



2011

## Self discrepancy and narrative repair

Lauren E. Jennings  
*Western Washington University*

Follow this and additional works at: <https://cedar.wwu.edu/wwuet>

 Part of the [Experimental Analysis of Behavior Commons](#)

---

### Recommended Citation

Jennings, Lauren E., "Self discrepancy and narrative repair" (2011). *WWU Graduate School Collection*. 149.  
<https://cedar.wwu.edu/wwuet/149>

This Masters Thesis is brought to you for free and open access by the WWU Graduate and Undergraduate Scholarship at Western CEDAR. It has been accepted for inclusion in WWU Graduate School Collection by an authorized administrator of Western CEDAR. For more information, please contact [westerncedar@wwu.edu](mailto:westerncedar@wwu.edu).

Self Discrepancy and Narrative Repair

By

Lauren E. Jennings

Accepted in Partial Completion  
of the Requirements for the Degree  
Master of Science

Dr. Moheb A. Ghali, Dean of the Graduate School

ADVISORY COMMITTEE

Chair, Dr. Kate C. McLean

Dr. Alex M. Czopp

Dr. Rebecca Goodvin

## **MASTER'S THESIS**

In presenting this thesis in partial fulfillment of the requirements for a master's degree at Western Washington University, I grant to Western Washington University the non-exclusive royalty-free right to archive, reproduce, distribute, and display the thesis in any and all forms, including electronic format, via any digital library mechanisms maintained by WWU.

I represent and warrant this is my original work, and does not infringe or violate any rights of others. I warrant that I have obtained written permissions from the owner of any third party copyrighted material included in these files.

I acknowledge that I retain ownership rights to the copyright of this work, including but not limited to the right to use all or part of this work in future works, such as articles or books.

Library users are granted permission for individual, research and non-commercial reproduction of this work for educational purposes only. Any further digital posting of this document requires specific permission from the author.

Any copying or publication of this thesis for commercial purposes, or for financial gain, is not allowed without my written permission.

Lauren E. Jennings  
July 12, 2011

SELF-DISCREPANCY AND NARRATIVE REPAIR

A thesis Presented to  
The Faculty of  
Western Washington University

In Partial Fulfillment  
Of the Requirements for the Degree  
Master of Science

By

Lauren E. Jennings

June 2011

## Abstract

Personal narratives have been shown to play an important role in creating a stable sense of self, yet little research has examined this in experimental designs. Thus, this study explored the utility of narrative, in comparison to other mechanisms (e.g., self-affirmation, distraction), for coping with threats to self-concept by examining affective and cognitive repair after experiencing a threat. Participants ( $N = 331$ ) received false physiological feedback suggesting a prejudiced response to African Americans and obese people and were induced to complete one of five repair techniques. Participants also completed affect and self-concept measures pre-study, post-threat, and post-repair. Overall, threat-specific and high-point narratives did not differ from other groups in their ability to overcome self-concept threat, but high-point narratives were particularly effective in enacting affective repair. However, individual differences in the threat-specific narratives moderated the effectiveness of this condition, so that more skilled story-telling was associated with more repair. These results suggest that while narrative processing is an effective method of maintaining a stable self-concept for people who have the appropriate skills and content to draw on, it is by no means necessary. Other self-maintenance techniques, such as remembering positive experiences unrelated to the threat, are also effective in maintaining self-meaning and may be more strategic responses to situations when the capacity for quality narrative reflection is low.

## Acknowledgments

I thank my advisor, Kate McLean, for her guidance and support during conceptualizing and completing this project. I am also grateful for the insightful comments of my graduate committee, Alex Czopp and Rebecca Goodvin. Finally, I thank the Memory and Identity Lab for their input on this project and assistance with data collection; in particular, I thank Leeann Briscoe and Jeremy Sodos for their careful coding of these data.

## Table of Contents

Abstract.....	iv
Acknowledgements.....	v
List of Tables and Figures.....	vii
Introduction.....	1
Current Study.....	6
Method.....	14
Results.....	25
Discussion.....	38
References.....	49
Appendix.....	58

## List of Table and Figures

## Table 1

*Summary of Study Design*

## Table 2

*Arousal Level Presented on Feedback Graphs by Picture Type and Trial*

## Table 3

*A Comparison of the Cognitive and Affective Repair in Each Condition*

## Table 4

*Descriptive Statistics for Threat-specific and High-point Narrative Variables*

## Figure 1

*Self-concept and affective repair effect sizes (Cohen's  $d$ ) for each condition*



## Self-Discrepancy and Narrative Repair

Developing and maintaining a stable sense of self is a challenging task, as variations in lived experience across time and different situations suggest possible ways in which people are not who they thought they were. Thus, having some anchor that moors a person to his or her self understanding, even when faced with contradictory evidence, would be helpful for navigating life's unfolding of self-relevant feedback. One possible mechanism for maintaining a stable sense of self is people's personal stories. Indeed, researchers who study narratives suggest that stories about the past are often constructed in ways which help to promote stability in the way people think about themselves (e.g., Bluck, Alea, Habermas, & Rubin, 2005; Pasupathi, Mansour, & Brubaker, 2007). However, no research of which I am aware has explored whether this stability function is useful in refuting feedback about the self which challenges a person's self-concept. Thus, this study examined whether personal stories could serve as an effective repair for people whose self-concept has been threatened by contradictory information.

Study of narrative identity and autobiographical memory has clearly established that reflection on the past is rarely, if ever, just an idle reminiscence about a time gone by (e.g., Bluck, 2003). Rather, revisiting the past usually serves some purpose, and possible functions include helping people understand who they are and informing or guiding thoughts and behaviors (e.g., Bluck et al., 2005). Additionally, theorists within the realm of narrative identity suggest that stories about the past are not immutable and rigidly conceived, but rather are intimately tied to the context in which they are remembered and shared (McLean, Pasupathi, & Pals, 2007). Therefore, it seems reasonable to consider that personal narratives are like tools, able to be employed as a strategic response to the demands of a given context.

In order to determine the types of situations in which people may be most likely to rely on these “narrative tools,” it is important to consider the purposes which stories serve.

### **Purpose of Recollection: Self-Stability Function**

Research on narrative identity supports the idea that people use stories to develop a stable and coherent sense of self (e.g., McLean, 2008; Pasupathi, Mansour, & Brubaker, 2007). While the content of those stories has been shown to be meaningful (e.g., McAdams, Albaugh, Farber, Daniels, Logan, & Olson, 2008; McAdams, Anyidoho, Brown, Huang, Kaplan, & Machado, 2004), much of the research on the relationship between narratives and identity development, maintenance, and understanding has focused on the role played by interpretations and evaluations of those experiences (Singer & Bluck, 2001). Indeed, it is this autobiographical reasoning that allows an individual to integrate their varied experiences across the lifespan into a single sense of self. One type of reasoning which is particularly important for the development of a stable self-concept is making meaning from the past. Researchers have repeatedly demonstrated an association between meaning making in personal stories and the development of a coherent and mature identity (e.g., Bauer, McAdams, & Sakaeda, 2005; McLean, 2005; McLean & Pratt, 2006). In particular, narrative processing is important because it facilitates an understanding of the self, which is grounded in life experience. For example, Pasupathi et al. (2007) have demonstrated how narratives allow people to draw connections between the self and previous events in order to demonstrate enduring traits or articulate processes of change. Thus, narratives about the past are an important tool in the development of a cohesive identity as they provide a venue for integrating experiences into a consistent sense of self across time and context.

### **Purpose of the Past: Directive Function**

Researchers have also demonstrated that storying the past acts as a guide for present behaviors. For example, memories of past mistakes or failures often become touchstones used to motivate future attempts at excellence or success (Pillemer, 2003). Furthermore, memories of past experiences play an important role in guiding subsequent decisions (Wirtz, Kruger, Scollon, & Diener, 2003). For example, in a study of positive emotion before, during, and after a spring-break experience, students' desire to repeat a vacation was best predicted by their memory of the trip, rather than their anticipated or actual on-line enjoyment. Thus, people may turn to the past to ensure they act in their own best interest in the present.

In addition to guiding behaviors, stories are useful in directing thoughts, particularly when used for emotion regulation. Many people have documented improvements in psychological health subsequent to writing emotion-laden accounts of important personal experiences (see Pennebaker & Seagal, 1999 for a review). Since then, other researchers have shown that it is specifically the use of analytic processing while storying a negatively-valenced event that leads to increases in well-being (Lyubomirsky, Sousa, & Dickerhoof, 2006). Additionally, within social contexts, Pasupathi (2003) found that people report less negative emotion when storying a past event than during the actual event. Importantly, this decrease does not occur with positive events, suggesting that people may talk about the past with others specifically to make themselves feel better. Together, these studies suggest that people can and do use stories to manipulate their current emotional state.

### **Self-Stability Serves a Directive Function**

In many respects, these two functions of reflection on the past operate independent of one another. However, solely conceptualizing them as unique purposes may fail to do justice

to all of the ways in which personal narratives serve as context-specific tools (McLean, 2005). In a factor analysis of the self-reported reasons why people refer to their personal past, Bluck et al. (2005) found that some of the hypothesized self-related functions of memories were more appropriately included within the directive function cluster, particularly those items indicating the use of stories to cope with negative events or emotions and to manage threats to oneself or one's world view. These findings suggest that narratives, and the self-stability they afford, may be an informative reference point when encountering discrepant feedback regarding the self. When people's identities are threatened with feedback that runs counter to their idea of who they are, stories that demonstrate self-stability may be an effective tool for diffusing this threat, as these might help them distinguish between what is enduring and what is situational. Additionally, a story's capacity for emotion regulation makes narration a natural response to the dual challenges of negative emotion and threat to identity stability.

### **Identity Management via Personal Narratives**

One model for how stories about the past may help refute self contradictory feedback is an application of Burke's Identity Control Theory (1991) to narrative identity. Burke's theory pertains to how a person regulates his or her identity standards, or personal meanings that define the self. Applying Burke's theory to a narrative context might unfold in the following manner: People collect stories about themselves which help explain who they are. As they move from situation to situation, they are constantly evaluating they ways in which their environment relates to their self-concept. As people tend to seek out self-verifying situations (Swann, 2005), they should frequently encounter situations which are consistent with how they conceptualize and story themselves. However, people can not always control

their environment, experiences, or social feedback, thus opening the door to episodes of self-concept threat. In these situations, people must decide how to manage this threat. On one hand, they may dismiss the situation as irrelevant, and refuse to let it inform their self-concept (e.g., King & Raspin, 2004; Pasupathi et al, 2007). However, if they are unable to deny that the situation has some bearing on who they are, then people will attempt to demonstrate that the source of the discord is the situation and not their self-concept (Baumeister, Stilman, & Wotman, 1990). There are many ways to ‘blame the situation’; however, using self stories as counter examples would be particularly strategic, as it would show that in other situations, one’s self-concept was verified.

The idea that people may strategically recruit personal narratives that demonstrate a certain aspect of their identity in situations when they are threatened by contradictory self feedback is supported by studies of motivated autobiographical recall. For instance, by manipulating the social desirability of a trait, researchers have shown that people tell different stories about their past in order to demonstrate or refute their possession of that characteristic (Sanitioso, Kunda, & Fong, 1990). Similarly, in a study in which researchers challenged the accuracy of an important trait, people were able to draw on past experiences for counterexamples to dismiss the undesirable self-discrepancy (Eisenstadt & Leippe, 1994). In contrast, participants who received feedback on unimportant traits were much more likely to believe the discrepant information, as they had less counter evidence to refute the feedback (see also Eisenstadt, Hicks, McIntyre, Rivers, & Cahill, 2006; Eisenstadt, Leippe, & Rivers, 2002). Thus it would seem that reflection on important aspects of the personal past is an ideal tool for resolving discrepancies between a person’s self-concept and the contradictory feedback they receive.

## **The Role of Narrative Quality in Self-Concept Repair**

While narratives appear to have characteristics which make them well-suited to self-concept repair, it is important to note that people differ vastly in their story-telling abilities and in the experiences which they have to share (McAdams, 2001). Most relevant to the present study, people differ in the extent to which they engage in autobiographical reasoning (e.g., McLean, 2005; Pasupathi et al., 2007; Pennebaker & Francis, 1996) and in how they frame emotional events (e.g., McAdams, Reynolds, Lewis, Patten, & Bowman, 2001). Additionally, numerous researchers have demonstrated that individual differences in both the kinds of autobiographical reasoning which people utilize and the content of the personal stories they construct are associated with differences in various well-being outcome measures (e.g., Bauer, McAdams, & Pals, 2008; McAdams et al., 2001; McLean & Breen, 2009). Thus, any study of the effectiveness of stories in dispelling threats to a person's self-concept should also consider how narrative quality moderates the relationship between narrative and repair.

### **Current Study**

It is clear from the relevant literature that narratives about the past inform current thoughts and behavior and help people construct a stable identity. Therefore, it seems plausible that stories may help guide an individual's response to a situation which threatens their current identity, and research into the motivations for storying the past support this idea. However, there are no studies of which I am aware of that experimentally test if stories are capable of dispelling the negative emotion and self-doubt which accompanies self-discrepant information, especially in relation to other mechanisms of repair. The current study was designed to present participants with feedback discrepant with their identity and to offer them

an opportunity to repair that discrepancy via several strategies, some of which involve storytelling. Additionally, the current study also sought to explore how differences in narratives affect the extent to which they serve as an effective repair.

### **Threat to Self-Concept Consistency**

While it is unknown whether different types of self-concept inconsistencies are best resolved through the same response, researchers have established that different types of experiences are not storied equally (Pasupathi, McLean, & Weeks, 2009); thus, an accurate comparison of the effectiveness of personal narratives to other strategies would be confounded if all participants did not undergo a manipulation of the same aspect of their self-concept. Given the use of a convenience sample of undergraduates at a relatively liberal institution, I chose to threaten participants with the perception that they are prejudiced. Because increases in education (Hello, Scheepers, & Slegers, 2006) and a liberal political orientation (Jost, Glaser, Kruglanski, & Sulloway, 2003) are associated with beliefs in equality, the perception of being prejudiced was expected to be at least mildly threatening to all participants.

Also, the choice of prejudice as the self-concept threat was also influenced by methodological considerations. Researchers have shown that discrepant feedback from a low-credibility source is easy to dismiss (Eigenstadt & Leippe, 1994). Thus, I chose a manipulation that is difficult to discount – one's own physiological response. In the current study, participants were given false physiological feedback in response to pictures of African Americans and obese people in such a way that suggests that the participants are unable to inhibit negative arousal when viewing these images. This methodology has been used by other researchers who have found it to be a credible manipulation of a person's perception of

their own prejudice (Dutton & Lake, 1973; Monteith, Ashburn-Nardo, Voils, & Czopp, 2002).

Finally, it is important to note that the choice of threatening a person's concept as a tolerant person blurs the line between a person's desire to view himself accurately and the desire to view himself positively (Leary, 2007), as being non-prejudiced is a socially desirable trait to possess. Indeed, the motivation to refute such a threat is likely derived in part from a person's strong motivation to feel they will be accepted by others. However, while this social element of the threat certainly affects that nature of its repair, it likely also serves to heighten the desire to refute the accuracy of the challenge which contradicts a person's self-understanding, making it appropriate for the goals of this study. Importantly, the repair conditions and outcome variables were specifically designed to consider how effective narratives are in managing both the accuracy and self-enhancement challenges of contradictory feedback.

### **Strategies for Refuting Inconsistent Self-Feedback**

In order to evaluate the effectiveness of narratives in refuting inconsistent self-feedback, participants were assigned to one of six conditions which forced them to process the prejudice feedback differently after exposure to the self-threat. These comparison conditions were designed to imitate known strategies for dealing with inconsistent feedback in order to clarify where the effectiveness of stories rank in relation to other repair strategies.

**Personal narratives.** The repair condition of primary interest required participants to report a narrative which they believe demonstrates that they are a tolerant person. Given that people report thinking about the past for the purpose of maintaining a consistent self-concept (Bluck et al., 2005) and that counterexamples serve as evidence in favor of a person's own,



enduring self-view (Eigenstadt & Leippe, 1994), this manipulation should help to repair an identity threat by maintaining stability of self-views.

However, it is important to consider the possibility that the act of storying the past may serve a self-regulation purpose that is independent of the content domain of that story. Indeed, the act of writing reflectively on personal experiences is related to greater well-being, although this may depend on the emotional valence of the event (Lyubomirsky et al., 2006; Pennebaker & Seagal, 1999). Furthermore, researchers have found evidence that writing about the self can result in self-affirmation (Napper, Harris, & Epton, 2009; Sherman, Nelson, & Steele, 2000). Therefore, I included a comparison narrative condition, in which participants recalled a high-point story, to ascertain if threat-specific narratives are necessary to dispel self-concept discrepancies. Should threat-specific narratives outperform high-point stories, it would rule out the possibility that the effectiveness of narrative repair stems from general affirmation of and autobiographical reasoning about the self and would support the hypothesis that narratives provide an opportunity to verify one's self-concept through reflection on and processing of similar past experiences.

As mentioned above, narratives were coded to capture individual differences in story-telling which may moderate, and therefore clarify, the relationship between narrative processing and self repair. Because evidence from a person's past has been shown to be effective in countering self-concept threat (e.g., Eisenstadt & Leippe, 1994), narratives were coded for how much tolerance participants actually displayed in their stories; that is, objective, *experienced-based evidence* of tolerance. Presumably, better evidence of past tolerant behavior will lead to more repair. Additionally, stories were coded for the inclusion of assertions of tolerant behavior and beliefs without specific proof; that is, *unsupported*,

*subjective* statements about oneself (i.e. “I am tolerant.”), one’s behaviors (i.e. “I treat all people equally.”), or one’s beliefs (i.e. “All people are equal.”). Because such statements are self-affirming (Napper, Harris, & Epton, 2009), it is possible that stories are an effective repair because they serve as a vessel for asserting the possession of certain traits. Also, I coded the way that participants narrated their emotional response to diversity within the story. McAdams et al. (2001) have shown that those who narrate past experiences with a redemptive arc, when one moves from negative to positive emotions, have greater well-being. However, it is also possible that demonstrating consistent positivity towards people who are different may be considered stronger evidence of tolerance, so no hypothesis was ventured for this variable. Finally, stories were coded for the explicit connections people make between their sense of self and their past experiences. As mentioned previously, this type of meaning-making has important implications for how the self is understood and has been associated with greater well-being (Pasupathi et al., 2007). Because I hypothesized that it is the opportunity to link past experiences with present self that make stories an effective repair, I predicted that participants who make these explicit connections will experience greater repair than those who do not.

As with the threat-specific narratives, high-point stories were coded for the inclusion of positive, self-assertions, which could serve to affirm the self, in order to determine the necessity of deeper narrative processing for self-concept repair. In addition, it was noted during a preliminary reading of some high-point stories that supportive relationships were a prominent theme within these narratives. Given that other researchers have shown the importance of perceived social support in minimizing stressors (e.g., Wethington & Kessler,

1986), I coded for a relationship-orientation within the narratives to determine if these stories were more effective in dispelling threat.

**Self-affirmation.** Because identity narratives may contain self-statements that assert beliefs about the self (i.e., “I treat all people fairly.”), and because other researchers have demonstrated the self-affirming properties of such self-statements (Napper, Harris, & Epton, 2009), I included a condition to tease out the effects of such statements removed from the context of storytelling by asking participants to complete a tolerance affirming questionnaire. By comparing the threat-specific narratives to an analogous questionnaire-based affirmation task, I was able to explore if narrative processing of past experiences was necessary in minimizing self-discrepancies. I hypothesized that people who simply affirm they are tolerant, without processing and interpreting the actual experiences that form and support that self-conception, would not experience as much repair as those who utilize a narrative of tolerance.

Likewise, a second questionnaire-based affirmation task, which consisted of general, positive statements about the self, was included to understand if narrative processing was critical to the effectiveness of the high-point stories, or if these stories were successful simply because they focused on a valued part of the self. Indeed, other researchers have shown that when one aspect of a person’s self-concept is challenged, he or she can overcome this threat by affirming a different, meaningful aspect of the self (e.g., Baumeister & Jones, 1978; see also Heine, Proulx, & Vohs, 2006) I predicted that while high-point narratives and general affirmations would both be effective to the extent they affirm an aspect of the self unrelated to the threat, high-points would be more effective because of their potential for autobiographical reasoning. The threat-specific and general affirmation conditions are

important comparisons for the two narrative conditions, and any differences which emerge between them were thought to be useful in clarifying any differences which emerged between the threat-specific and high-point narratives.

**Self-verifying behaviors.** To better gauge the effectiveness of personal storytelling in dismissing discrepant self-feedback, a fifth condition was planned to compare narratives about past experiences to the actual performance of self-verifying behaviors. As is suggested by self-perception theory, people often make inferences as to the type of person they might be by looking for clues in their own behavior (Bem, 1967). Thus, it is not at all surprising that researchers have shown that people often seek out situations which are self-verifying (Swann, 2005), and it is reasonable to expect that people would be even more motivated to do so after encountering discrepant information. Therefore, enactment of self-verifying behavior is a good standard against which to compare the effectiveness of self-stories in minimizing identity threat.

**Distraction.** The final condition was designed to distract participants from thinking about the discrepant feedback they received. This is an attempt to simulate an avoidance tactic for dealing with uncomfortable information (Roth & Cohen, 1986). As mentioned previously, autobiographical reasoning is important for well-being and self-understanding (e.g., Bauer, McAdams, & Pals, 2008; Pennebaker & Seagal, 1999). However, some researchers have argued that autobiographical reasoning is not beneficial in all contexts, and could even be harmful in challenging situations (McLean & Mansfield, 2011). This ambiguity regarding the effectiveness of cognitive avoidance makes the distraction condition an important comparison to narrative processing.

### **Self-Concept Repair**

An encounter with self-concept discrepant information is disruptive on both a cognitive and affective level (Higgins, 1987; Swann, 2005). Therefore, I operationalized repair in two different ways: 1) how well the various conditions restored the participant's self beliefs and, 2) how well the conditions dispelled the negative affect associated with the threat. Additionally, as mentioned above, the use of tolerance as a threat introduces issues of social desirability; thus considering both self-concept and affective measures of repair may help disentangle the self-verifying and self-enhancing functions of each repair. By comparing how well participants are able to regulate their self beliefs and their emotions in each of the repair conditions, I was able to determine how stories about the past compare with other potential responses and to begin to explore some of the explanations for why personal narratives would or would not be an effective response to a threat to self-stability.

### **Study Hypotheses**

Because personal stories do not simply affirm the self but rather provide a platform for autobiographical reasoning about specific, past experiences (Singer & Bluck, 2001), and because past experience has been shown to be useful in undermining discrepant feedback (Eigenstadt & Leippe, 1994), it was predicted that both narrative conditions would be more effective than either of the self-affirmation statement conditions at dispelling self-concept threat. However, given that self-understanding is enhanced by making connections between past events and the self (Pasupathi et al., 2007), it was hypothesized that, compared with high-point stories, threat-specific stories would be better suited to minimizing any self-doubt and negative emotions that arise from inconsistent feedback, as they would allow participants to connect relevant experiences to the self-concept domain under threat. Because the current literature does not offer a clear picture of how narratives compare to distraction and self-

verifying behavior, no hypotheses was made regarding these two strategies. Finally, as outlined previously, qualities of the narratives were predicted to moderate the amount of repair achieved in the narrative conditions. For the threat-specific narratives, I hypothesized that participants who made meaning in the form of self-event connections and provided more compelling, objective evidence of past tolerance would experience more self-concept repair, but that subjective assertions of tolerant beliefs and behaviors would not be associated with more repair. For the high-point narratives, I predicted that stories about relationships would be more effective in enacting repair, while subjective assertions affirming the self would be un-related to self-concept repair.

## **Method**

### **Participants**

I recruited 439 participants through Western Washington University's psychology subject pool. Given that the procedure used in this study to produce self-contradictory feedback relied on negative arousal in response to pictures of African American people, participants who self-identified as African American were excluded from participation. Participants were randomly assigned to one of six conditions, and the two narrative conditions were over-sampled in order to allow for additional analyses of narrative quality. I was unable to use data from 27 participants due to an experimenter error or computer malfunction during an experimental session; additionally, data from 5 participants could not be used due to incomplete data on key items. Finally, 23 participants indicated that they did not consider themselves to be a tolerant person at the beginning of the study and were thus removed from analysis, as these participants received physiological feedback which

confirmed their self-concept in this domain.<sup>1</sup> In all, I obtained useable data from 384 participants (82% female, 18% male; Age:  $M = 19.46$ ,  $SD = 3.27$ ; 89% Caucasian, 7% Asian, 4% Hispanic/Latino); this resulted in 97 participants in the tolerance narrative condition, 90 participants in the high-point narrative condition, 49 participants in the tolerance affirmation-statements condition, 48 participants in the general affirmation-statements condition, 53 participants in the tolerant behavior condition, and 47 participants in the distraction condition.

## Measures

**Tolerance self-beliefs.** Two items were developed for the purposes of this study to track self-beliefs regarding tolerance throughout the experiment. Participants were asked to rate the accuracy of the statement “I am a tolerant person,” as well as to indicate how certain they were of their rating. Throughout the study, we asked participants to consider tolerance as “acceptance of people who are different.” Both questions used a 9-point scale to encourage variability across repeated administrations. These items were embedded in a larger battery of questions pertaining to personality traits in order to avoid suspicion.

**Affect.** Participant affect was measured by asking participants to indicate the extent to which they were experiencing 26 different emotions; responses ranged from *Slightly or not at all* to *Extremely* on a 5-point scale. This measure was adapted from Monteith et al. (2002). Consistent with other mood measures (e.g., Watson, Clark, & Tellegen, 1988), two emotion

---

<sup>1</sup> Compared with participants remaining in the study, these 23 participants reported significantly lower baseline tolerance accuracy,  $t(405) = -16.84$ ,  $d = -3.62$ ,  $p < .001$  and baseline tolerance certainty,  $t(22.99) = -3.08$ ,  $d = -1.02$ ,  $p < .01$ , as well as marginally significantly lower internal motivation to avoid prejudice  $t(22.86) = -2.02$ ,  $d = -.71$ ,  $p = .055$ . They also had lower baseline self-esteem,  $t(405) = -2.36$ ,  $d = -.51$ ,  $p < .05$ , and scored lower on agreeableness,  $t(23.53) = -4.03$ ,  $d = -1.11$ ,  $p = .001$ , higher on neuroticism,  $t(404) = 2.97$ ,  $d = .64$ ,  $p = .003$ , and marginally higher on normative identity style  $t(404) = 1.80$ ,  $d = .39$ ,  $p = .07$ . Compared to people remaining in the study, those removed were more likely to have grown up in a rural or urban area and were less likely to be suburban  $\chi^2(2, N = 407) = 17.45$ ,  $p < .001$ . This group did not differ significantly on any other variable.

indices were created: negative affect (i.e. “guilty,” “uneasy,” and “sad”) and positive affect (i.e. “happy,” “proud,” and “good”). Reliability coefficients (alphas) were .94 and .94 for the negative affect index and .86 and .90 for the positive affect index at the post-threat and post-repair administrations, respectively.

**State self-esteem.** Participant state self-esteem was assessed via a 4-item measure ( $\alpha = .81$  at pre-study, .87 at post-threat, .89 at post-repair) adopted from Christensen, Wood, and Barrett (2003). Participants rated how they felt about themselves on a 9-point scale with four sets of anchors: *very negative/very positive*, *not worthwhile/worthwhile*, *incompetent/competent*, and *unacceptable/acceptable*.

**Personality measures.** I included various personality and individual difference measures for supplementary analyses of how these factors relate to differences in story construction and narrative repair effectiveness; however, these relationships were not considered in the current study. I assessed participants’ personality via the Big Five Inventory (subscale alphas ranged from .76 to .88; John & Srivastava, 1999), as well as measured their self-concept clarity ( $\alpha = .87$ ; Campbell et al., 1996). Participants also completed the Internal and External Motivations to Avoid Prejudice (Plant & Devine, 1998) which ascertains if people curtail prejudiced responding based on personal beliefs (subscale  $\alpha = .73$ ) and/or societal pressures (subscale  $\alpha = .78$ ). Participants completed Berzonsky’s (1989) Identity Style measure, which captures styles of identity exploration and commitment (subscale alphas ranged from .65 to .79). Finally, to ascertain the extent to which a person subscribes to an incremental or entity theory of self, participants completed Dweck’s (1996) ‘Kind of Person’ Implicit Theory Measure ( $\alpha = .85$ ).



**Demographics.** Participants completed a series of demographic questions, with a particular emphasis on obtaining information that may serve as an indicator of exposure to people of different backgrounds. In addition to traditional questions, this measure also asked about SES, home setting (urban/suburban/rural), membership in a group marginalized by society, and amount of exposure to minority groups.

### **Procedure**

The experiment unfolded in six sections (see Table 1). During the Pre-study, participants provided baseline ratings on the dependent variables. Second, participants completed the Threat Manipulation, and third, they again rated themselves on the dependent variables. Fourth, participants then completed one of the six Repair conditions, followed by completion of the dependent variable battery a final time. The remainder of the experiment was spent completing follow-up questionnaires. Each of these sections are detailed below and summarized in Table 1.

**Pre-study activities.** Participants were brought into an individual room for completion of the procedure. After giving informed consent, participants filled out a short pre-test questionnaire containing the tolerance self-beliefs and state self-esteem measure. The experimenter then started participants on the computer program used for the remainder of the study (written with Media Lab v2008; Empirisoft, 2008).

**Threat manipulation.** The procedure outlined in this section was adapted from the procedure used by Monteith et al. (2002). Participants first read instructions on the computer informing them that the purpose of the study was to learn about how successful people are at controlling negative physiological reactions to pictures of different social situations. At this point, the experimenter entered the room to place a fake electrode on the participant's finger.

The experimenter explained that the electrode was for measuring skin conductivity, and that this is the same measure of arousal used in lie detector tests. Participants were also told that the electrode works by sending an imperceptible electrical signal through their fingers. After answering any questions, participants were told to relax as much as possible for a baseline reading. The experimenter then pretended to record their response for 1 minute. After stopping the “recording,” the experimenter presented each participant with a fake graph showing that their arousal decreased throughout the minute and removed the electrode. This procedure was utilized to establish the credibility of the readings.

Participants then reviewed (false) information as to how the program measures and records their arousal and converts it into a chart for them to review. When finished, the experimenter presented each participant with an article on how to control their negative arousal (Lang, 1970), along with an article summary to ensure attention to key points. Participants were instructed to read the article and review the summary. They then reviewed the instructions for the fake experiment. When finished, the experimenter placed the electrode back on each participant’s finger and started the “experiment.” During the fake experiment, participants were presented with pictures of different social scenes followed by a false feedback graph about their level of arousal in response to each picture.

**Pictures.** When possible, pictures were obtained from the National Institute of Mental Health Center for the Study of Emotion and Attention (Lang, Bradley, & Cuthbert, 2008); however, Google Images was also used to locate additional photographs that fit the content criteria. Pictures were chosen based on their content (racial vs. nonracial) and ability to induce varying levels of arousal (neutral vs. arousing). Example images from each picture category are a picture of a lamp (neutral), a predatory snake (arousing), an interracial couple

(prejudice), and an intoxicated driver (controversial). While three of the prejudice pictures contained African Americans, a fourth picture featuring obese women was also included, as being prejudiced against different types of people would help demonstrate a stable trait. The controversial pictures were included as a compliment to the prejudice pictures, in order to demonstrate that the participants were able to control their arousal to other types of scenes about which they may have strong negative beliefs.

***Picture-viewing procedure.*** In all trials, participants were presented with a series of images followed by a bar graph indicating the level of arousal the participant experienced in response to the preceding picture. Table 2 presents a summary of the arousal level presented to participants in response to each type of picture in each trial. Throughout the four trials, all pictures were presented for 3 seconds during each exposure, while participants were allowed to view each feedback graph for as long as they chose before advancing.

Participants began with a practice trial in order to familiarize themselves with the procedure. During the trial phase, participants were exposed to 5 arousing and 4 neutral pictures. During this trial phase, feedback was consistent with the picture content (i.e. the arousing pictures were accompanied by graphs indicating high arousal). Then participants were reminded that the purpose of the experiment was to study negative arousal in response to social scenes, and they were told they were beginning the actual experimental trials. Participants were also given the following information, in order to encourage them to interpret their feedback as evidence that they are prejudiced:

“The scenes you are about to see may or may not cause you to react with negative arousal. Often times, social situations provoke intense reactions in people. These reactions can include hatred, anger, prejudice, discomfort, and other negative states. Sometimes people attempt to bury these reactions; however, the physiological representation of the reactions remains. Many psychologists feel that automatic

responses are the truest measures of underlying reactions that we have about social groups and situations. In the pictures you are about to see, some situations and social groups are pictured that you may hold negative attitudes about. If this is so, then the program will register your reactions just as it did with the other set.”

Participants then viewed a series of 17 pictures: 6 neutral, 5 arousing, 4 prejudice, and 2 controversial. During this first round, the 6 neutral pictures were accompanied by a graph suggesting low arousal, while the arousing, prejudice and controversial pictures were followed by graphs indicating high arousal.

Before beginning the second experimental trial, participants were reminded of the techniques they learned for controlling their negative arousal earlier in the study and were encouraged to use them in subsequent trials. Participants were informed that the 11 pictures they found most arousing would be pulled back from the previous trial. Participants were also told that after this second viewing of these pictures, two graphs would appear: one of the arousal they exhibited in trial one and the other of the arousal exhibited during the current (second) trial.

Participants were then exposed to the 5 arousing, 4 prejudice, and 2 controversial photographs that were supposedly the most arousing. During trial two, participants were shown graphs suggesting medium arousal in response to the arousing and controversial pictures (compared with high arousal in the first trial). However, the graphs following the prejudice pictures still indicated high arousal. Participants then completed a third trial with the same 11 pictures. During this final trial, the participants were presented graphs suggesting low arousal to the arousing and controversial pictures and high arousal to the prejudice pictures.

**Post-threat ratings.** At this point, the experimenter removed the electrode from participants' fingers, and participants completed the tolerance self-beliefs, state self-esteem, and affect measures.

**Repair task.** Participants were randomly assigned to complete one of the six repair conditions. In all conditions, participants had unlimited time to complete the task.

**Threat-specific story.** Participants were asked to describe a time that they believe demonstrates that they are a tolerant person. The instructions for this task were modified from the Life Story Interview (McAdams, 2008) and are presented in Appendix A. Participants typed their answer in the computer program.

**High-point story.** Participants were asked to describe a time in their life that stands out as an especially positive experience. The instructions for this task were modified from the Life Story Interview (McAdams, 2008) and are presented in Appendix B. Participants typed their answer in the computer program.

**Threat-specific affirmation.** Participants were asked the extent to which they identify with a series of 20 self-statements pertaining to acting and thinking in a tolerant manner. Sample questions include "I avoid relying on stereotypes when interacting with others" and "Everyone's rights are equally important to me." Participants responded on a 5-point scale ranging from "Very much unlike me" to "Very much like me."

**General affirmation.** Participants were asked the extent to which they identify with a series of 20 self-statements pertaining to different character strengths. These items were modified from the Values in Action (VIA) Strengths Scale (Peterson & Seligman, 2004), although no items pertaining to equalitarianism were included. The use of the VIA for self-affirmation purposes is a procedure developed by Napper, Harris, and Epton (2009). Sample

items include “People in my life feel that I am a person that can be trusted” and “I am a person that others respect.” Participants responded on a 5-point scale ranging from “Very much unlike me” to “Very much like me.”

**Hiring decision.** Participants were presented with a short description of a hypothetical college internship and were asked to make a hiring decision from two final candidates. Participants were given two candidate packets, which contained both a candidate photograph and resume. The two resumes were rated as equally qualified in a pre-test. The two candidate photographs were of an African American male and a Caucasian male; the presentation was counter-balanced so that each photograph was presented with each resume and the order of presentation was random. Participants were asked to rate how qualified they believe each candidate to be and then to decide who should ultimately be awarded the internship.

**Distraction.** Participants were presented a paragraph from a short story and asked to count the number of times the letters “E”, “A”, and “S” appeared in the paragraph. This method of forced distraction was adopted from Pasupathi and Rich (2005).

**Post-repair ratings.** At this point, participants again completed the tolerance self-beliefs, state self-esteem, and affect measures.

**Post-manipulation questionnaires.** Finally, participants completed the individual differences and demographics measures. As a manipulation check, participants were also asked in a free response format what they felt the purpose of the study was. At this point, participants were fully debriefed. The experimenter explained that all physiological feedback was false and that no physiological data was ever recorded. Participants were given the

opportunity to ask questions or discuss the experiment, and participants were thanked for their participation.

### **Coding**

Threat-specific and high-point stories were coded by the author and two research assistants. Reliability between the author and the main coder, designated before coding began, was conducted on 25% of the sample. When necessary, an additional 25% of the sample was coded to achieve reliability. The remaining sample was coded by the two research assistants, and any discrepancies were resolved by the author. All coders were blind to participants' responses on all other measures.

**Objective tolerance.** Threat-specific narratives were coded for the degree to which the participants' story demonstrated objective, *experienced-based evidence* of tolerance on a 5-point scale ( $r = .81$ ). A score of 1 represented intolerance, as marked by derogatory sentiments toward people who were different from the narrator. A score of 2 was used to indicate begrudging/coerced acceptance of another person's differences. Narratives were scored a 3 if the narrator was able to look past the differences of another person and achieve an affectively neutral stance towards them. Narratives were scored a 4 if the narrator was affectively positive towards another person and overlooked any differences. A score of 5 represented full tolerance in that the narrator saw another person's differences as valuable, positive, and/or a strength.

**Assertions.** We coded narratives for *unsupported, subjective* assertions about the self which affirmed a person's self-concept as a tolerant (threat-specific stories) or generally positive (high-point stories) person. Because quantifying these statements would help to ascertain the extent to which the narrative and the corresponding affirmation statement

conditions relied on similar processes to enact repair, phrases were identified as an assertion if they mirrored the statements used in the affirmation conditions. Thus, potential assertions were identified by the presence of a present tense verb and were coded as assertions if they fell into one of the following categories.<sup>2</sup>

***Tolerant behavior assertions.*** In these statements, narrators asserted a general tendency to behave in a tolerant manner ( $r = .70$ ). An example is “I have become friends with people who are different than me and out of norm.”

***“I am tolerant” assertions.*** In these statements, narrators explicitly assert that they are tolerant ( $r = .83$ ).

***Tolerant belief assertions.*** In these statements, narrators assert their general beliefs about tolerance ( $r = .98$ ). An example is “Everyone is equal no matter the gender, gay, religion, and race.”

***Self-assertions.*** In these statements, narrators assert something positive about their identity ( $r = .73$ ). An example is “I am a friendly person.”

**Affective trajectory of tolerance.** This coding scheme for threat-specific stories was adapted from McAdams et al. (2001) in an effort to chart the narrator’s emotional response to interacting with a person who is different ( $kappa = 1.0$ ). Only those narratives that exemplified higher levels of tolerance (4 or 5 on tolerance scale) were coded on this variable ( $n = 53$ ). Narratives were coded as an “overcoming sequence” if initial negative affect (i.e. discomfort, annoyance) resulting from an interaction with a person who is different was replaced by an affectively positive position towards that person/situation by the end of the

---

<sup>2</sup> We attempted to code all four types of assertions in both threat-specific and high-point narratives. However, self-affirmations were rare in threat-specific narratives, and no high-point stories pertained to tolerance.



story. Narratives were designated as a “stable sequence” if narrators were affectively positive towards a person who is different throughout the entire story.

**Tolerance self-event connections.** We coded threat-specific narratives for whether or not the narrator made an explicit connection between the events of the story and his or her self-concept as a tolerant person ( $kappa = .92$ ). This coding scheme was adapted from Pasupathi and Mansour (2006). Narratives were coded as a “stable self-event connection” if the narrator indicated that their experience demonstrated that they are a tolerant person. Narratives were coded as a “change self-event connection” if the narrator indicated that their experience showed they have become or are becoming more tolerant. Because this second category was rare, the two types of self-event connections were combined.

**Relationship orientation.** High-point narratives were coded for whether or not they were related to positive relationships with others ( $kappa = .83$ ). A story was considered a relationship narrative if the narrator explained or demonstrated that it was the presence of other people, whether real or imagined, that contributed to the feeling that their narrative was a “high-point.”

## Results

### Manipulation Checks

**Threat repairs.** I included several manipulation checks to ensure that participants in each non-narrative comparison condition responded as expected to their respective repair tasks.

**Tolerance accuracy statements.** The average aggregated rating on the tolerance affirmation statements was 4.05 ( $SD = .36$ ), suggesting that participants generally agreed with the statements. The range of average ratings was from 3.30 to 4.85, suggesting that all

participants expressed some agreement with the statements (scale ranged from 1 to 5 and was anchored at *Strongly disagree* and *Strongly agree*).

**General affirmation statements.** The average aggregated rating on the general affirmation statements was 3.83 ( $SD = .44$ ), suggesting that participants generally agreed with the statements. The range was from 2.70 to 4.85, with only one participant averaging less than 3.0, suggesting that almost all participants expressed some agreement with the statements (scale ranged from 1 to 5 and was anchored at *Strongly disagree* and *Strongly agree*).

**Distraction task.** On average, participants in the distraction task appeared to be focusing on the letter counting task. The mean deviation from the correct answer across the three letter-counting tasks was -5.51 (the correct answers were 38, 54, and 33 letters), and participants spent an average of 4.39 minutes ( $SD = 1.86$ ) on the task; together, these data suggest that participants did take time to count the letters and disengage from the threat.

**Behavior task.** Participants in the Behavior Task condition rated the black candidate ( $M = 7.81$ ,  $SD = .90$ ) as significantly more qualified than the white candidate ( $M = 7.28$ ,  $SD = .99$ ),  $t(52) = 3.44$ ,  $p = .001$ . However 10 participants (19%) rated the white candidate as more qualified, and of those participants, 9 awarded the internship to the white candidate. 29 participants (55%) rated the black candidate as more qualified, and of those participants, 28 awarded the internship to the black candidate. 14 participants (26%) saw the two candidates as equal, and 12 participants awarded the internship to the black candidate. However, it is problematic that 35% of participants who saw the white photo paired with resume 1 rated the white candidate as more qualified, while only 8% of participants who saw the white photo paired with resume 2 rated the white candidate as more qualified. Similarly, 61% of

participants who saw the black photo paired with resume 1 rated the black candidate as more qualified, while only 45% of participants who saw the black photo paired with resume 2 rated the black candidate as more qualified. The diversity of responses to this repair manipulation makes it difficult to ascertain participants' motivations during completion; thus this condition will be dropped from further analysis, leaving a total of 331 participants.

**Threat Manipulation.** In order to evaluate the effectiveness of the threat manipulation, I considered how tolerance accuracy and certainty, as well as negative affect, were affected by the manipulation<sup>3</sup>. By focusing on these three variables, I was able to consider both the cognitive and affective components of an identity threat. A paired-samples *t*-test found that participants rated themselves as less tolerant after the threat manipulation ( $M = 6.30, SD = 1.58$ ) as compared with before ( $M = 7.40, SD = 1.11$ ),  $t(330) = -13.27, d = -.81, p < .001$ . An additional paired-samples *t*-test found that participants also rated themselves as less certain of their tolerance self-concept after the threat manipulation ( $M = 6.33, SD = 1.64$ ) as compared with before ( $M = 7.35, SD = 1.42$ ),  $t(330) = 10.88, d = -.67, p < .001$ . Finally, a one-sample *t*-test compared negative affect after the threat with a test value of 1, which indicated no negative affect, and was found to be significant ( $M = 1.80, SD = .63$ ),  $t(330) = 22.98, p < .001$ . Thus, on average, participants were affected by the manipulation in both cognitive and affective ways.

---

<sup>3</sup> To ensure these outcomes were not redundant, I looked at the intercorrelations between the three measures of threat. In order to do so, I created tolerance accuracy and certainty difference scores from the pre-study to post-threat time points. Not surprisingly, these measures of threat were inter-correlated: tolerance accuracy threat and certainty threat,  $r(331) = .43, p < .001$ , tolerance accuracy threat and negative affect,  $r(331) = .33, p < .001$ , tolerance certainty threat and negative affect,  $r(331) = .29, p < .001$ ; however, these correlations were deemed low enough to consider each variable separately as no correlation was exceptionally high and delineating attitude, attitude certainty, and negative affect was deemed to be theoretically valid.

However, it is important to note that not all participants were threatened. Some participants did not register any change in response to the manipulation, while other participants actually affirmed themselves on the dependent measures by rating themselves as more tolerant after the threat. Because I was interested in how people deal with an identity threat, I excluded from analyses those participants who were not threatened. In order to be considered threatened, participants had to register a negative cognitive or affective response to the manipulation. To create a measure of negative cognitive response, I averaged each participant's change in tolerance accuracy and certainty from the pre-study to the post-threat time points. Any participant who registered a decrease on this index was considered to have experienced a cognitive threat; this criterion included 70% of the sample. Additionally, I considered participants' self-reported negative affect at the post-threat time point as a measure of a negative affective response. Any participant who registered a two or higher on this index was considered to have experienced an affective threat; this was chosen because each mood item was rated on a one to five scale, with two being anchored by "a little" when participants were rating the extent to which they felt each emotion. 30% of the sample fit this criterion. After applying both of these criteria, 76% of participants (or 252) were designated as threatened.

A series of analyses was run to determine if and how the 79 participants who were designated as not threatened differed from those who were. Paired samples *t*-tests showed that participants who were not threatened reported being more tolerant after the threat ( $M = 7.42$ ,  $SD = 1.15$ ) than before the threat ( $M = 7.22$ ,  $SD = 1.26$ ),  $t(78) = -2.87$ ,  $d = .17$   $p = .005$ , as well as more certain of being tolerant after the threat ( $M = 7.67$ ,  $SD = 1.22$ ) than before the threat ( $M = 7.08$ ,  $SD = 1.63$ ),  $t(78) = -3.96$ ,  $d = .41$   $p < .001$ . On baseline tolerance measures,

participants who were not threatened rated themselves as less certain of their tolerance self-concept ( $M = 7.08$ ,  $SD = 1.63$ ) than participants who were threatened ( $M = 7.44$ ,  $SD = 1.34$ ),  $t(329) = -1.997$ ,  $d = -.26$ ,  $p = .047$ . However, participants who were not threatened ( $M = 38.85$ ,  $SD = 5.72$ ) scored marginally higher on internal motivation to avoid prejudice than participants who were threatened ( $M = 37.40$ ,  $SD = 5.92$ ),  $t(329) = 1.91$ ,  $d = .25$ ,  $p = .058$ . In exploring personality differences, participants who were not threatened ( $M = 23.47$ ,  $SD = 5.79$ ) scored lower on neuroticism than participants who were threatened ( $M = 25.05$ ,  $SD = 5.77$ ),  $t(328) = -2.12$ ,  $d = -.27$ ,  $p = .035$ ; additionally participants who were not threatened scored higher ( $M = 39.80$ ,  $SD = 8.01$ ) on self-concept clarity than participants who were threatened ( $M = 37.08$ ,  $SD = 9.23$ ),  $t(148.75) = 2.53$ ,  $d = .30$ ,  $p = .013$ . The groups did not differ on any other personality variable or on any demographic variables. Taken together these findings suggest those designated as not threatened are unique from the other participants – they appeared to think about prejudice and tolerance differently, have a more established sense of self, and be less prone to anxiousness.

### **Analysis of Group Differences**

**Self-concept threat.** In order to determine the ways in which participants were threatened and to ensure that the threat was similar across all groups, a series of analyses was done to explore different measures of cognitive and affective threat.<sup>4</sup>

**Tolerance accuracy.** A 2 (pre-study, post-threat) X 5 (condition) mixed-model ANOVA was calculated for participants' ratings of tolerance self-concept accuracy. There was a significant effect of time-point,  $F(1,247) = 237.22$ ,  $MSE = 1.10$ , partial  $\eta^2 = .49$ ,  $p <$

---

<sup>4</sup> Inclusion of the non-threatened participants or the behavior repair condition does not lead to a different pattern of statistical significance for any of the analyses pertaining to cognitive and affective threat response reported in this section.

.001, no effect of condition  $F(4, 247) = .661$ ,  $MSE = 2.37$ , partial  $\eta^2 = .01$ ,  $p = .620$ , and no interaction  $F(4,247) = .843$ ,  $MSE = 1.10$ , partial  $\eta^2 = .01$ ,  $p = .499$ . Across conditions, participants rated themselves as more accurate in their tolerance judgments before the threat ( $M = 7.46$ ,  $SD = 1.06$ ) than after the threat ( $M = 5.94$ ,  $SD = 1.53$ ). Thus, participants' self-concept as a tolerant person appeared to be substantially affected by the manipulation regardless of which condition they were assigned.

**Tolerance certainty.** Additionally, a 2 (pre-study, post-threat) X 5 (condition) mixed-model ANOVA was calculated for participants' ratings of tolerance self-concept certainty. There was a significant effect of time-point,  $F(1, 247) = 250.52$ ,  $MSE = 1.10$ , partial  $\eta^2 = .50$ ,  $p < .001$ , no effect of condition  $F(4, 247) = .124$ ,  $MSE = 3.07$ , partial  $\eta^2 = .00$ ,  $p = .974$ , and no interaction  $F(4,247) = 1.32$ ,  $MSE = 1.10$ , partial  $\eta^2 = .02$ ,  $p = .26$ . Across conditions, participants rated themselves as more certain of their tolerance before the threat ( $M = 7.44$ ,  $SD = 1.34$ ) than after the threat ( $M = 5.91$ ,  $SD = 1.53$ ). Participants' certainty regarding their tolerance self-concept was likewise substantially affected by the manipulation regardless of which condition they were assigned.

**State self-esteem.** Finally, a 2 (pre-study, post-threat) X 5 (condition) mixed-model ANOVA was calculated for participants' ratings of state self-esteem. There was a significant effect of time-point,  $F(1, 247) = 141.35$ ,  $MSE = .677$ , partial  $\eta^2 = .36$ ,  $p < .001$ , no effect of condition  $F(4, 247) = .436$ ,  $MSE = 2.296$ , partial  $\eta^2 = .01$ ,  $p = .782$ , and no interaction  $F(4,247) = .51$ ,  $MSE = .677$ , partial  $\eta^2 = .01$ ,  $p = .727$ . Across conditions, reported higher self-esteem before the threat ( $M = 7.14$ ,  $SD = 1.08$ ) than after the threat ( $M = 6.23$ ,  $SD = 1.33$ ). Thus, participants experienced a substantial decrease in state self-esteem after the threat regardless of which condition they were assigned.

**Affect.** While no baseline mood measure was administered, two one-way ANOVAs were conducted to ensure that conditions did not differ in their emotional response to the threat. At the post-threat measurement time point, neither negative affect,  $F(4, 247) = .786$ ,  $\eta^2 = .01$ ,  $p = .535$ , nor positive affect,  $F(4, 247) = .591$ ,  $\eta^2 = .01$ ,  $p = .669$ , differed by condition.

**Self-concept repair.** I conducted a series of analyses to explore differences in repair effectiveness across six dependent measures. Table 3 shows condition means and effect sizes for all dependent variables.<sup>5</sup>

**Tolerance accuracy.** A 2 (post-threat, post-repair) X 5 (condition) mixed-model ANOVA was calculated for participants' ratings of tolerance self-concept accuracy. There was a significant effect of time-point,  $F(1, 247) = 55.43$ ,  $MSE = .732$ , partial  $\eta^2 = .18$ ,  $p < .001$ , no effect of condition  $F(4, 247) = 1.044$ ,  $MSE = 3.21$ , partial  $\eta^2 = .02$ ,  $p = .385$ , and no interaction  $F(4, 247) = .480$ ,  $MSE = .732$ , partial  $\eta^2 = .01$ ,  $p = .750$ . Participants rated themselves as less tolerant before the repair ( $M = 5.94$ ,  $SD = 1.53$ ) than after the repair ( $M = 6.58$ ,  $SD = 1.27$ ). Thus, regardless of condition, participants' self-concept as a tolerant person experienced moderate repair, although final ratings of accuracy did not return to pre-threat levels.

**Tolerance certainty.** A 2 (post-threat, post-repair) X 5 (condition) mixed-model ANOVA was calculated for participants' ratings of tolerance self-concept certainty. There was a significant effect of time-point,  $F(1, 247) = 54.94$ ,  $MSE = .85$ , partial  $\eta^2 = .18$ ,  $p < .001$ , no effect of condition  $F(4, 247) = .594$ ,  $MSE = 3.29$ , partial  $\eta^2 = .01$ ,  $p = .594$ , and no interaction  $F(4, 247) = 1.45$ ,  $MSE = .85$ , partial  $\eta^2 = .02$ ,  $p = .217$ . Across conditions,

---

<sup>5</sup> These analyses were also run with the inclusion of those participants who were not threatened by the manipulation. However, the pattern of significance did not change for any variable.

participants rated themselves as less certain before the repair ( $M = 5.91, SD = 1.53$ ) than after the repair ( $M = 6.55, SD = 1.34$ ). Thus, regardless of condition, participants' tolerance self-concept certainty moved back towards their original stated certainty.

**State self-esteem.** A 2 (post-threat, post-repair) X 5 (condition) mixed-model ANOVA was calculated for participants' ratings of state self-esteem. There was a significant effect of time-point,  $F(1, 247) = 69.88, MSE = .34, \text{partial } \eta^2 = .22, p < .001$ , no effect of condition  $F(4, 247) = .55, MSE = 2.95, \text{partial } \eta^2 = .01, p = .697$ , and no interaction  $F(4, 247) = 2.06, MSE = .34, \text{partial } \eta^2 = .03, p = .086$ . Across conditions, participants rated themselves lower on self-esteem before the repair ( $M = 6.23, SD = 1.33$ ) than after the repair ( $M = 6.68, SD = 1.22$ ). Thus, regardless of condition, participants' state self-esteem moved back towards their original stated self-esteem. While the interaction is only trending towards significance, it is worthwhile to note that the effect sizes associated with the repairs are larger in the high-point story and general affirmation conditions than in the tolerance story or tolerance related affirmation conditions.

**Negative affect.** A 2 (post-threat, post-repair) X 5 (condition) mixed-model ANOVA was calculated for participants' negative affect. There was a significant effect of time-point,  $F(1, 247) = 193.39, MSE = .10, \text{partial } \eta^2 = .44, p < .001$ , no effect of condition  $F(4, 247) = 1.41, MSE = .639, \text{partial } \eta^2 = .02, p = .232$ , and a significant interaction  $F(4, 247) = 4.73, MSE = .096, \text{partial } \eta^2 = .07, p = .001$ . Across conditions, participants experienced more negative affect before the repair ( $M = 1.91, SD = .67$ ) than after the repair ( $M = 1.51, SD = .54$ ). In an effort to understand the interaction, five within-subject t-tests were calculated in order to determine the effect of time for each condition, and an alpha level of .01 was utilized to control for type I errors. These tests were all significant (threat-specific narratives,  $t(74) =$



6.54,  $p < .001$ ; highpoint narratives,  $t(71) = 8.24$ ,  $p < .001$ ; tolerance affirmations,  $t(36) = 4.23$ ,  $p < .001$ ; general affirmations,  $t(32) = 6.07$ ,  $p < .001$ ; distraction,  $t(34) = 6.85$ ,  $p < .001$ ). Additionally, two between-subjects one-way ANOVAs were calculated in order to determine the effect of condition at each time point; an alpha level of .025 was used to control for type I errors. The conditions did not differ in negative affect post-threat  $F(4, 247) = .786$ ,  $p = .535$ ; however, they did differ in negative affect post-repair  $F(4, 247) = 3.51$ ,  $p = .008$ . Tukey's HSD determined that participants in the tolerance story condition had significantly more negative affect post-repair than participants in the high-point story condition ( $p < .01$ ). No other conditions differed significantly. However, an exploration of the effect sizes suggests that in a practical sense, the tolerance affirmation condition also differed from the high-point story condition, while those conditions not pertaining to tolerance had effects which approached that of the high-point condition. Thus, participants in both the tolerance affirmation condition and tolerance story condition did not dispel negative affect as effectively as those participants in the highpoint, general affirmation or distraction conditions.

**Positive affect.** A 2 (post-threat, post-repair) X 5 (condition) mixed-model ANOVA was calculated for participants' positive affect. There was a significant effect of time-point,  $F(1, 247) = 8.61$ ,  $MSE = .19$ , partial  $\eta^2 = .03$ ,  $p = .004$  and an effect of condition  $F(4, 247) = 2.75$ ,  $MSE = 1.28$ , partial  $\eta^2 = .04$ ,  $p = .029$ . However, these effects were qualified by a significant interaction  $F(4, 247) = 7.47$ ,  $MSE = .19$ , partial  $\eta^2 = .11$ ,  $p < .001$ . In an effort to understand the interaction, five within-subject  $t$ -tests were calculated in order to determine the effect of time for each condition, and an alpha level of .01 was utilized to control for type I errors. Post-threat and post-repair ratings only differed in the high-point stories (threat-

specific narratives,  $t(74) = .71, p = .48$ ; highpoint narratives,  $t(71) = 5.80, p < .001$ ; tolerance affirmations,  $t(36) = 0.00, p = 1.00$ ; general affirmations,  $t(32) = 1.61, p = .12$ ; distraction,  $t(34) = .22, p = .83$ ). Additionally, two between-subjects one-way ANOVAs were calculated in order to determine the effect of condition at each time point; an alpha level of .025 was used to control for type I errors. The conditions did not differ in positive affect post-threat  $F(4, 247) = .591, p = .669$ ; however, they did differ in positive affect post-repair  $F(4, 247) = 5.53, p < .001$ . Tukey's HSD determined that participants in the tolerance story and distraction conditions had significantly less positive affect post-repair than participants in the high-point story condition ( $p < .01$ ). Participants in the tolerance affirmation condition had marginally less positive affect post-repair than participants in the high-point story condition ( $p < .05$ ) No other conditions differed significantly. Thus, participants in the high point condition alone experienced more positive affect after the repair.

***Aggregated effect sizes.*** In order to better compare the five repair conditions, I created two indexes that averaged together the various self-concept and affective measures. I used random effects regression to combine effect sizes in order to account for the exclusion of other possible measures of these two outcomes. To do this, each effect size was corrected for small sample size bias by calculating the standardized mean difference effect size (Hedges & Olkin, 1985, as cited in Quintana & Minami, 2006). For each standardized effect size, a standard error and an inverse variance weight were calculated (Hedges & Olkin, 1985, as cited in Quintana & Minami, 2006). Finally, Wilson's (2005) random-effects meta-analysis macros were used to calculate the average weighted effect within each repair condition. These results are displayed in Table 3 and Figure 1. For self-concept repair, which included measures of tolerance accuracy and certainty, all conditions, except for the

distraction condition, experienced substantial repair. For affective repair, participants in the high-point and general affirmations conditions experienced substantial repair; the gains for the tolerance story and tolerance affirmations conditions were much more modest.

### **Analysis of Individual Differences in Story Conditions**

In addition to exploring group differences, I also examined how individual differences in narrative quality related to the ability of personal stories to repair a self-concept threat. The relationship between qualities of the narratives and the amount of repair achieved was explored for all five dependent measures, although only significant findings are reported. For each outcome variable, difference scores were calculated between the post-threat and post-repair time points; these scores were analyzed via correlations or t-tests. When necessary, I controlled for differences in threat (by calculating the difference score between pre-study and post-threat measures). Finally, I also explored how the stories of those participants who were threatened and not threatened differed in quality. Table 4 presents a summary of descriptive statistics and intercorrelations of narrative variables analyzed in this section.

#### **Threat-specific stories.**

**Objective tolerance.** Participants who shared experiences which displayed more objective evidence of tolerance reported more negative affect repair,  $r(72) = .21, p = .07$ , although this finding was only marginally significant. Thus, writing about more tolerant behavior did not help dispel the cognitive threat to their self-concept, but it did reduce the negative affective component of the threat.

**Tolerant behavior assertions.** The number of tolerant behavior assertions included in the story did not change the effectiveness of the repair.

***“I am tolerant” assertions.*** Participants who included more “I am tolerant” assertions reported more negative affect repair  $r(72) = .23, p = .04$ .

***Tolerant belief assertions.*** The number of tolerance belief assertions included in the story did not change the effectiveness of the repair.

***Tolerance affective trajectory.*** Those participants who narrated their emotion towards someone different as an “overcoming sequence” reported larger self-esteem repair ( $M = .74, SD = 1.07$ ) than participants who narrated their emotion as a “stable sequence” ( $M = .10, SD = .74$ ),  $t(38) = 2.23, d = .72, p = .03$ . Additionally, participants who narrated their emotion as an “overcoming sequence” experienced marginally more positive affect repair ( $M = .20, SD = .64$ ) than participants who told “stable sequence” narratives ( $M = -.16, SD = .56$ ),  $t(38) = 1.88, d = .61, p = .069$ . Thus, participants experienced affective benefits from telling stories in which they overcame negative emotion directed towards someone different.

***Self-event connections.*** Participants who made self-event connections experienced more tolerance self-concept accuracy repair ( $M = .88, SD = 1.44$ ) than those participants who did not ( $M = .22, SD = 1.09$ ),  $t(73) = 2.05, d = .50, p = .04$ . Additionally, those participants who made self-event connections experienced marginally more tolerance self-concept certainty repair ( $M = .88, SD = 1.52$ ) than those participants who did not ( $M = .30, SD = 1.17$ ),  $t(73) = 1.71, d = .41, p = .09$ . Finally, those participants who made self-event connections experienced more positive affect repair ( $M = .06, SD = .64$ ) than those participants who did not ( $M = -.24, SD = .42$ ),  $t(73) = 2.22, d = .53, p = .029$ .

***Narrative differences between threatened and unthreatened participants.*** The threat-specific stories of threatened and unthreatened participants did not differ in the amount of tolerance they displayed, the affective trajectory of the stories, or the inclusion of self-

event connections. However, unthreatened participants included more tolerant behavior assertions ( $M = 1.18$ ,  $SD = 1.26$ ) than threatened participants ( $M = .48$ ,  $SD = .84$ ),  $t(26.77) = 2.46$ ,  $d = .74$ ,  $p = .021$ ; additionally, unthreatened participants also included marginally more tolerant belief assertions ( $M = .59$ ,  $SD = .96$ ) than threatened participants ( $M = .16$ ,  $SD = .57$ ),  $t(25.51) = 2.01$ ,  $d = .64$ ,  $p < .06$  (these variables are intercorrelated, see Table 4). Thus, while people who experienced self-concept threat did not produce drastically different narratives than those participants who were not in a state of self-doubt, unthreatened participants did make more assertions of tolerant behavior and beliefs that were not moored to any specific experiences.

Overall, the relationship between repair and individual differences in the threat-specific narratives suggest that story quality is important to self-concept repair. Those participants whose narratives contained more objective tolerance, pertained to overcoming negative affect towards others, and contained more meaning-making in the form of self-event connections experienced greater cognitive and affective repair. Additionally, general assertions of tolerant behavior and beliefs did not play a role in boosting repair and were more likely to appear in the stories of unthreatened participants.

**Highpoint stories.**

*Self-assertions.* The number of self-assertions included in the story did not affect the effectiveness of the repair.

*Relationship-orientation.* The inclusion of relationship themes did not affect the effectiveness of the repair.

*Narrative differences between threatened and unthreatened participants.* The threat-specific stories of threatened and unthreatened participants did not differ in the number

of self-assertions they included. However, unthreatened participants were marginally less likely to tell a high-point with a relationship theme than threatened participants (38.9% vs. 62.5%,  $\chi^2(1, N = 90) = 3.29, p = .07$ ).

Overall, differences in high-point narratives do not appear to be linked to differences in repair for threatened participants. However participants who are threatened appear to be more likely to draw on experiences of positive relationships than those who are not experiencing self-doubt.

### **Discussion**

The current study explored the effectiveness of personal narratives, relative to other modes of repair, in countering contradictory feedback about the self and examined how differences in story quality facilitate or hinder self-concept repair. The results suggest that the effectiveness of employing narratives in response to a self-concept threat is highly dependent on the content and quality of the story. Across all conditions, participants' repair tactics helped them rebound towards possessing their original beliefs regarding the accuracy of and certainty with which they assign a trait to themselves. However, when considering affective outcomes, participants who continued to dwell on the threatened trait, whether in reflecting on a personal story or completing an affirmation questionnaire, experienced less repair than those conditions which affirmed a positive aspect of the self through the high-point story or general affirmation statements. Notably, participants who narrated stories of positive personal experiences were particularly likely to experience decreases in negative and increases in positive affective outcomes. While threat-specific narratives overall were not more effective than other repairs, those participants who engaged in skilled autobiographical

reasoning, providing convincing evidence of tolerant behavior were able to use this nuanced self-knowledge to achieve greater repair.

My hypotheses regarding overall group differences were not supported by these results. I had predicted that regardless of outcome type, threat-specific and high-point narratives would out perform the affirmation statements, and threat-specific narratives would perform better than high-points. Regarding self-concept repair, all four proactive conditions (two narrative and two affirmation) performed equally well, and while not as effective, even the distraction condition resulted in some repair. These results suggest that many different strategies can be effective for managing one's self-concept and that the way people view themselves remains relatively consistent after instances of contradictory feedback regardless of how they respond. Regarding affective repair, the threat-specific narratives were one of the least effective repairs, and the high-point stories were one of the best. This pattern of affective results also does not support the overall superiority of the narrative process; rather, the best repairs are those which avoid the threat by affirming other aspects of the self.

Considered from a narrative perspective, which emphasizes the importance of personal narratives in construction of a self, these results are surprising. Researchers have argued for the importance of autobiographical reasoning in understanding the self (i.e. Singer & Bluck, 2001) and achieving greater well-being (i.e. Bauer et al., 2005); thus, I had anticipated that narratives would surpass other responses in their ability to maintain a stable sense of self and promote positive emotion. However, approached from other theoretical frameworks, these data are easily explained. The Meaning Maintenance Model (MMM) put forth by Heine et al. (2006) argues that when people experience a threat to their sense of meaning within one domain, they will work to affirm meaning within another domain.

Indeed, the pattern of results for affective repair is clearly in line with this model, as participants who affirmed positive aspects of the self unrelated to the domain under threat experienced greater repair than other the conditions, regardless of whether or not this affirmation occurred within a narrative.

While the exploration of individual differences in these high-point narratives was far from exhaustive, the limited results are also unsurprising in light of the Meaning Maintenance Model. Participants who were threatened by the manipulation were more likely than those who weren't to tell a high-point story about being loved and accepted by significant others. Researchers have shown that the perception of social support is related to lower stress (e.g. Wethington & Kessler, 1986), so it is noteworthy that participants naturally gravitated towards a topic unrelated to tolerance which could affirm a meaningful component of their lives and minimize negativity. While threatened participants tended towards a relationship theme, the presence of relational content was not related to repair. Indeed, there were no individual differences in high-point narrative quality that contributed to differences in the amount of repair participants experienced, although, admittedly, I conducted a limited exploration of differences in this condition. However, the current data suggest that, unlike the threat-specific narrative condition, the benefits which can be garnered from reflecting on a high-point may be available to most people, regardless of narrative ability or previous experience. Participants appeared to have benefited simply from savoring meaningful experiences in unrelated domains. Other researchers have found that savoring rather than analyzing positive memories is associated with greater well-being (Lyubomirsky et al., 2006), and that this reliving is particularly potent for narratives which are self-enhancing (D'Argembeau & Van der Linden, 2008). Thus, as predicted by the MMM, narratives of



positive personal experiences appear to allow people to relive beloved moments that bestow a sense of meaning, and these stories may be particularly important in the face of threat to the self.

However, consistent with my hypothesis regarding individual differences, those individuals who were skilled narrators in the threat-specific story condition experienced greater repair when they were able to make meaning *within the threat-domain* by linking past experiences with their present sense of self. Complimentary to Heine, Proulx, and Vohs, other researchers have articulated models of meaning which center around making sense of inconsistency; these theorists focus on how the need to understand disruptive events that challenge a person's sense of meaning either encourage a person to change their sense of meaning or to reappraise/reinterpret the disruptive situation so that it no longer poses a challenge to their framework for understanding the world (e.g., Burke, 1991; Park & Folkman, 1997). Given that other researchers have established a link between narrative processing and disruptive, non-canonical experiences (McLean et al., 2007), it is reasonable to conclude that much of the research on meaning in stories has linked narratives with this second type of meaning-making, the ability to make sense of deviation. Indeed, the predicted association between autobiographical reasoning in the threat-specific narratives and self-concept repair fails in line with these models of meaning, as the threat-specific narratives appear to manage self-concept by reinterpreting discrepant feedback as an anomaly.

The individual differences within threat-specific narratives and their relation to repair give credence to the idea that threat-specific narratives manage self-meaning through reinterpreting threats as situational flukes. Unlike the high-point narratives, differences in story quality mattered for repair. Indeed, it is unsurprising that only the people who were

skilled, thoughtful narrators benefited from this condition, as cognitive work is necessary to make sense of discrepancies (Bruner, 1990). The association of self-event connections with self repair in threat-specific narratives supports the theoretical reasoning behind my hypothesis that this type of narrative would be highly effective - it is the opportunity to understand the present self in light of the past which is the source of narrative's ability to provide meaning. Additionally, threatened participants who told stories of being tolerant despite initial discomfort with someone's differences experienced greater self-esteem and positive affect repair. Perhaps in situations of self-concept threat, narration of previous experiences in a way that acknowledges momentary deviations from one's sense of self can help reappraise the current situation as similarly transitory. Interestingly, the number of assertions regarding tolerant behavior and beliefs was not related to the amount of repair. In disruptive situations, these subjective, unsupported statements would merely be an assertion of the way a person understands him or herself, and would not aid in removing the discrepancy between that self-understanding and the present situation. Thus, it makes sense that the presence of these statements did not promote additional repair. However, the amount of objective tolerance demonstrated in actual experiences was modestly related to affective repair. Hence, threat-specific stories appear to induce repair to the extent they enable people to *evidence* tolerance in a story, as well as to connect their self-understanding to that example of tolerance, in order to reappraise a threat to their sense of self as an anomaly.

It appears that two separate meaning maintenance processes were present in this study, which uniquely served to manage threat to the self – one that attempts to make sense of disruption and one that attempts to maintain a global sense of positivity about the self. Perhaps it is the nature of the threat, which activates both self-verification and self-

enhancement motivations, which allows both avenues of narrative repair to manage meaning and threats to the self. Narrative processing within the threat domain allows people to reinterpret situations in order to affirm their self understanding as valid, while storying of positive experiences allows people to ignore discrepant information in order to maintain a conception of the self as good and valued. Thus, each type of narrative serves a unique purpose for the threatened self.

### **Implications for Narratives**

Personal narratives have been implicated as an important tool for creating meaning in life, particularly in terms of understanding the self (McAdams, 2001). The results of this study support this idea that narratives help people to discern important, enduring aspects of who they are and to maintain a coherent self-concept despite situational challenges. However, the current study also suggests that stories that do not explicitly make sense of the self in relation to past experiences play an important role in the creation of meaning within lives. While meaning-making about the self is often seen as the purview of narratives of disruptive experience (e.g., Bruner, 1990; Pals, 2006), the role of positive narratives in creating meaning should not be overlooked. Indeed, treasured stories about relationships and achievements may serve as testaments to a life well-lived and may be important touchstones which become meaningful in times of challenge and self-doubt. Thus, along with searching for self-defining meaning stated within narratives, researchers may need to also consider how the context surrounding the construction of a narrative is relevant to whether or not a story has meaning for a person's sense of self.

Additionally, the results of the current study suggest that threat-specific narrative reflection in response to self-doubt may not be an effective repair for everyone who engages

in it; rather, it appears to be the skilled story-tellers – those people who are able to engage in meaning-making and who can tell a coherent story while still recognizing the complexities and contradictions of experience – who benefit from this process. Not all people engage in extensive storying of the self, and others have questioned if this lack of reflection is problematic, as narrative processing is related to greater well-being and meaning in life (McLean & Mansfield, 2011). However, the results of the current study suggest that for those people who lack necessary narrative skills, other responses may be equally, if not more viable for repairing threats to a person's self-concept. While narrative processing does carry with it the added benefit of self-insight, for some people, it may be more beneficial for their well-being to utilize other more accessible modes of repair, such as savoring memories of relationships and achievements or simply affirming the self. Indeed, Bauer et al. (2005) have shown that narratives which strive for self-insight are related to maturity, while stories that focus on humanistic concerns are related to happiness, supporting this idea that stories may serve multiple routes to well-being and that autobiographical reasoning is not necessary for all routes.

Finally, the current study emphasizes the importance of everyday situations and the “small” stories they engender for the creation of self-meaning. The relationship between identity development, well-being, and autobiographical processing has often been studied in life's “bigger” moments, such as turning points and traumas (i.e., McLean & Pratt, 2006). However, other researchers have argued for the importance of “small stories” as an arena for practicing making sense of the self (Bamberg, 2008). Indeed, it is these repeated efforts to organize, summarize, and explain experience that result in patterns of thought that define the self (Markus, 1977). Thus, the current study suggests that storying the self in everyday,

disruptive situations may be an important opportunity to engage in autobiographical reasoning and thus strengthen ways of thinking about the self. Interestingly, 65% of participants included at least one self-event connection in their threat-specific narratives, which is high in comparison to other studies (for a review see Pasupathi et al., 2007). While the nature of the prompt, which asked for experiential proof of a valued self-concept trait, may have invited connections between the self and the past, it may also be that situations which require demonstration of certain traits may promote meaning-making about what defines the self. Thus, researchers should continue to pursue how stories are recruited for different purposes and how even everyday contexts may be fruitful ground for making meaning and developing and maintaining a self-concept within narratives.

### **Implications for Confronting Racism**

Given the self-concept domain used in this study, it is worth considering the implications these results have for confronting racism. Participants were clearly threatened by the insinuation they were experiencing a prejudiced response, and while no repair completely ameliorated the effects of the manipulation, all responses were effective in moving participants back towards their original self-understanding. Additionally, those participants who were able to avoid the issue of racism by affirming other positive traits or relationships they possess were able to feel better about themselves. These two results confirm what other researchers have established – it is difficult to get people to confront the reality of their racism.

Additionally, the analysis of individual differences in the threat-specific narrative condition suggests there may be a master narrative, or cultural script (Thorne & McLean, 2003), for talking about experiences with oppressed minorities and that such a master

narrative may help perpetuate racist behavior. In these narratives, participants were asked to share stories which demonstrated they are a tolerant person. For many participants, this appeared to require demonstrating a “colorblind” stance towards people’s differences. Participants experienced more affective repair when they were able to ignore the differences between themselves and another which had initially made them uncomfortable. Additionally, of those participants who made a self-event connection, 92% did so in a way that suggested tolerance was an enduring, stable trait they possessed. While this is clearly attributable in part to the task, it may also be indicative of a societal expectation that our prejudices are something we are supposed to have conquered, instead of something we must confront. Hammock (2010) has argued that personal stories reproduce cultural narratives, so it may be that some of the power of certain narratives to enact repair was a product of their conformity with a master narrative of what it means to be tolerant. Thus, it may be difficult to confront lingering issues of race in our society when people’s own experiences of ignoring differences are validated by a master narrative that suggests this is what it means to be tolerant.

### **Limitations and Future Directions**

In trying to understand the implications of the current study, it is important to consider its limitations and the issues they pose for interpretation. For methodological reasons, I chose to call into question participants’ self-concepts with feedback that suggests they are prejudiced. However, this trait carries with it unique characteristics which suggest caution in generalization of these results. Compared with self-concept domains such as intelligence, the college students which participated in this study may not have had a large body of experiences pertaining to tolerance from which stories could be drawn and may not

have considered tolerance to be central to their self-concept (Markus, 1977). Thus, narratives, and in particular threat-specific narratives, may play a different role in identity domains which are easily linked with related past experiences and for which participants have developed more elaborate self-schemas. Additionally, the threat that one is not a tolerant person is a threat that is somewhat specific to white people; the issues of white guilt and the strong desire to deny the possibility of being racist which accompany this threat may make it unique. Thus, the same pattern of results may not appear for other traits, particularly those which are not strongly normed as socially desirable. Third, the nature of the threat precipitated the use of a predominately white sample, and it is possible that narratives may operate differently in other ethnic groups, who may assign different meaning and value to personal stories. Finally, the threat manipulation was also complicated by the fact that not all participants responded by being threatened. While the exclusion of these individuals did not change the overall group analysis of repair effectiveness, these participants differed on numerous demographic and personality measures. Thus, future research should explore if and how narratives serve as a repair of discrepant feedback for different self-concept domains, different cultures, and different individuals.

Finally, this study does not take into account the social nature of story telling. Unlike the other repairs in this study, which are likely to be solitary acts, personal narratives are one way in which a person's self-concept is opened to comment from others (Pasupathi, 2001). It is likely that the second opinion available from a shared story's audience would be particularly helpful in self-concept repair, as other researchers have shown the positive, verifying effects of a validating audience (Pasupathi & Rich, 2005). Thus, future studies

may want to explore how audience influences the effectiveness of threat-specific and high-point stories as self-concept repair.

In closing, the results of the current study suggest that self-concept threat is best tackled by engaging in reflection on some aspect of self. For those people who have the skill and the experiences necessary to refute a threat through narrative processing of threat-related experiences, this strategy is an effective one, which carries with it the potential bonus of self-insight and meaning. However, for those people who do not possess the raw materials and necessary skill to craft a potent story, dwelling on threat-related narratives may be a poor choice. Instead, it may be beneficial to restore a sense of meaning by revisiting and affirming the experiences and values which are a person's greatest assets, and stories of relationships and achievements are a particularly useful tool for doing just that. It is up to each individual to match their needs and abilities to challenge at hand. Whatever option is chosen, when a threat to the self shrouds it in doubt, the most effective responses are those that make visible some aspect of what defines us. Thus, by their very nature, personal stories have an important role to play in dispelling self-threat.



## References

- Bamberg, M. (2008). Twice-told-tales: Small story analysis and the process of identity formation. In T. T. Sugiman, K. J. Gergen, W. W. Wagner, & Y. Y. Yamada, (Eds.), *Meaning in action: Constructions, narratives, and representations* (pp. 183-204). New York: Springer Science. doi:10.1007/978-4-431-74680-5\_11
- Bauer, J. J., McAdams, D. P., & Sakaeda, A. R. (2005). Interpreting the good life: Growth memories in the lives of mature, happy people. *Journal of Personality and Social Psychology, 88*, 203-217.
- Bauer, J. J., McAdams, D. P., & Pals, J. L. (2008). Narrative identity and eudemonic well-being. *Journal of happiness studies, 9*, 81-104. doi: 10.1007/s10902-006-9021-6
- Baumeister, R. F., & Jones, E. E. (1978). When self-presentation is constrained by the target's knowledge: Consistency and compensation. *Journal of Personality and Social Psychology, 36*, 608-618.
- Baumeister, R. F., Stilman, A., & Wotman, S. R. (1990). Victim and perpetrator accounts of interpersonal conflict: Autobiographical narratives about anger. *Journal of Personality and Social Psychology, 59*, 994-1005.
- Bem, D. J. (1967). Self-perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review, 74*(3), 183-200.
- Berzonsky, M. D. (1989). Identity style: Conceptualization and measurement. *Journal of Adolescent Research, 4*, 268-282.
- Bluck, S. (2003). Autobiographical memory: Exploring its functions in everyday life. *Memory, 11*(2), 113-123. doi:10.1080/741938206

- Bluck, S., Alea, N., Habermas, T., & Rubin, D. C. (2005). A tale of three functions: The self-reported uses of autobiographical memory. *Social Cognition, 23*(1), 91-117.  
doi:10.1521/soco.23.1.91.59198
- Bruner, J. S. (1990). *Acts of Meaning*. Harvard University Press: Cambridge MA.
- Burke, P. J. (1991). Identity processes and social stress. *American Sociological Review, 56*(6), 836-849. doi:10.2307/2096259
- Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavalley, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of Personality and Social Psychology, 70*, 141-156.
- Christensen, T. C., Wood, J. V., & Barrett, L. F. (2003). Remembering everyday experience through the prism of self-esteem. *Personality and Social Psychology Bulletin, 29*(1), 51-62.
- D'Argembeau, A., & Van der Linden, M. (2008). Remembering pride and shame: Self-enhancement and the phenomenology of autobiographical memory. *Memory, 16*, 538-547. doi:10.1080/09658210802010463
- Dutton, D. G. & Lake, R. A. (1973). Threat of own prejudice and reverse discrimination in interracial situations. *Journal of Personality and Social Psychology, 28*(1), 94-100.
- Dweck, C. (1996). Implicit theories as organizers of goals and behavior. *The psychology of action: Linking cognition and motivation to behavior* (pp. 69-90). New York, NY US: Guilford Press.
- Eisenstadt, D., Hicks, J. L., McIntyre, K., Rivers, J. A., & Cahill, M. (2006). Two paths of defense: Specific versus compensatory reactions to self-threat. *Self and Identity, 5*(1), 35-50. doi:10.1080/15298860500348079

- Eisenstadt, D., & Leippe, M. R. (1994). The self-comparison process and self-discrepant feedback: Consequences of learning you are what you thought you were not. *Journal of Personality and Social Psychology*, *67*(4), 611-626.
- Eisenstadt, D., Leippe, M. R., & Rivers, J. A. (2002). Asymmetry and defense in self-comparison: Differential reactions to feedback about the rejected and ideal selves. *Self and Identity*, *1*(4), 289-311. doi:10.1080/15298860290106797
- Empirisoft (2008). Media Lab v2008 [software]. Retrieved from <http://www.empirisoft.com/>
- Fivush, R., Haden, C. A. & Reese, E. (2006). Elaborating on elaborations: Role of maternal reminiscing style in cognitive and socioemotional development. *Child Development*, *77*(6), 1568-1588. doi:10.1111/j.1467-8624.2006.00960.x
- Hammack, P. L. (2010). The cultural psychology of Palestinian youth: A narrative approach. *Culture & Psychology*, *16*, 507-537. doi:10.1177/1354067X10380159
- Heine, S. J., Proulx, T., & Vohs, K. D. (2006). The Meaning Maintenance Model: On the Coherence of Social Motivations. *Personality and Social Psychology Review*, *10*, 88-110. doi:10.1207/s15327957pspr1002\_1
- Hello, E., Scheepers, P., & Slegers, P. (2006). Why the more educated are less inclined to keep ethnic distance: An empirical test of four explanations. *Ethnic and Racial Studies*, *29*(5), 959-985.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, *94*(3), 319-340.
- John, O. P., & Srivastava, S. (1999). The big five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2<sup>nd</sup> ed.), (pp. 102-138). New York: Guilford Press.

- Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, 129(3), 339-375.
- King, L. A., & Raspin, C. (2004). Lost and found possible selves, subjective well-being, and ego development in divorced women. *Journal of Personality*, 72(3), 603-632,
- Lang, P. J. (1970). Autonomic control or learning to play the internal organs. *Psychology Today*, 5, 37.
- Lang, P. J., Bradley, M. M., & Cuthbert, B. N. (2008). International affective picture system (IAPS): Affective ratings of pictures and instruction manual. Technical Report A-8. University of Florida, Gainesville, FL.
- Leary, M. R. (2007). Motivational and Emotional Aspects of the Self. *Annual Review of Psychology*, 58, 317-344. doi:10.1146/annurev.psych.58.110405.085658
- Lyubomirsky, S., Sousa, L. & Dickerhoof, R. (2006). The costs and benefits of writing, talking, and thinking about life's triumphs and defeats. *Journal of Personality and Social Psychology*, 90, 692-708.
- Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, 35(2), 63-78. doi:10.1037/0022-3514.35.2.63
- McAdams, D. R. (2001). The psychology of life stories. *Review of General Psychology*, 5, 100-122. doi: 10.1037//1089-2680.5.2.100
- McAdams, D. P. (2008). Life story interview. Retrieved from <http://www.sesp.northwestern.edu/foley/instruments/interview/>
- McAdams, D. P., Albaugh, M., Farber, E., Daniels, J., Logan, R. L., & Olson, B. (2008). Family metaphors and moral intuitions: How conservatives and liberals narrate their

- lives. *Journal of Personality and Social Psychology*, 95(4), 978-990.  
doi:10.1037/a0012650
- McAdams, D. P., Anyidoho, N. A., Brown, C., Huang, Y. T., Kaplan, B., & Machado, M. A. (2004). Traits and stories: Links between dispositional and narrative features of personality. *Journal of Personality*, 72(4), 761-784. doi:10.1111/j.0022-3506.2004.00279.x
- McAdams, D. P., Reynolds, J., Lewis, M., Patten, A., & Bowman, P. J. (2001). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narrative, and their relation to psychosocial adaptation in midlife adults and in students. *Personality and Social Psychology Bulletin*, 27, 472-483.
- McLean, K. C. (2005). Late adolescent identity development: Narrative meaning making and memory telling. *Developmental Psychology*, 41(4), 683-691. doi:10.1037/0012-1649.41.4.683
- McLean, K. C. (2008). The emergence of narrative identity. *Social and Personality Psychology Compass*, 2(4), 1685-1702. doi: 10.1111/j.1751-9004.2008.00124.x
- McLean, K. C., & Breen, A. V. (2009). Processes and content of narrative identity development in adolescence: Gender and well-being. *Developmental Psychology*, 45(3), 702-710. doi:10.1037/a0015207
- McLean, K. C., & Mansfield, C. D. (2011). To reason or not to reason: Is autobiographical reasoning always beneficial? *New Directions for Child and Adolescent Development*, 2011(131), 85-97. doi: 10.1002/cd.291

- McLean, K. C., Pasupathi, M., & Pals, J. L. (2007). Selves creating stories creating selves: A process model of self-development. *Personality and Social Psychology Review*, *11*(3), 262-278. doi:10.1177/1088868307301034
- McLean, K. C., & Pratt, M. W. (2006). Life's little (and big) lessons: Identity statuses and meaning-making in the turning point narratives of emerging adults. *Developmental Psychology*, *42*(4), 714-722.
- Monteith, M. J., Ashburn-Nardo, L., Voils, C. I., & Czopp, A. M. (2002). Putting the brakes on prejudice: On the development and operation of cues for control. *Journal of Personality and Social Psychology*, *83*(5), 1029–1050.
- Napper, L., Harris, P. R., & Epton, T. (2009). Developing and testing a self-affirmation manipulation. *Self and Identity*, *8*, 45-62. doi: 10.1080/15298860802079786
- Pals, J. L. (2006). The narrative identity processing of difficult life experiences: Pathways of personality development and positive self-transformation in adulthood. *Journal of Personality*, *74*, 2-31.
- Park, C. L., & Folkman, S. (1997). Meaning in the context of stress and coping. *Review of General Psychology*, *1*(2), 115-144. doi:10.1037/1089-2680.1.2.115
- Pasupathi, M. (2001). The social construction of the personal past and its implications for adult development. *Psychological Bulletin*, *127*, 651-672.
- Pasupathi, M. (2003). Emotion regulation during social remembering: Differences between emotions elicited during an event and emotions elicited when talking about it. *Memory*, *11*, 151-163.

- Pasupathi, M., & Mansour, E. (2006). Adult age differences in autobiographical reasoning in narratives. *Developmental Psychology, 42*(5), 798-808. doi:10.1037/0012-1649.42.5.798
- Pasupathi, M., Mansour, E., & Brubaker, J. R. (2007). Developing a life story: Constructing relations between self and experience in autobiographical narratives. *Human Development, 50*, 85-110. doi:10.1159/000100939
- Pasupathi, M., McLean, K. C., & Weeks, T. (2009). To tell or not to tell: Disclosure and the narrative self. *Journal of Personality, 77*, 89-124.
- Pasupathi, M., & Rich, B. (2005). Inattentive listening undermines self-verification in personal storytelling. *Journal of Personality, 73*(4), 1051-1085. doi:10.1111/j.1467-6494.2005.00338.x
- Pennebaker, J. W. & Francis, M. E. (1996). Cognitive, emotional, and language processes in disclosure. *Cognition and Emotion, 10*, 601-626.
- Pennebaker, J. W. & Seagal, J. D. (1999). Forming a story: The health benefits of narrative. *Journal of Clinical Psychology, 55*, 1243-1254.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. Oxford, UK: Oxford University Press.
- Pillimer, D. B. (2003). Directive functions of autobiographical memory: The guiding power of the specific episode. *Memory, 11*(2), 193-202.
- Plant, E. A. & Devine, P. G. (1998). Internal and external motivation to respond without prejudice. *Journal of Personality and Social Psychology, 75*(3), 811-832.
- Quintana, S. M., & Minami, T. (2006). Guidelines for meta-analysis of counseling psychology research. *The Counseling Psychologist, 34*, 839-877.

- Roth, S., & Cohen, L. J. (1986). Approach, avoidance, and coping with stress. *American Psychologist*, *41*(7), 813-819.
- Sanitioso, R., Kunda, A., & Fong, G. T. (1990). Motivated recruitment of autobiographical memories. *Journal of Personality and Social Psychology*, *59*(2), 229-241.
- Sherman, D. A. K., Nelson, L. D., & Steele, C. M. (2000). Do messages about health risks threaten the self? Increasing the acceptance of threatening health messages via self-affirmation. *Personality and Social Psychology Bulletin*, *26*(9), 1046–1058.
- Singer, J. A., & Bluck, S. (2001). New perspectives on autobiographical memory: The integration of narrative processing and autobiographical reasoning. *Review of General Psychology*, *5*(2), 91-99. doi:10.1037/1089-2680.5.2.91
- Swann, W. B. (2005). The self and identity negotiation. *Interaction Studies*, *6*(1), 69-83.
- Thorne, A., & McLean, K. C. (2003). Telling traumatic events in adolescence: A study of master narrative positioning. In R. Fivush, & C. A. Haden, (Eds.), *Autobiographical memory and the construction of a narrative self: Developmental and cultural perspectives* (pp. 169-185). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063-1070.
- Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social Behavior*, *27*, 78-89. doi:10.2307/2136504
- Wilson, D. B. (2005). SPSS for Windows Meta-Analysis Macros (Version 1.0) [Computer software]. Available at <http://mason.gmu.edu/~dwilsonb/ma.html>



Wirtz, D., Kruger, J., Scollon, C. N., & Diener, E. (2003). What to do on spring break? The role of predicted, on-line, and remembered experience in future choice. *Psychological Science, 14*(5), 520-524.

*Appendix A*

## Instructions for the Threat-specific Narrative Condition

Please describe a moment or episode in your life which you believe demonstrates that you are a tolerant person. By tolerant, we mean accepting of people who are different from you. Please describe this experience in detail. What happened, when and where, who was involved, and what were you thinking and feeling? Also, please say a word or two about why you think this particular moment demonstrates that you are a tolerant person and if it says anything else about who you are as a person.

*Appendix B*

## Instructions for the High-point Narrative Condition

Please describe a moment or episode in your life that stands out as an especially positive experience. This might be *the* high point scene of your entire life, or else an especially happy, joyous, exciting, or wonderful moment in the story. Please describe this high point experience in detail. What happened, when and where, who was involved, and what were you thinking and feeling? Also, please say a word or two about why you think this particular moment was so good and what the scene may say about who you are as a person.

Table 1

*Summary of Study Design*

Cond	Procedure					
	Pre-study	Threat Manipulation	Post-threat	Repair	Post-repair	Follow-up
1				Threat-specific Narrative		
2	All participants complete tolerance self-concept and state self-esteem measures	All participants presented with feedback suggesting they are prejudiced	All participants complete tolerance self-concept, affect, and state self-esteem measures	High-point Narrative	All participants complete tolerance self-concept, affect, and state self-esteem measures	Personality and demographic measures
3				Threat-specific Affirmations		
4				General Affirmations		
5				Self-verifying Behavior		
6				Distraction		

Table 2

*Arousal Level Presented on Feedback Graphs by Picture Type and Trial*

Picture Type	Trial			
	Practice	1	2	3
Neutral	Low	Low	---	---
Arousing	High	High	Med	Low
Prejudice	---	High	High	High
Controversial	---	High	Med	Low

*Note.* Dashed lines indicate a particular picture type was not shown during that trial.

Table 3

*A Comparison of the Cognitive and Affective Repair in Each Condition*

	Threat-specific Stories		Highpoint Stories		Tolerance Affs		General Affs		Distraction	
	<i>M (SD)</i>	<i>Cohen's d</i>	<i>M (SD)</i>	<i>Cohen's d</i>	<i>M (SD)</i>	<i>Cohen's d</i>	<i>M (SD)</i>	<i>Cohen's d</i>	<i>M (SD)</i>	<i>Cohen's d</i>
Tolerance Accuracy										
Post-Threat	6.05 (1.58)	0.46	5.74 (1.65)	0.55	6.22 (1.32)	0.5	5.97 (1.43)	0.42	5.83 (1.65)	0.26
Post-Repair	6.69 (1.16)		6.50 (1.20)		6.84 (1.17)		6.55 (1.33)		6.26 (1.60)	
Tolerance Certainty										
Post-Threat	5.92 (1.53)	0.44	5.96 (1.57)	0.39	6.05 (1.56)	0.56	5.73 (1.64)	0.74	5.80 (1.53)	0.12
Post-Repair	6.59 (1.43)		6.56 (1.45)		6.78 (.95)		6.73 (1.23)		6.06 (1.28)	
Self-Esteem										
Post-Threat	6.32 (1.25)	0.28	6.30 (1.21)	0.47	6.26 (1.14)	0.22	6.08 (1.75)	0.43	5.99 (1.50)	0.36
Post-Repair	6.66 (1.17)		6.86 (1.16)		6.50 (1.10)		6.80 (1.55)		6.46 (1.26)	
Negative Affect										
Post-Threat	1.95 (.64)	0.48	1.82 (.69)	0.8	1.88 (.71)	0.37	1.88 (.64)	0.74	2.05 (.68)	0.68
Post-Repair	1.65 (.60)		1.35 (.46)		1.62 (.66)		1.47 (.46)		1.44 (.41)	
Positive Affect										
Post-Threat	2.50 (.86)	-0.05	2.60 (.70)	0.61	2.52 (.79)	0	2.52 (.94)	0.18	2.34 (.76)	0.03
Post-Repair	2.46 (.95)		3.05 (.78)		2.52 (.93)		2.69 (1.00)		2.37 (.89)	
Combined Effect sizes										
Self-Concept		0.45		0.47		0.52		0.56		0.19
CI		.11, .78		.13, .80		.18, .86		.23, .90		-.14, .52
Affective		.23		0.62		0.19		0.43		0.34
CI		-.07, .53		.34, .89		-.08, .46		.13, .74		-.01, .70

*Note.* Cohen's *d* represents the size of each repair in each condition. The combined self-concept repair effect size includes tolerance accuracy and certainty. The combined affective repair effect size includes self-esteem, negative affect, and positive affect.

Table 4

*Descriptive Statistics for Threat-specific and High-point Narrative Variables*

Narrative Variable	Threatened Participants					Un-Threatened Participants				
	<i>M</i>	<i>SD</i>	Range	N	%	<i>M</i>	<i>SD</i>	Range	N	%
Objective Tolerance	3.49	0.95	1-5	74		3.57	0.98	2-5	21	
Tolerance Behavior										
Assertions	0.48	0.84	0-4	75		1.18	1.26	0-4	22	
"I am Tolerant" Assertions	0.59	0.62	0-2	75		0.73	0.83	0-3	22	
Tolerance Belief Assertions	0.16	0.57	0-4	75		0.59	0.96	0-3	22	
Tolerance Affective Trajectory				40					13	
Stable					58%					69%
Overcoming					42%					31%
Self-Event Connections				75					22	
Present					64%					68%
Absent					36%					32%
Self-Affirmations	0.94	0.99	0-4	72		0.94	0.8	0-3	18	
Relationship Orientation				72					18	
Present					63%					39%
Absent					38%					61%

*Note.* Among threatened participants, no continuous narrative variables were inter-correlated. Among un-threatened participants, "I am tolerant" Statements were correlated with Tolerance,  $r(19) = .45, p = .04$ , and Tolerance Behavior Affirmations,  $r(19) = .46, p = .03$ .

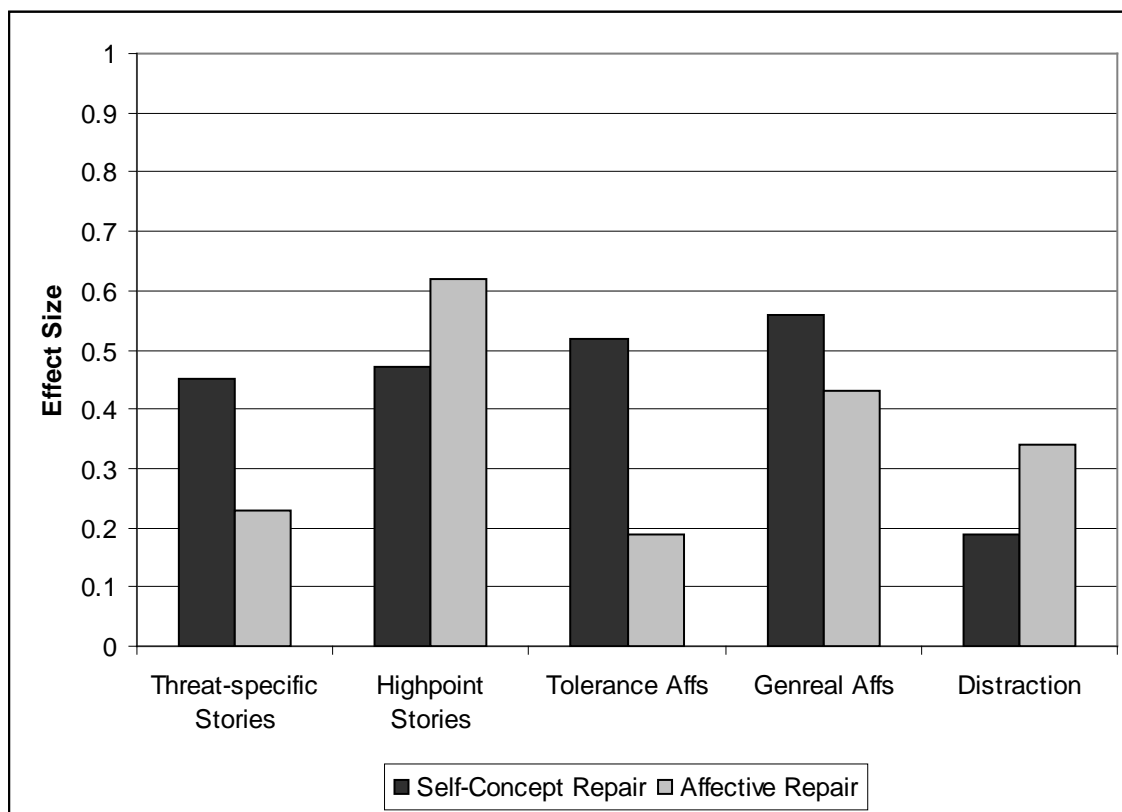


Figure 1. Self-concept and affective repair effect sizes (Cohen's *d*) for each condition.