, whereas the mixed response hypothesis anticipates people lower in self-complexity will seek an escape from their dissonance resulting in attitude weakening (i.e., changing one's pre-existing attitudes to be more in line with one's transgressions) while those greater in self-complexity will exhibit attitude bolstering. Thus, both hypotheses make clear, but competing, predictions. Because both predictions are reasonable but reside within a previouslyuninvestigated intersection of domains, we were uncertain about which outcome might obtain. Although both hypotheses anticipate a relation between self-complexity and attitude change, we anticipated that this correlation could be eliminated if the threat to selfintegrity resulting from hypocrisy was eliminated (e.g., Fried & Aronson, 1995). That is, we expected that providing an opportunity to self-affirm would eliminate the experience of dissonance, averting the need to modify one's attitudes after acknowledging hypocritical acts.

To test these hypotheses, participants in the current study completed a measure of self-complexity and provided an initial report of their attitudes toward good study habits. Past work with the current sample population demonstrates that our participants

value good study habits (e.g., Brown & McConnell, 2009a; McConnell et al., 2009). Next, after personally promoting the importance of good study habits, they either wrote about episodes where they did not study well (hypocrisy condition) or they completed a control activity (this was a between-subjects manipulation). In the hypocrisy condition, it was expected that individuals lower in self-complexity would experience greater dissonance arousal, however we did not assess their affect directly because the finding that people lower in self-complexity report stronger negative affect following negative experiences is well established (e.g., Linville, 1985; McConnell, Strain et al., 2009; Renaud & McConnell, 2002). Also drawing attention to their affect through its measurement could serve to eliminate its impact on subsequent psychological outcomes (Schwarz & Clore, 1996). Next, as part of another between-subjects manipulation, participants either did or did not affirm an important personal value (high vs. no self-affirmation, respectively). Finally, participants once again reported their attitudes toward studying to assess how their beliefs changed across the experimental session. Because self-affirming an important personal value should undercut dissonance arousal, it was expected that the relation between self-complexity and attitude change (predicted by either hypothesis under consideration) would only be observed when people who recounted hypocritical acts did not have an opportunity to assuage their dissonance by self-affirmation.

Method

Participants

At Miami University, 167 participants received partial course credit in return for their participation. Sixteen of them did not follow directions when writing their essays, and thus they were excluded from the analyses, leaving a total of 151 participants (109 women).¹

Measures

Self-complexity

Self-complexity was measured using McConnell et al.'s (2005) computer adaptation of the self-complexity trait-sorting task (Linville, 1985). Participants were provided a list of 40 traits attributes (20 positive, 20 negative) that are commonly used by college students to describe themselves (Showers, 1992). They were instructed to place the attributes into groups (i.e., self-aspects) that represent meaningful aspects of their lives. Furthermore, they were told they could assign attributes to more than one group, they did not have to use all of the attributes provided, and they should stop if they felt they were straining to generate more groups.

Self-complexity was calculated using the *H* statistic (Scott, 1969), which captures both the number of self-aspects (i.e., groups) and the redundancy in attributes among self-aspects:

$$H = \log_2 n - \left(\sum_i \cdot n_i \cdot \log_2 n_i\right) / n,$$

where n is the total number of attributes available to the participant (40) and n_i is the number of attributes present within each particular group combination (i) across the participant's reported

self-aspects (for extensive discussions, Koch & Shepperd, 2004; Rafaeli-Mor, Gotlib, & Revelle, 1999; Schleicher & McConnell, 2005). H increases as people report a greater number of self-aspects and report self-aspects that are comprised of relatively unique attributes. Although alternative measures of self-complexity exist (see Koch & Shepperd, 2004), we used H (M = 2.24; SD = 0.77) in the current work because it is the most widely used measure of self-complexity (Rafaeli-Mor & Steinberg, 2002) and because it reveals good utility in predicting affect-related outcomes (McConnell et al., 2009).

Attitude change

To assess the degree to which attitudes changed during the study, participants reported their attitudes toward study-related behaviors twice (before and after the hypocrisy manipulation). Specifically, they rated the importance of eight study behaviors on a 1 (not at all important) to 7 (very important) scale. For example, they were asked, "How important is it to make flashcards or other study aids when preparing for an exam," "How important is it to attend every single class," and "How important is it to read the textbook for class?" The order of item presentation was randomly determined.

Participants' mean response to these items at Time 1 (before the hypocrisy manipulation; α = .84) was subtracted from their mean response at Time 2 (after the hypocrisy manipulation; α = .80) to form an index of attitude change. Thus, positive *attitude change scores* reflected relatively greater attitude bolstering (i.e., viewing study effort as more important later in the experiment relative to its beginning) and negative attitude change scores reflected relatively greater attitude weakening (i.e., viewing study effort as less important later in the experiment in comparison to its beginning).

Procedure

Participants were randomly assigned to conditions in a 2 (hypocrisy vs. control) \times 2 (high self-affirmation vs. no self-affirmation) between-subjects design. They completed the experiment in individual rooms to enhance privacy and anonymity. They first completed the measure of self-complexity, after which they were given a sheet labeled, "Ranking of Personal Characteristics and Values" (Rydell, McConnell, & Mackie, 2008). The sheet contained a list of 11 values (e.g., sense of humor, relations with friends/family, business/money, creativity), and participants ranked the values in order of their importance to them, from most important (1) to least important (11). None of the 11 values provided involved academics. This ranking set the stage for the self-affirmation manipulation used later in the experiment.

Next, participants completed the first measure of study attitudes and were told to respond based on how they felt at that very moment. Similar to Fried and Aronson (1995), all participants wrote an essay for 5 min about the importance of good study skills and study effort. Specifically, they were told that their essay should be about the general importance of study effort and good study skills and they should not write about their own experiences. Following this essay, participants in the hypocrisy condition wrote a second essay describing every time that semester when they did not put as much effort into studying as they should have. They were instructed to write for 4 min and to be as specific as possible. No details regarding any potential audience for the essays were provided to participants. Although expecting a public audience for one's hypocrisy may intensify dissonance arousal (Stone & Fernandez, 2008), the ambiguity used in the current work should, if anything, make it more difficult to observe the effects predicted by either the pure bolstering or mixed response hypotheses. Participants in the control condition, on the other hand, completed a word search task for 4 min to find words related to school, which

¹ The participants who did not follow instructions were relatively equally distributed among conditions, with six in the hypocrisy condition not writing about past experiences of poor studying, five in the high self-affirmation condition writing essays entirely lacking personal or self-relevant information, and five in the no self-affirmation condition writing essays that were very personal (and thus, self-affirming).

featured words such as "student" and "class" (none of the words involved study skills or effort).

Participants were then told to refer to the ranking of values sheet that they had completed earlier for the study. On a sheet of paper, they wrote about one of those values. Specifically, participants in the *high self-affirmation condition* were told to write about their most important value and why they ranked it as the most important. Additionally, they were told to describe a time in their life when that value had been important to them. In contrast, participants in the *no affirmation condition* were told to write about their ninth most important value and why they thought this value might be important to the typical Miami University student. They were further instructed to describe a time in a typical Miami University student's life when this value may have been important. All participants were instructed to write as much or as little as they wanted. This manipulation has been used effectively in past work (Rydell et al., 2008).

Finally, participants completed the Time 2 measure of study attitudes, with the critical eight items embedded in a question-naire among filler items (containing questions such as, "How important is it to recycle?" and "How important is it to drive under the speed limit?") to reduce the likelihood that participants would simply re-report their Time 1 responses. The presentation order of the items was randomized.

Results

The two predictions under consideration, the pure bolstering and the mixed response hypotheses, anticipate that the impact of hypocrisy on inducing attitude change will be related to one's self-complexity for those who did not mitigate cognitive dissonance through other means (i.e., did not self-affirm an important personal value). Thus, we conducted a multiple regression analysis where the attitude change score was regressed on self-complexity (H), self-affirmation condition (effects coded), hypocrisy condition (effects coded), and all possible two-way and three-way interactions (product terms).

Although a significant self-complexity by hypocrisy interaction was observed, β = .51, t = 2.03, p < .05, this effect was qualified by the hypothesized three-way interaction, β = -.52, t = 2.06, p < .05, which is illustrated in Fig. 1 using non-standardized regression

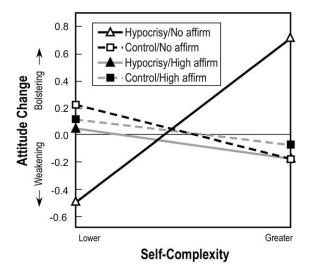


Fig. 1. Relations between self-complexity and attitude change (more positive scores reflect attitude bolstering or adopting more positive attitudes toward studying at Time 2, whereas negative scores reflect attitude weakening or developing more negative attitudes toward studying at Time 2) as a function of experimental conditions.

weights. Specifically, attitude change is represented along the y-axis (positive values indicate attitude bolstering, negative values indicate attitude weakening) and self-complexity is graphed along the x-axis (based on H, with a range of ± 2 SD from the M). To test the specific hypotheses, we assessed the correlation between selfcomplexity and attitude change (both continuous measures) separately for each of the four experimental conditions. Consistent with predictions, the only significant correlation between selfcomplexity and attitude change observed was found for participants in the hypocrisy, no self-affirmation condition, r = .37, p < .05. As Fig. 1 reveals, although those individuals greater in self-complexity exhibited attitude bolstering, those people lower in self-complexity showed attitude change consistent with one's hypocritical behavior (i.e., attitude weakening) when no other means of reducing dissonance was available (i.e., self-affirmation). Clearly, this pattern of results (a positive correlation rather than a negative correlation) supports the mixed response hypothesis and not the pure bolstering hypothesis.

Discussion

The current work demonstrates that the nature of self-concept representation influences how cognitive dissonance shapes one's responses. In the wake of acknowledging actions that were at odds with one's pre-existing attitudes, those greater in self-complexity showed more attitude bolstering following hypocrisy, whereas those lower in self-complexity responded by weakening their attitudes to be more in line with their transgressions. These findings support the mixed response hypothesis and run contrary to the pure bolstering hypothesis. In other words, cognitive dissonance (in the current work, triggered by hypocrisy) does not produce similar responses in all individuals. Instead, the organization of the self-concept in memory appears to play an important role in determining how people respond to inconsistencies between their behaviors and beliefs.

After acknowledging their hypocritical actions, people lower in self-complexity revised their attitudes to bring them more in line with their behaviors that violated their standards of ideal conduct. The mixed response hypothesis anticipates this outcome because people lower in self-complexity experience stronger negativity following their shortcomings (McConnell et al., 2009), experience greater difficulty in ignoring their inadequacies (Renaud & McConnell, 2002), attend to their affect more when acting (Brown & McConnell, 2009a), and are highly motivated to respond quickly to eliminate the pain resulting from falling short of one's ideals (Dixon & Baumeister, 1991). And without any other immediate remedy to their hypocrisy (e.g., an opportunity to behave differently), those lower in self-complexity appeared to take "the quick out" by weakening their attitudes in order to quell the discomfort that resulted from their hypocrisy rather than vowing to do better down the road. Interestingly, such a response may serve to make future transgressions less aversive and more likely because the likelihood of triggering subsequent dissonance will be reduced, potentially instituting a self-perpetuating pattern and setting the stage for additional self-regulatory failures. On the other hand, those greater in self-complexity showed the more typical outcome of attitude bolstering following their acknowledging a personal transgression, which is more consistent with a less impetuous response (Dixon & Baumeister, 1991) and more in line with greater dedication to long-range goals (Brown & McConnell, 2009a). This relation between self-complexity and attitude change, however, was eliminated by providing participants with an opportunity to affirm an important, personally-relevant value, implicating the role of self-directed negativity in how self-concept representation predicted attitude change.

The role of the self has long been recognized as central to the experience of cognitive dissonance. For example, the accessibility of one's personal standards (e.g., Stone & Cooper, 2001), the importance of a particular standard for one's view of the self (e.g., Sherman & Gorkin, 1980), and the availability of alternative ways to affirm one's sense of moral worth (e.g., Sherman & Cohen, 2006) have all been shown to moderate cognitive dissonance. The current study adds to this body of work by showing that the organization of the self-concept also plays a role in how dissonance directs people's responses to their own inconsistencies. It is interesting to consider how one's response to hypocrisy might have important implications for the permanence of any attitude change observed. Although speculative, it seems reasonable that the form of attitude change exhibited by those lower in self-complexity (i.e., attitude weakening), may result in attitude change that is less likely to persist because it reflects a short-term strategy focused on immediate affect management. Future work should explore the possibility that the durability of attitude change may vary as a function of one's self-concept structure.

Although we observed that those lower in self-complexity showed less positive attitudes toward studying after acknowledging their past inadequacies, it is also possible that these individuals may have reduced the importance of scholarly behaviors as well. Work on trivialization has shown that one response to cognitive dissonance is to reduce the perceived importance of the relevant domain (e.g., Festinger, 1957; Simon, Greenberg, & Brehm, 1995), and indeed, there are many responses one can reveal in the face of cognitive dissonance, ranging from attitude change to changes in the perceived importance of the domain in question (e.g., McKimmie et al., 2003; Simon et al., 1995). Perhaps in the current work, the weakened attitudes toward studying among those lower in self-complexity reflected some degree of trivialization as well. Yet even if those lower in self-complexity responded to their hypocrisy with a blend of attitude weakening and trivialization, the point remains that the organization of their self-concepts moderated their responses to being a hypocrite.

Another interesting possibility is that one's response to selfaffirmation, in addition to one's response to cognitive dissonance, might be moderated by self-complexity. The literature has demonstrated that those who are lower in self-complexity experience stronger affective reactions to self-relevant feedback (e.g., Renaud & McConnell, 2002) and stronger correspondence between wellbeing and factors known to promote good mental and physical health (e.g., desirable personality characteristics, better social support; McConnell et al., 2009). And similarly, it may well be the case that people lower in self-complexity experience greater benefits from self-affirmation because the structure of their self-concepts will intensify the positivity derived from affirming important self-relevant values. Future work should explore this possibility more fully to evaluate whether self-concept representation plays a meaningful role in self-affirmation processes. Based on the existent literature, we anticipate that it should.

More broadly, the finding that self-complexity plays an important role in qualifying a number of important psychological phenomena is gaining increasing support across a number of literatures (see Brown & McConnell, 2009b; McConnell & Strain, 2007). And in particular, it is interesting to consider the implications of the current findings with respect to self-regulatory activities. Most theoretical treatments of self-regulation focus on how negative affect often serves as a critical signal in directing behavior and goal pursuit (e.g., Carver, 2004; Duval & Wicklund, 1972; Higgins, 1987; Renaud & McConnell, 2007). Frequently, aversive affect results from one's actions being at odds with one's ideals and goals. In other words, hypocrisy is often at the heart of self-discrepancies, producing unpleasant self-awareness that motivates the individual to reach one's goals. When considering the current work, it would

seem likely that self-concept representation, and self-complexity in particular, plays an important role in how self-regulation is experienced differently by individuals and also in how it is achieved. It is interesting to note that although most theories of discrepancy-based self-regulation focus on the role of self-concept content (e.g., discrepancies between one's current self and a goal self), the current findings suggest a role for self-concept structure as well. For instance, goal pursuit may be especially strong for people lower in self-complexity because they experience stronger affective responses in general (Linville, 1985), become more preoccupied with their failings (Renaud & McConnell, 2002), and rely on their affect as a guide to behavior more heavily (Brown & McConnell, 2009a). Thus, understanding the organization and cognitive representation of the self will shed light on how people set goals and persist in pursuing them, especially in the wake of falling short of them.

In addition to the implications of self-concept representation for goal pursuit and attainment, it is likely to have implications for other behaviors tied to inconsistencies in self-knowledge. Research on stereotype threat has shown that when one's memberships in stigmatized groups are salient, performance suffers in domains associated with negative group stereotypes (for a review, Schmader, Johns, & Forbes, 2008). For example, an awareness that one's own social group is associated with poor performance in a particular domain leads African Americans to score more poorly on standardized tests (e.g., Steele & Aronson, 1995) and women to underperform in math (e.g., Spencer, Steele, & Quinn, 1999). Recent work by Rydell, McConnell, and Beilock (2009) has shown that consonance in self-concept knowledge is critical in determining whether women suffer from stereotype threat in mathematics (e.g., I am a woman, women are bad a math, therefore I must be bad at math) or do not (e.g., I am a college student, college students are good at math, therefore I must be good at math). Although this work implicates the role of self-concept content, we would anticipate that self-concept structure would also play a role in how stereotype threat is experienced and translated. Because selfknowledge is more interrelated for people lower in self-complexity, threats to the self are more likely to be stronger for them, resulting in greater stereotype threat being experienced by individuals lower in self-complexity. Future research should explore this intriguing possibility where, once again, self-concept representation can shed light on important psychological outcomes and for whom significant consequences (e.g., academic underperformance) are especially likely.

In sum, the current study reveals that the consequences of cognitive dissonance are qualified by how the self-concept is represented in memory. Specifically, hypocrisy-induced dissonance led to attitude change, but the direction of this change was qualified by self-complexity. Whereas those greater in self-complexity showed the typical pattern of results (i.e., attitude bolstering following hypocrisy), those lower in self-complexity weakened their attitudes after acknowledging their transgressions. When one's hypocrisy was revealed, people lower in self-complexity responded by changing their attitudes to be more in line with their hypocritical actions, presumably to quickly restore consonance in the wake of especially unpleasant self-directed affect. This work demonstrates that the self is not only central in the experience of dissonance, but that its representation in memory plays an important role in how self-directed affect is translated into action.

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References

- Aronson, E. A. (1997). The theory of cognitive dissonance: The evolution and vicissitudes of an idea. In C. McGarty & S. A. Haslam (Eds.), The message of social psychology: Perspectives on mind in society (pp. 20-35). Oxford, UK: Blackwell.
- Brown, C. M., & McConnell, A. R. (2009a). Effort or escape: Self-concept structure determines self-regulatory behavior. Self and Identity, 8, 365-377.
- Brown, C. M., & McConnell, A. R. (2009b). When chronic isn't chronic: The moderating role of active self-aspects. Personality and Social Psychology Bulletin, 35 3-15
- Carver, C. S. (2004). Self-regulation of action and affect. In R. F. Baumeister & K. D. Vohs (Eds.), Handbook of self-regulation: Research, theory, and applications (pp. 13-39). New York: Guilford Press.
- Cooper, J., & Fazio, R. H. (1984). A new look at dissonance theory. In L. Berkowitz (Ed.). Advances in experimental social psychology (Vol. 17, pp. 229-266). Orlando, FL: Academic Press.
- Dixon, T. M., & Baumeister, R. F. (1991). Escaping the self: Moderating effects of selfcomplexity. Personality and Social Psychology Bulletin, 17, 363–368.
- Duval, S., & Wicklund, R. (1972). A theory of objective self-awareness. New York: Academic Press.
- Elliot, A. J., & Devine, P. G. (1994). On the motivational nature of cognitive dissonance: Dissonance as psychological discomfort. Journal of Personality and Social Psychology, 67, 382-394.
- Festinger, L. (1957). A theory of cognitive dissonance. Palo Alto, CA: Stanford University Press.
- Fried, C. B. (1998). Hypocrisy and identification with transgressions: A case of undetected dissonance. Basic and Applied Social Psychology, 20, 145-154.
- Fried, C. B., & Aronson, E. (1995). Hypocrisy, misattribution, and dissonance reduction. Personality and Social Psychology Bulletin, 21, 925–933.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. Psychological Review, 94, 319-340.
- Koch, E. J., & Shepperd, J. A. (2004). Is self-complexity linked to better coping? A review of the literature. Journal of Personality, 72, 727-760.
- Linville, P. W. (1985). Self-complexity and affective extremity: Don't put all of your
- eggs in one cognitive basket. *Social Cognition*, 3, 94–120. McConnell, A. R., Renaud, J. M., Dean, K. K., Green, S. P., Lamoreaux, M. J., Hall, C. E., et al. (2005). Whose self is it anyway? Self-aspect control moderates the
- relation between self-complexity and well-being. Journal of Experimental Social Psychology, 41, 1-18. McConnell, A. R., Rydell, R. J., & Brown, C. M. (2009). On the representation of self-
- concept: How self-concept organization influences affective responses and selfevaluations. Journal of Experimental Social Psychology, 45, 695-707 McConnell, A. R., & Strain, L. M. (2007). Content and structure of the self-concept. In
- S. Spencer & C. Sedikides (Eds.), The self in social psychology (pp. 51-72). New York: Psychology Press.
- McConnell, A. R., Strain, L. M., Brown, C. M., & Rydell, R. J. (2009). The simple life: On the benefits of low self-complexity. Personality and Social Psychology Bulletin, 35, 823-835.
- McKimmie, B. M., Terry, D. I., Hogg, M. A., Manstead, A. S. R., Spears, R., & Doosie, B. (2003). I'm a hypocrite, but so is everyone else: Group support and the

- reduction of cognitive dissonance. Group Dynamics: Theory, Research, and Practice, 7, 214-224.
- McQueen, A., & Klein, W. M. P. (2006). Experimental manipulations of selfaffirmation: A systematic review. Self and Identity, 5, 289-354.
- Rafaeli-Mor, E., Gotlib, I. H., & Revelle, W. (1999). The meaning and measurement of self-complexity. Personality and Individual Differences, 27, 341-356.
- Rafaeli-Mor, E., & Steinberg, J. (2002). Self-complexity and well-being: A review and research synthesis. Personality and Social Psychology Review, 6, 31-58.
- Renaud, J. M., & McConnell, A. R. (2002). Organization of the self-concept and the suppression of self-relevant thoughts. Journal of Experimental Social Psychology,
- Renaud, J. M., & McConnell, A. R. (2007). Wanting to be better but thinking you can't: Implicit theories of personality moderate the impact of self-discrepancies on self-esteem. Self and Identity, 6, 41-50.
- Rydell, R. J., McConnell, A. R., & Beilock, S. L. (2009). Multiple social identities and stereotype threat: Imbalance, accessibility, and working memory. Journal of Personality and Social Psychology, 96, 949–966.
- Rydell, R. J., McConnell, A. R., & Mackie, D. M. (2008). Consequences of discrepant explicit and implicit attitudes: Cognitive dissonance and increased information processing. Journal of Experimental Social Psychology, 44, 1526-1532.
- Schleicher, D. J., & McConnell, A. R. (2005). The complexity of self-complexity: An associated systems theory approach. Social Cognition, 23, 387–416.
- Schmader, T., Johns, M., & Forbes, C. (2008). An integrated process model of stereotype threat on performance. Psychological Review, 115, 336-356.
- Schwarz, N., & Clore, G. L. (1996). Feelings and phenomenal experiences. In E. T. Higgins & A. W. Kruglanski (Eds.), Social psychology: Handbook of basic principles (pp. 433-465). New York: Guilford.
- Scott. W. A. (1969). Structure of natural cognitions. Journal of Personality and Social Psychology, 12, 261-278.
- Sherman, D. K., & Cohen, G. L. (2006). The psychology of self-defense: Selfaffirmation theory. In M. P. Zanna (Ed.). Advances in experimental social psychology (Vol. 38, pp. 183-242). San Diego, CA: Academic Press.
- Sherman, S. J., & Gorkin, L. (1980). Attitude bolstering when behavior is inconsistent with central attitudes. Journal of Experimental Social Psychology, 16, 388-403.
- Showers, C. (1992). Compartmentalization of positive and negative self-knowledge: Keeping bad apples out of the bunch. Journal of Personality and Social Psychology, 62, 1036-1049.
- Simon, L., Greenberg, J., & Brehm, J. (1995). Trivialization: The forgotten mode of dissonance reduction. Journal of Personality and Social Psychology, 68, 247-260.
- Spencer, S. J., Steele, C. M., & Quinn, D. M. (1999). Stereotype threat and women's math performance. Journal of Experimental Social Psychology, 35, 4-28.
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.). Advances in experimental social psychology (Vol. 21, pp. 261-302). San Diego, CA: Academic Press.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. Journal of Personality and Social Psychology, 69, 797-811.
- Stone, J., Aronson, E., Crain, A. L., Winslow, M. P., & Fried, C. B. (1994). Inducing hypocrisy as a means of encouraging young adults to use condoms. Personality and Social Psychology Bulletin, 20, 116-128.
- Stone, J., & Cooper, J. (2001). A self-standards model of cognitive dissonance. Journal
- of Experimental Social Psychology, 37, 228-243.
 Stone, J., & Fernandez, N. C. (2008). To practice what we preach: The use of hypocrisy and cognitive dissonance to motivate behavior change. Social and Personality Psychology Compass, 2, 1024-1051.