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Experiencing and Responding to Self-Discrepant Autobiographical Memories

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EXPERIENCING AND RESPONDING TO SELF-DISCREPANT AUTOBIOGRAPHICAL MEMORIES

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ABSTRACT

The overarching goal of this investigation was to explore how individuals experience and respond to autobiographical memories that contradict their self-concept. A secondary goal was to explore two potential determinants of the experience and response to self-discrepant autobiographical memories: self-threat and narcissism.

In Study 1, 291 participants were asked to recall a time when they challenged another person's memory for a past event. They were then asked to describe why they challenged the other's recollection, among other questions. Overall, the motives identified for challenging aligned to a considerable extent with the previously theorized functions of autobiographical remembering. As expected, instances in which participants admitted to challenging in order to preserve or protect their self-concept emerged. Significant differences were observed between these self-protective challenges and other types of challenges on several dissonance proxies, including negative emotional states, importance of convincing the other, motivation to present a positive self-image, and distress at disagreeing with the other. There was a tendency for women who identified self-protective motives to have higher narcissism scores.

In Study 2, 221 participants were instructed to recall a high self-threat event (a time when they engaged in intimate partner violence) and a low self-threat event (a time when they acted in a kind, supportive, and/or understanding way towards a romantic partner or date) in a counterbalanced order, and thereafter rated measures designed to capture dissonance-reducing appraisals. As expected, the high self-threat event produced more dissonance, as indicated by higher ratings of shame, than the low self-threat event. Consistent with the initial prediction, participants reported lower belief in accuracy and

indicated being more critical of their past selves than their current selves after the high self-threat event. Regarding narcissism, shame-prone women tended to be more critical of their past-selves than their current-selves. More nurturing and more dominant participants showed a similar pattern of criticizing past selves. More nurturing participants tended to show higher belief in accuracy and higher belief in occurrence after the high self-threat event than after the low self-threat event.

Overall, experiencing and responding to self-discrepant autobiographical memories appeared to closely resemble cognitive dissonance processes. Dissonance activation and use of appraisals depended on perceptions of self-threat and narcissism; as self-threat increased, dissonance increased, and appraisal use increased. The findings have implications for the utility of cognitive dissonance processes in understanding the experience and responses to self-discrepant autobiographical memories. The findings also have clinical implications for the utility of appraisals in protecting the current self-concept.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER 1

General Introduction

This investigation seeks to understand how individuals experience and respond to autobiographical memories, recalled by the self and/or recounted by another, that contradict their current self-concept. The self-concept is here defined as a theory that an individual holds about himself or herself (Rosenberg, 1989). Autobiographical memories that are discrepant with the current self-concept are henceforth referred to as self-discrepant autobiographical memories.

The value of such an investigation rests in its potential to (a) arrive at a more nuanced understanding of how the self and autobiographical memories work together to protect and preserve one's self-concept and to (b) inform our understanding and clinical interventions when autobiographical memories of self-discrepant acts exacerbate psychopathology and/or interfere with treatment (Pillemer, 2001; Rubin, Hoyle, & Boals, 2014).

Chapter 1 sets the theoretical and empirical stage for this program of study by focusing on cognitive dissonance theory and its integration into autobiographical memory theorizing. Building on this foundation, Chapter 2 focuses on autobiographical memory research as it applies to incompatible recollections of past events, some of which possibly involve dissonance. Chapter 3 focuses on dissonance-reduction strategies in the context of autobiographical memories of intimate partner violence.

Self-Discrepant Autobiographical Memories & Cognitive Dissonance

Not all autobiographical memories are discrepant with the self-concept; although there may be incompatible versions of a recalled past event, this incompatibility does not

necessarily violate or conflict with one's self-concept. The focus of this investigation, however, is on a subset of autobiographical memories wherein the past event, as recalled by someone else (Study 1) or as recalled by the self (Study 2), does in fact violate or conflict with one's self-concept. Based on Aronson's revision of cognitive dissonance theory (1969, 1992) as well as autobiographical memory theorizing and research (Conway & Pleydell-Pearce, 2000), it is the position of this manuscript that cognitive dissonance processes underlie the experience of self-discrepant autobiographical memories and the ensuing responses.

Overview of cognitive dissonance theory. Festinger (1957) conceptualized dissonance as simultaneously holding two or more inconsistent cognitions, or cognitions and behaviours, which produce an aversive state of psychological discomfort that in turn motivates individuals to alter their cognitions/behaviours to reduce dissonance. Aronson (1969, 1992) revised the theory by suggesting that mere inconsistency does not necessarily produce dissonance. Rather, he argued that a certain kind of inconsistency, where one's action(s) conflict with one's self-concept, would produce the sharpest dissonance. He further elaborated on the role of the self-concept by arguing that individuals strive to "(a) maintain a consistent, stable, and predictable sense of self, (b) preserve a competent sense of self, and c) preserve a morally good sense of self" (Aronson, 1969, Aronson, 1992, p. 305). He proposed that a state of dissonance would arise when an individual has acted or is implied by someone else to have acted in a way that (a) is startling or "astonishing" to them (i.e., as opposed to consistent with whom they think they are), (b) makes them feels incompetent or foolish, and (c) makes them feel immoral, ashamed, or guilty. Otherwise stated, an implication that one is immoral,

incompetent, inconsistent, unstable, or unpredictable threatens one's positive self-concept and therefore creates dissonance (Aronson, Blanton, & Cooper, 1995).[1]

Inherent in Aronson's revision of cognitive dissonance theory is that individuals have a positive self-concept and that negative information is inconsistent with this self-concept. Swann's (Swann, 2012; Swann & Ely, 1984; Swann & Read, 1981) self-verification theory, on the other hand, proposes that the self-concept is not always positive. The theory predicts that when faced with negative information, an individual with a negative self-concept might not experience dissonance because this situation would presumably be consistent with their sense of self. This investigation draws from Aronson's rather than Swann's revision because, given that the studies involve nonclinical samples, most of the participants are expected to have a positive self-concept.

Festinger (1957) and Aronson (1969, 1992) both proposed that dissonance reduction could be accomplished in several ways, including changing the dissonant element(s), increasing the number of consonant element(s) (e.g., outweighing, affirming some other valued aspect of the self-concept), or reducing the importance of the dissonant element(s) (e.g., trivialization, rationalizing).

Applications of cognitive dissonance theory in autobiographical memory theorizing. Cognitive dissonance theory has been incorporated into Conway's (Conway & Pleydell-Pearce, 2000) self-memory-system, one influential framework within autobiographical memory. The self-memory-system emphasizes the reciprocal relationship between the self and autobiographical memories (Conway & Pleydell-

[1] Because self-affirmation theory (Steele, 1988), self-discrepancy theory (Higgins, 1989), and similar theories can arguably be subsumed under the umbrella of dissonance theory (Aronson, 1992), they are not discussed here.

Pearce, 2000). Of relevance to this investigation, the self-memory-system is premised on the assumption that coherence between autobiographical memory and the self-concept provides stability and integration, which contributes to physical and psychological health. Conway and Pleydell-Pearce (2000) draw from Higgins' (Higgins, Bond, Klein, & Strauman, 1986) self-discrepancy theory to underscore the need for coherence. According to Higgins' theory, discrepancies in self-views produced problematic mood states, such as sadness and fear.

Along similar lines, Conway and Pleydell-Pearce argue that a lack of coherence (e.g., dissonance) is thought to undermine important aspects of the self-concept, and exacerbate the emergence of psychological disorders, confabulations, and delusions. Given the pivotal role of coherence to one's well-being, Conway (2005) and Conway and Pleydell-Pearce (2000) suggested that when coherence is threatened, it can be re-established by lowering the accessibility of memories that threaten or undermine this coherence or by substantially modifying or distorting coherence-threatening memories prior to accessing them.

The self-memory-system contributes to this investigation in three important ways. First, it builds on Aronson's revised cognitive dissonance theory by proposing that dissonance (or a lack of coherence) can arise from conflict between autobiographical memory retrieval and the current self-concept. Second, it highlights the importance of dissonance-reducing mechanisms to one's physical and psychological health. Third, it proposes ways in which dissonance can be resolved (i.e., coherence can be re-established) by modifying, distorting, or reinterpreting coherence-threatening autobiographical memories.

A more recent application of cognitive dissonance theory in an autobiographical memory context can be found in Rodriguez and Strange's work (2015), who showed that, after writing a counter-attitudinal essay about tuition increase, participants reported not only being more supportive of tuition increase following the essay, but also that their pre-essay attitudes had also been supportive of this idea. In other words, participants unwittingly modified aspects of their recollection of pre-essay attitudes to match their post-essay attitudes.

Discussion of cognitive dissonance in an autobiographical memory context was also incorporated in Scoboria, Jackson, et al., (2014), and Scoboria, Boucher, et al., (2015) who proposed that cognitive dissonance could result from at least a temporary conflict between two or more salient sources of information about the occurrence, accuracy, and/or personal importance of a remembered event. These salient yet conflicting sources of information may involve internal cognitive processes, such as when one's current self-concept is inconsistent with their memory for the event, or external social processes, such as when one receives information from someone else that undermines their current memory for a past event.

Conclusion. Based on Aronson's revision of dissonance theory (1969, 1992) as well as autobiographical memory theorizing and research (Conway & Pleydell-Pearce, 2000), one can argue that cognitive dissonance processes underlie the experience of self-discrepant autobiographical memories and the ensuing responses. It is possible to draw a parallel between the arousal of cognitive dissonance and ensuing responses to this dissonance, and the arousal of self-discrepancy within an autobiographical memory context and ensuing responses to it. This parallel holds to the extent that if dissonance

arises when an individual's behaviour violates their self-concept as morally good, competent, and/or consistent/stable/predictable self (Aronson, 1969, 1992), then dissonance should also arise when aspects of an autobiographical memory, as recalled by someone else or as recalled by oneself, reflect a behaviour that violates one's self-concept. Consistent with the self-memory-system (Conway & Pleydell-Pearce, 2000), such dissonance would threaten the coherence between autobiographical memory and the self-concept. In response, dissonance reduction strategies should theoretically become activated to re-establish coherence and preserve the self-concept.

The parallel between cognitive dissonance and self-discrepant autobiographical memories also holds to the extent that, if dissonance, an aversive state of discomfort, can be alleviated by either changing the dissonant cognitions or behaviours, increasing the number of consonant cognitions or behaviours, or reducing the importance of the dissonant cognitions or behaviours (Aronson, 1969, 1992; Festinger, 1957), then dissonance produced as a result of exposure to self-discrepant autobiographical memories can also be alleviated through comparable processes that prioritize the cognition(s) contained within the self-concept over the recalled behaviour(s).

Autobiographical Memory-Based Appraisals as Dissonance-Reducing Mechanisms

In line with Festinger's (1957) position that dissonance could be alleviated by trivializing the dissonant element, dissonance between the current self-concept and autobiographical memories may also be alleviated by trivializing aspects of that autobiographical memory (Alicke & Sedikides, 2009; Conway & Pleydell-Pearce, 2000). Similarities have also been drawn between Festinger's proposal of changing the dissonant element and the idea of reconstructing self-discrepant aspects of a conflicting

autobiographical memory in a more self-serving manner (Alicke & Sedikides, 2009; Conway & Pleydell-Pearce, 2000). In both instances, research has found that using these memory-based mechanisms, or appraisals as they will be referred to henceforth, has a comparable effect to dissonance-reducing mechanisms insofar as improving psychological and physical health (Snyder & Higgins, 1988), maintaining higher self-esteem and well-being scores (Beike & Landoll, 2000), and lowering psychological maladjustment (e.g., depression, hostility, anxiety; Alicke & Sedikides, 2009).

Those autobiographical memory-based dissonance-reducing appraisals that have been partially empirically substantiated thus far can be roughly grouped into appraisals of importance and appraisals of veridicality. Appraisals of importance are hypothesized to reduce dissonance by re-evaluating either the importance of a past event (or aspects of it) or the importance of aspects of the self. Examples include devaluing a past-self (McFarland & Alvaro, 2000), claiming a feeling of subjective distance between past and present selves (Ross & Wilson, 2002; Wilson & Ross, 2003), trivializing the utility of the dissonant memory (Greve & Wentura, 2010), minimizing or justifying the dissonant memory or aspects of it (Beike & Landoll, 2000), devaluing the dissonant memory by recalling other events more consistent with one's current self-concept (Beike & Landoll, 2000), and viewing the dissonant memory as closed or belonging to the past, with no bearing on the present (Baumeister, Stillwell, & Wotman 1990; Beike & Crone, 2008; Beike & Landoll, 2000).

Appraisals of veridicality are hypothesized to reduce dissonance by re-evaluating the attributions made about how much a past event is believed to have truly occurred (belief in occurrence) and/or how accurate its recall is (belief in accuracy; Scoboria et al.,

2014). Examples include participant-reported higher accuracy ratings for pride-inducing memories relative to shame-inducing memories, presumably to bolster the self-concept (D'Argembeau & Van der Linden, 2008) and participant-reported reduced belief in the occurrence of a past negative or traumatic event because its recall might be threatening or uncomfortable (Scoboria, Boucher, & Mazzoni, 2015). To elaborate, Scoboria and colleagues (2015) found instances in which participants reporting lowered belief in occurrence when retrieving potentially intrusive trauma-related memories (e.g., "I pushed it from my mind"; "I did not want to believe that that happened."). Echoing Festinger's notion of increasing consonant elements, Scoboria, Jackson, et al. (2014) also proposed that devaluing new information and maintaining the original belief in occurrence can arguably diminish cognitive dissonance. Disputed memories are an example of instances when, faced with conflicting information, individuals maintain their original autobiographical belief and defend their version of a past event (Sheen, Kemp, & Rubin, 2001).

How does motivation influence appraisals? Festinger (1957) proposed that an aversive state of psychological discomfort motivates individuals to turn to dissonance-reducing mechanisms. Aronson (1969, 1992) instead argued that it was the motive to preserve a moral, competent, and stable sense of self that drove the use of dissonance-reducing mechanisms. Along those lines, the self-memory-system (Conway & Pleydell-Pearce, 2000) proposes that the primary role of the working self is to maintain a coherent sense of identity by regulating the encoding, accessibility, and retrieval of memories. According to this framework, the motivation to achieve self-coherence facilitates the reconstruction of autobiographical memories that are consistent with one's current self-

concept. The framework further predicts that, when encountering dissonant and/or self-threatening information, individuals alter, distort, reinterpret or even fabricate their memories so as to maintain their current self-concept. Failure to do so presumably results in delusions, confabulations, or other forms of psychosis (Conway, 2005).

In contrast to Conway and Pleydell-Pearce's emphasis on self-coherence, Sedikides and colleagues (Alicke & Sedikides, 2009; Sedikides & Green, 2004, 2009; Sedikides & Strube, 1995) have advanced self-protection and self-enhancement as motives that play a crucial role in memory appraisal. Reminiscent of Aronson's work, both these motives are rooted in the assumption that individuals view themselves positively (e.g., competent, warm, moral, attractive, and lovable), and strive to maintain, protect, and/or enhance this positive self-concept (Sedikides & Green, 2004).

The exact relation between self-enhancement and self-protection is the subject of many papers. Alicke and Sedikides (2009) propose that threat perception may help differentiate between the two. They contend that, similar to the parasympathetic nervous system, self-enhancement is activated by relatively minor disturbances or minor threats, and makes only slight adjustments. In contrast, similar to the sympathetic nervous system, self-protection is activated by larger disturbances, such as challenges or threats, and makes more radical adjustments. Self-protection should therefore be activated when self-discrepant autobiographical memories threaten the self-concept. This inference is compatible with Alicke and Sedikides's suggestion that experiencing negative affect, a presumed sign of threat to the self, preferentially activates self-protection.

In addition to threat perception, Alicke and Sedikides (2009) differentiate between the two motives in terms of effort; whereas self-enhancement requires only

minor effort to maintain the positivity of the self-concept, self-protection requires more considerable effort to counter or minimize the threat. Because of this, self-protective processes are more elaborate, more cognitively demanding, and more likely to involve self-deception than self-enhancement processes. In fact, self-protection is presumably expressed through various efforts at forgetting, avoidance of remembering, making excuses to deflect blame, misremembering unfavorable information about the self, or retreating from threatening situations, which are reminiscent of the appraisals presented earlier. Not surprisingly, the two motives relate in predictable ways to the self-serving bias; internalizing positive outcomes is more likely to involve self-enhancement, whereas externalizing negative outcomes (e.g., deflecting blame) is more likely to involve self-protection.

The predominance of self-protection versus self-coherence has also been debated. There are a handful of studies that illustrate the emergence of appraisals under conditions of discrepancy and/or self-threat, but the underlying motives are not fleshed out. When Baumeister et al. (1990) examined accounts involving interpersonal conflict, they found that narratives in which a participant had angered another person contained denial of any lasting negative consequences, justifications, excuses, and blaming of the victim. Such a stance was deemed indicative of self-protection, but self-coherence could not be ruled out.

Other authors interpret their results in the context of self-coherence. For example, Beike and Landoll (2000) manipulated motivation levels by asking participants to recall either self-discrepant or self-consistent memories. Participants in the self-discrepant condition made more frequent use of justification, outweighing, and closure than

participants in the self-consistent condition. As to motive, however, they argued that self-coherence was involved, while dedicating little attention to self-protection.

A potential compromise between self-consistency and self-protection was suggested by McFarland and Alvaro (2000), who speculated that the two motives might work together. They experimentally manipulated self-threat by randomly assigning participants to describe either a severe or a mild negative event, and then instructing them to provide current and pre-event ratings on various personal characteristics (e.g., tolerant, mature). Even though random assignment would have ensured that pre-event ratings were comparable between the two randomly created groups, participants describing the more severe negative event were more critical of their pre-event selves than participants describing the mild negative event. This derision of past selves was interpreted as bolstering the illusion that the participant had grown and improved since the negative event, which contributed to feelings of self-worth. This illusion of improvement presumably alleviated the threat posed by recalling negative affective states. Crucial to the self-coherence and self-protection debate, the illusion of improvement was engendered by derogating the past, rather than the present attributes, presumably because past attributes are less salient and available, and therefore easier to devalue. Extending this argument further, it would appear that coherence with one's current self-perception prevented the derogation of present attributes. Self-protection, however, required that the self be protected in some way, so the past was derogated instead.

Along those same lines, Wilson and Ross (2003) asserted that individuals strive to maintain a coherent yet favorable self-concept. They further argued that individuals do not always value self-coherence; at times, they show a tendency to perceive improvement

or growth in themselves by deriding past selves, which is more aligned with the self-enhancement and self-protective motives.

Another factor to consider regarding motivation is the degree of threat. According to Baumeister, Smart, and Boden (1996), prioritizing one motivation over another may depend on the degree of threat to the self; self-relevant information that is somewhat discrepant should activate a self-coherence motive, whereas self-relevant information that is strongly discrepant should activate self-protection. They further add that the greatest threat to the self is typically experienced by individuals possessing an unstable or inflated self-concept, a pattern most typical among narcissists.

Sedikides and Green (2004) attempted to experimentally disentangle self-protection from self-coherence. They selected participants with a negative and a positive self-concept and randomly instructed them to consider trait-relevant behaviours (e.g., trustworthy) either while thinking of themselves or someone else. Participants' recall of those behaviours was tested after a brief distractor task. The authors found that even participants with a negative self-concept (i.e., individuals who self-reported behaving in an untrustworthy or unkind manner in the past and expected to act similarly in the future) recalled fewer negative than positive behaviours when instructed to think of themselves. This inferior recall of self-threatening information, regardless of the valence of one's self-concept, established the more dominant role of self-protection vis-à-vis self-coherence in the context of memorial self-defense. This conclusion is, however, specific to one mechanism through which self-protection may operate: mnemic neglect (Sedikides & Green, 2000; 2004), which refers to shallower processing of self-threatening information, and consequently reflected in inferior recall. Other discrepancy reduction

strategies may operate under a predominantly different motive or circumstance.

To summarize then, some individuals may prioritize self-protection, whereas others may prioritize self-coherence. These two motives do not necessarily contradict each other if the self-concept is inherently positive because both self-protection and self-coherence would motivate the individual to maintain that positivity. An issue, however, arises when there is a negative or somewhat unfavorable self-concept, in which case it is not clear whether self-protection (and the related desire to protect oneself from negative evaluation) or self-coherence (and the related desire to maintain that negative self-concept) will emerge as more dominant. The valence of the self-concept becomes relevant when considering that a current negative self-concept may be more aligned with a dysphoric or borderline presentation (Barry, Naus, & Rehm, 2006; Jorgensen et al., 2012), whereas a current positive self-concept may be more aligned with an adjusted presentation. Based on the arguments presented thus far, circumstances that create dissonance, and in particular self-threat, should predominantly activate self-protection.

When do appraisals occur? Little is known about how we choose the manner in which we respond to self-discrepant autobiographical memories, although dissonance theory can make several relevant contributions in this regard. According to Festinger (1957), the magnitude of dissonance is partially contingent upon the importance of the elements involved; the more important, valued, or consequential the conflicting elements are, the higher that dissonance will be. Recognizing the role of individual differences, Aronson (1969, 1992) proposed that individuals differ in their tolerance of dissonance and in their preference for certain dissonance reduction strategies over others. Building on Festinger's (1957) and Aronson's work (1969, 1992), two constructs are discussed

below as potential determinants of responses to self-discrepant autobiographical memories: self-threat and narcissism. No distinction is being made as to whether these two constructs differentially impact the magnitude of dissonance or the selection of dissonance-reducing methods. It is likely that self-threat and narcissism are involved in both aspects to varying degrees.

Conceptualizations of self-threat. Self-threat has been operationalized in various ways, including experiencing failure (Pyszczynski, Greenberg, & LaPrelle, 1985), experiencing self-referent negative feelings (McFarland & Alvaro, 2000), such as shame (Aronson, 1992; Pinto-Gouveia & Matos; 2011) or fear (Berntsen & Rubin, 2006), and experiencing negative events (e.g., death, physical assault of self, proximity to a war zone, accident, injuries, illnesses, harassment, sexual assault; Wood & Conway, 2006). Baumeister, Smart, and Boden (1996) defined self-threat as instances when "favorable views about oneself are questioned, contradicted, impugned, mocked, challenged, or otherwise put in jeopardy" (p. 8). As such, self-threat should emerge when the self-concept is mocked, challenged, or criticized in some form. Baumeister's conceptualization of self-threat is in line with Conway and Pleydell-Pearce's (2000) view that certain memories, if accessed, are threatening to the current self because they "destabilize the goals of the working self and cast the whole system into turmoil" (p. 282).

Sedikides and colleagues (Campbell & Sedikides, 1999; Pinter, Green, Sedikides, & Gregg, 2011; Sedikides & Green, 2000; 2004, 2009) advanced a self-threat model, mnemic neglect, which, reminiscent of Aronson's revised dissonance theory (1969),

holds that when an individual's positive[2] self-concept is exposed to a certain kind of feedback, there is a momentary drop in self-esteem, which is uncomfortable and motivates the individual to reduce or alleviate the discomfort. According to Sedikides, the feedback produces dissonance if it (a) is negative or inconsistent with the self-concept, (b) is central to aspects of the self-concept (as opposed to peripheral), and (c) is indicative of a central trait (e.g., the trait of trustworthiness vis-à-vis the indicative behaviour of using a roommate's toothpaste without permission. To the extent that that individual holds trustworthiness in high regard, the feedback involving stealing toothpaste is perceived as threatening). More recent iterations of Sedikides' mnemic neglect model regard feedback as threatening if it (a) involves the self (is about oneself, not someone else), (b) it contains negative implications (entails criticism, not flattery), and (c) it pertains to central personality traits (traits deemed certain, descriptive, and important aspects of the self; Pinter, Green, Sedikides, & Gregg, 2011; Sedikides & Green, 2009).

Relation of self-threat to dissonance and appraisals. In a large meta-analytic review, Campbell and Sedikides (1999) found that individuals appraise (or make self-

[2] Because Sedikides and colleagues (2000, 2004) assume that the self-concept is inherently positive, only negative behavioural feedback creates dissonance. Others concede that the self-concept may be negative (e.g., Barry, Naus, & Rehm, 2006; Jorgensen et al., 2012), in which case, dissonance would arise when the behavioural feedback is unexpected and inconsistent, meaning in this case, positive (Aronson, 1969). In contrast to self-consistency proponents, self-enhancement and self-protection proponents predict that negative behavioural feedback is undesirable under any circumstance (Alicke & Sedikides, 2009; Sedikides & Green, 2004, 2009; Sedikides & Strube, 1995). This investigation will not debate the merits of either side. Rather, I assume that most individuals have a positive self-concept, particularly in a nonclinical sample, and acknowledge that both self-consistency proponents and self-enhancement proponents make similar predictions as to how an individual with a positive self-concept reacts to negative behavioural feedback; he/she seeks to protect and/or preserve the positivity of the self-concept as someone moral, competent, and predictable (Aronson, 1992; Sedikides & Green, 2004).

serving attributions, as they refer to them) to protect their self-concept. This process, they argued, depends on the level of threat to the self-concept; the greater the perceived self-threat, the more self-serving and externalized, rather than internalized, the attributions become. In other words, appraisals become more external and possibly more removed from reality as the level of perceived self-threat grows. Applying Sedikides' conceptualization of self-threat (Pinter, Green, Sedikides, & Gregg, 2011; Sedikides & Green, 2009), appraisals should be most apparent when the feedback is directed at the individual themselves (rather than it being about a third party), contains negative implications for that individual, and involves central personality traits of that individual.

Given the functional similarity between dissonance-reducing appraisals and ego defenses, ego defenses become a useful lens through which to discuss and understand appraisals. Consistent with Campbell and Sedikides (1999), the notion that appraisal selection is contingent upon self-threat perception also emerges in the context of ego defenses, where it has been argued that the greater the self-threat, the more self-deceit is required to mitigate that threat, and ego defenses arise to facilitate this self-deceit and preserve the self-concept (Baumeister, 1986). According to Baumeister (1996) and Greve and Wentura, (2010), defenses requiring the most self-deceit involve an *absolute* rejection of threatening self-referent information, as is the case of "rejecting" or "avoidant" defenses. On the other hand, defenses requiring comparatively less self-deceit involve attempts at negotiating reality rather than an absolute rejection. It would therefore appear that ego defenses become more rejecting of reality and more removed from that reality when self-threat increases. In such cases, more self-deceit is required to preserve the current self-concept. Along those lines, it is possible that dissonance may increase

and/or appraisals may become increasingly more rejecting of reality as self-threat increases.

A related yet slightly different perspective on ego defenses is offered by Vaillant (1994, 2011), who ranked ego defenses to reflect decreasing levels of psychopathology and increasing levels of personality maturation. According to Vaillant (1994, 2011), ego defenses could range from *psychotic* defenses involving denial and/or reality distortion (e.g., delusional projection, psychotic denial), to *immature* defenses (e.g., acting out, passive aggression, dissociation, projection), to *neurotic* defenses (e.g., rationalization, displacement), to *mature* defenses (e.g., sublimation, humour), the latter deemed beneficial to psychological health and well-being. Based on this hierarchy, the less mature someone's personality is, the more likely they would be to select a psychotic or immature defense to preserve the self-concept.

Cumulatively, the work presented in this section suggests that the magnitude of self-threat proportionally impacts the magnitude of dissonance and likely also influences appraisal selection—the response chosen to reduce dissonance. Echoing Vaillant's hierarchy (1994, 2011), the role of personality maturation in dissonance arousal and appraisal selection has received some attention in the context of narcissism, and this will be explored in greater detail in the next section.

Conceptualizations of narcissism. The interpersonal circumplex is widely used to conceptualize interpersonal behaviours and traits as existing along two orthogonal dimensions: dominance and nurturance (Wiggins, 1995). Dominance, alternatively referred to as status, power, worth, and self-esteem, is related to a deeply held belief that one is worthy of respect from significant others. Nurturance, alternatively referred to as

security, love, intimacy, affiliation, and integration, is related to the deeply held belief that one is a loved individual who can enter in intimate and lasting relationships with significant others. Because of its interpersonal components and its useful organization of traits along two orthogonal dimensions, the interpersonal circumplex represents a valuable, efficient, and theory-driven way in which to assess the presence of certain dispositional tendencies and estimate the intensity with which each disposition is expressed (Wiggins, 1995).

Narcissism is of particular interest to this investigation because of its relationship to self-esteem and sensitivity to perceived self-threat (APA, 2012). Most theorists suggest that narcissistic traits range on a continuum from normal to pathological, with the pathological expression being more prevalent in a clinical sample and the normal expression being more prevalent in a nonclinical sample (Pincus et al., 2009). The normal expression of narcissism is widely viewed as adaptive and corresponds to greater assertiveness, agency, as well as having positive illusions towards the self while minimizing any information that reflects negatively on the self (Morf & Rhodewalt, 2001). When mapped onto the circumplex, features of normal narcissism tended to cluster around the Domineering octant (Inventory of Interpersonal Problems; Pincus et al., 2009). The pathological expression of narcissism is widely viewed as maladaptive and corresponds to greater aggression, hostility, manipulation, deception, and is further characterized by a dominant and antagonistic interpersonal style, greater striving towards self-enhancement and greater resistance and reactivity to feedback that is inconsistent with the self-concept (Morf & Rhodewalt, 2001; Pincus et al., 2009). When mapped onto the circumplex, the more pathological aspects of narcissism tend to cluster around the

Vindictive, Domineering, and Intrusive octants of the Inventory of Interpersonal Problems (Pincus et al., 2009).

The more pathological aspects of narcissism have also been studied in terms of two distinct dimensions: grandiose narcissism, characterized by deceitfulness, envy, aggression, lack of empathy, and interpersonal exploitativeness, and vulnerable narcissism, characterized by distrust, hostility, negative emotions, social avoidance to cope with threats to the self, and interpersonal coldness (Pincus & Lukowitsky, 2010; Pincus et al., 2009). Whereas both dimensions overlap in their antagonistic interpersonal style, vulnerable narcissism appears to be more prevalent among individuals with problematic attachment styles, childhood abuse/neglect, and negative emotionality (e.g., shame, helplessness, emptiness, low self-esteem; Pincus et al., 2009).

When mapped on the circumplex, vulnerable narcissism was most positively related to the Cold-Hearted and Aloof-Introverted Interpersonal Adjective Scales (Interpersonal Adjective Scales; Wiggins, 1995) octants (Miller et al., 2012), whereas grandiose narcissism was most positively related to the Assured-Dominant, Arrogant-Calculating, and Cold-Hearted (Miller et al., 2012; Pincus et al., 2009) Interpersonal Adjective Scales octants. Using the Interpersonal Adjective Scales and the Inventory of Interpersonal Problems together, Miller and colleagues were able to further minimize the overlap between grandiose and vulnerable narcissism; they found that features of grandiose narcissism fell between the Assured-Dominant and the Arrogant-Calculating octants, whereas features of vulnerable narcissism fell along the Cold-Hearted octant.

Relation of narcissism to dissonance and appraisals. According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM–5*; American

Psychiatric Association, 2013), individuals with narcissistic traits possess an inflated yet fragile sense of self-esteem and react to perceived slights or criticism with rage, hostility, and/or aggression so as to protect the self (Baumeister et al., 1996; Campbell, Reeder, Sedikides, & Elliot, 2000; Pincus et al., 2009). Not surprisingly, narcissists are more motivated to protect their self-esteem than non-narcissists (Campbell et al., 2009; Morf & Rhodewalt, 1993; Pincus et al., 2009; Rhodewalt & Morf, 1998). This protection may involve reappraising negative aspects of self, distorting disconfirming external information (in the case of grandiose narcissism; Pincus & Lukowitsky, 2010), and memory distortion. Rhodewalt and Eddings (2002) found that, in response to being romantically rejected by a female confederate, highly narcissistic men recalled their dating history in more successful terms (e.g., they claimed to usually have a girlfriend, usually date more than one girlfriend), than they had originally reported. This biased recall was the opposite of the pattern observed among less narcissistic individuals, who recalled their dating history in less successful terms when rejected. Similarly, Campbell and colleagues (2000) found that narcissists demonstrated greater self-serving bias relative to non-narcissists.

Taken together, narcissistic individuals, who are typically sensitive to self-esteem threats, may experience even more dissonance than less narcissistic individuals. They may also select appraisals differently from others, such as opting for mechanisms that absolutely reject reality rather than negotiate it, as discussed in the previous section.

Narcissism and self-threat. Earlier iterations of the mnemic neglect model (Sedikides & Green, 2000, 2004, 2009) underscored the importance of personality in proposing that feedback would be threatening and produce dissonance only when it

violates central personality traits. Despite the inherent importance of personality, however, Sedikides and Green do not propose specific personality dimensions that may be related to self-threat.

A meta-analytic review on the self-serving bias (Campbell & Sedikides, 1999) found that several individual differences, such as locus of control or self-esteem, modulated experiences of self-threat, which in turn contributed to differences in self-serving appraisals. Specifically, the authors found that individuals possessing an achievement orientation, high self-esteem, and an external locus of control, as well as narcissistic individuals, were more likely to feel threatened and thereafter manifested greater self-serving bias (i.e., appraisals) than their peers. In other words, those with a stable and positive self-concept as well as those with a fragile self-concept experienced greater self-threat and greater dissonance than their peers.

Cumulatively, these studies suggest that self-threat is a multifaceted construct that is at least in part modulated by personality traits. In particular, individuals with narcissistic traits may experience the most self-threat and the greatest dissonance.

Section conclusion. Dissonance arousal and appraisal-selection may in part be guided by self-threat and personality traits, such as narcissism. In the case of narcissism and self-threat, the two factors could combine as follows: a highly narcissistic individual is likely to perceive threat more intensely than a less narcissistic individual (APA, 2013; Baumeister et al., 1996; Campbell & Sedikides, 1999; Rhodewalt & Eddings, 2002) and subsequently respond to this threat to a greater extent than a less narcissistic individual, such as by devaluing the importance of a self-discrepant autobiographical memory more than their peers.

Chapter 1 Summary

Anchored in cognitive dissonance theory (Festinger, 1957; Aronson, 1969, 1992) and autobiographical memory research and theorizing (Conway & Pleydell-Pearce, 2000), the overarching goal of this investigation was to gain a more nuanced understanding of how individuals experience and respond to past acts that are discrepant with their self-concept, with a focus on arguably protective appraisals of importance and appraisals of veridicality. Because dissonance arousal and appraisal selection are contingent on several factors, self-threat and narcissism will also be explored as a secondary focus. This research program was designed as two studies. Study 1 took an interpersonal focus by exploring why individuals challenge another's recollection of a past event that is incompatible with theirs. Study 2 took an intrapersonal focus by exploring how individuals appraise an autobiographical event that is presumably shame inducing and arguably dissonant with their positive self-concept.

CHAPTER 2

Introduction to Study 1

Study 1 sought to explore why individuals challenge another's recollection of an autobiographical memory that may be incompatible with their own recollection and in some cases, arguably dissonant with their self-concept. Those particular instances, where the recollection of past act(s) as recounted by another person violates one's self-concept as moral, competent, and/or stable and predictable (Aronson, 1969, 1992; see Chapter 1 for more detail), are referred to as self-discrepant autobiographical memories throughout this manuscript. Experiences of this kind of dissonance, where self-discrepant autobiographical memories are involved, are expected to be distinct from non-self-discrepant autobiographical memories.

Study 1 takes an interpersonal approach to answering how individuals experience and respond to possibly incompatible recollections and in particular, self-discrepant autobiographical memories. This approach was chosen because: (a) challenging another's recollection of a past autobiographical memory arguably produces conditions under which cognitive dissonance and dissonance reduction mechanisms might emerge, (b) challenging another's recollection of a past event seems to be common and should therefore be something that most individuals have prior experience with and can provide examples of, and (c) the current state of autobiographical memory research appears ripe for such a development.

In the following sections, the groundwork laid by Hirst and colleagues (Cuc, Ozuru, Manier, & Hirst, 2006; Hirst & Echteroff, 2012; Muller & Hirst, 2014), who have studied factors implicated in the social sharing of memories, is reviewed. This work is

presented in order to better understand the interpersonal context and related reasons around the choice to challenge another person's recollection. The second part of this review focuses on the contributions that the autobiographical memory literature makes to this investigation regarding potential reasons for challenging. The final part of this review focuses on self-discrepant autobiographical memories and related appraisals. The literature review is followed by the presentation of the study hypotheses and design, before finally turning to the results and discussion.

The Social Context of Challenges

A series of studies conducted by Hirst and colleagues have demonstrated that the very act of conversing can reshape memories such that subsequent memories become a blend of details encoded originally and conversations had between the initial encoding and subsequent acts of remembering (Cuc, Ozuru, Manier, & Hirst, 2006; Hirst & Echteroff, 2012; Muller & Hirst, 2014). In the course of an amiable conversation or a dispute, the speaker may intentionally or unintentionally offer new and/or misleading information, which could become incorporated into the listener's memory (or both their memories, depending on the context) thus altering the memory content and potentially modifying how that memory is thereafter appraised. This is not an exhaustive explanation of how social sharing can alter memories; examples of other processes include memory appropriation whereby another's memory is claimed as one's own (Brown, Caderao, Fields, & Marsh, 2015), and selectively retelling certain details of a memory while omitting other details (Stone, Corman, Brown, Koppel, & Hirst, 2012). These studies cumulatively demonstrate that memories can be revised within a social context, that revisions can be made in the course of challenges, as well as friendlier conversations, and

that such revisions are actually a frequent and normal part of individuals' lives.

Challenging another's memory may be regarded as a form of social influence, and even, as some have discussed, an attempt at persuasion (Nash, Wheeler, & Hope, 2015). In line with Nash and colleagues (2015), one could argue that examining instances in which an individual challenges another's memory bridges the gap between the social and cognitive literatures by embedding aspects of persuasion into memory appraisals. Such attempts add to a small but steadily accumulating line of research that seeks to examine the effects of socially targeting (and arguably persuading against) belief in occurrence (e.g., Scoboria et al., 2014; see next section for a more detailed treatment of this argument).

Challenges could theoretically be subject to the same social dynamics as would be involved in other forms of social communication. Based on Hirst and Echteroff's review (2012), the extent to which one individual can influence another's memory depends on several variables, including perceptions of expertise, perceptions of power, and personality characteristics. For example, perceiving the speaker as an expert or as more dominant can heighten the impact the speaker has on altering a socially remembered but unshared (as in, not being held by all conversational participants) memory (Brown, Coman, & Hirst, 2009; Cuc et al., 2006). As another example, Wright, London, and Waechter (2010) demonstrated that listeners who are fearful of negative evaluation are more susceptible to conforming to a speaker's account. Similarly, a dominant speaker may have a substantial impact on others' memories. Cuc and colleagues (2006) asked participants to study and recall stories first individually (i.e., pre-group), then in-group, and then individually again (i.e., post-group). They found that post-group accounts

contained a substantial number of details found in the pre-group account of the dominant speaker (i.e., a participant that spoke the most and dominated the in-group discussion). This scenario has a more adversarial analog in the false confessions literature, where a police interrogator, perceived as having the greater power, can persuade an innocent individual through implicit or explicit promises, threats, and/or implications of harsh treatment to comply with accusations and even to believe that they have committed a crime (Kassin & Gudjonsson, 2004).

Taken together, these studies suggest that challenging of memories can occur in various contexts, including social remembering of jointly experienced memories (i.e., reminiscing), persuasion, and disputes. Research in this area is starting to recognize the influence of social dynamics, such as the dominance of certain speakers (Cuc et al., 2006) in how and why memorial challenges unfold. The present investigation builds on this foundation by considering the various social dynamics involved in challenging, such as aspects of personality (e.g., trait dominance, narcissism).

Challenges within the Autobiographical Memory Literature

In this next section, several areas of autobiographical memory literature are reviewed for the purpose of informing predictions about reasons for challenging another's recollection. To this end, only lines of autobiographical memory inquiry that approximate or closely parallel social challenges are presented.

Social influence and remembering. Although not explicitly formulated in terms of a challenge, instances in which social input contradicts one's memory have already been investigated within the autobiographical memory literature. Sometimes, a lack of memory is challenged (e.g., false memory studies or false confessions), and other times,

the occurrence of and/or details within an existing memory are challenged (e.g., misinformation, nonbelieved memories, contested memories). Examples of challenges are found in literatures on memory suggestions for entire events that are delivered via hypnosis (Sheehan, Statham, & Jamieson, 1991) or dream interpretation (Mazzoni, Lombardo, Malvagia, & Loftus, 1999). Other instances of challenges involve the use of more cognitively based techniques, like enhancing the plausibility of suggestions (Mazzoni, Loftus, & Kirsch, 2001) to increase the belief that a past event in fact occurred even if it cannot be recalled (Mazzoni & Kirsch, 2002). To illustrate, Scoboria, Wysman, and Otgaar (2012) challenged participants' recollection and attributions about whether certain childhood events genuinely occurred by providing them with "assurances" from their parents that such events did in fact happen. They found that the manipulation (i.e., confirmatory evidence from a trustworthy source, the parents) led to higher ratings of belief in occurrence—a belief that the event truly occurred to the self (Scoboria et al., 2012).

The finding that credible suggestions are effective at increasing the belief in the occurrence of a false autobiographical event dovetails nicely with prior findings that the perceived expertise and therefore trustworthiness of the speaker increases the likelihood that the information they deliver will be accepted by the listener and integrated into the listener's subsequent recalls (Hirst & Echterhoff, 2012). This work, alongside Cuc et al.'s (2006) finding regarding the influence of a speaker's dominance, implies that dispositional qualities may be another reason for challenging others' memories. For instance, it is conceivable that the speaker's own confidence in their memory ability may be a reason to challenge someone else's (e.g., "I challenge your recollection because I am

confident that I am right" or "I am sure of my memory and things did not happen the way you describe them"). Alternatively, they could be challenging because the challenger views himself/herself as someone who is dominant in interpersonal contexts.

Nonbelieved memories. Another line of inquiry that explores the experience of having a current, vivid memory challenged by another person is the literature on nonbelieved memories. Nonbelieved memories involve the vivid recollection of an autobiographical event despite reduced or relinquished belief that the event genuinely occurred to the self (Mazzoni, Scoboria, & Harvey, 2010; Otgaar, Scoboria & Mazzoni, 2014). More generally, nonbelieved memories tend to originate when a currently vivid autobiographical memory is contradicted by novel evidence. Such evidence is often, but not exclusively, provided in a social context. Most relevant to this investigation, nonbelieved memories may originate from someone disputing or challenging the occurrence of a past event (e.g., stating that the event did not occur, that the event was impossible) and/or its accuracy (e.g., that the event happened differently). In turn, such challenges contribute to reducing or even relinquishing belief that the event occurred to the self, despite the continued presence of vivid recollection (Scoboria et al., 2015). Several of the reasons for reducing or relinquishing autobiographical belief originally reported in Scoboria et al. (2015) may also emerge in the present investigation. For example, the challenger may dispute the other's memory by suggesting that an alternative source affected memory (e.g., "your memory came from a dream"), or the challenger might dispute the other's memory by appealing to assumptions about general memory ability at a young age (e.g., "you were a child! Your imagination was running wild then"). Furthermore, appealing to these meta-memory beliefs and/or suggesting alternate

attributions could arguably be used with the underlying intent of trivializing the validity of the other's recollection.

Disputed memories. The methodology employed by Sheen and colleagues (2001), in which disputed memories are contested in real time, arguably offers the closest analogy to date of instances when an individual challenges another's version of events. In those instances, two individuals agree on most of the details regarding what happened, but disagree on who the protagonist is. In the course of this disagreement, both sides try to defend their belief that a past event occurred to them (e.g., two girls arguing over which of them was sent home from school for wearing a skirt that was too short; Ikier, Tekcan, Gulgoz, & Kuntay, 2003; Sheen et al., 2001). Sheen's work suggests that individuals may be motivated to challenge in order to preserve ownership of a past event they view as belonging to them.

Another relevant finding emerging out of the disputed memories literature is perceived importance, which is regarded as an appraisal that is made about an event in the current investigation. Sheen and colleagues (2001) speculated that the higher importance ratings associated with the disputed memories in their study (relative to shared-but-not-disputed memories) could have been attributable to the participant's attempts at convincing themselves, the other twin/sibling, or the interviewer that the disputed memory was indeed theirs. In contrast, the methodology employed by Ikier and colleagues (2003), where sets of twins or siblings were interviewed separately and were instructed to provide disputed memories, personal memories, and memories that were clearly experienced by the other twin/sibling, did not produce higher ratings of perceived importance. Imagery ratings were also inconsistent across the two studies; the Sheen

study reported higher imagery ratings (hearing, seeing, etc.) but not Ikier and colleagues (2003), who reported lower imagery ratings for disputed memories as compared with personal memories. These inconsistent finding might be reconciled as follows. First, the Sheen et al. (2001) methodology could arguably have mimicked the dynamics of social challenges to a greater extent than the Ikier et al. methodology. These circumstances might have led to heightened attempts at defending one's memory, which could have produced higher perceived importance ratings and higher imagery ratings. Second, because the equivalence of the comparison memories between the two studies could not be established (i.e., shared-but-not-disputed memories vs. personal memories and memories of others), it is plausible that some disputed memories hold greater importance than others. As further evidence of this argument, Sheen and colleagues (2006) found that childhood memories of achievement and misfortune were more likely to be appropriated, whereas childhood memories of wrongdoing were more likely to be disowned. The self-serving motives apparent in these disputed memories imply that a desire to protect oneself from being perceived in a negative light is an important consideration in choosing to challenge another's memory.

Borrowed memories. Borrowed memories involve intentionally or unintentionally appropriating past events or details of past events from others and telling them as our own (Brown et al., 2015). Such memories are relevant to this investigation because Brown and colleagues (2015) found that intentionally borrowing others' personal memories was most frequently motivated by a desire to enhance oneself (e.g., "I find the story engaging and interesting, and would love it to be a part of my life"). This desire appeared to reflect a self-enhancement motive consistent with the self-serving pattern

observed in the disputed memories literature. In relation to the current investigation, self-enhancement may be another reason to challenge another's version of events.

Memory verification. Closely related to the work on nonbelieved memories is the small literature on memory verification, which has shown that individuals report that they would rely on others (e.g., parents, siblings) as well as nonsocial external evidence (e.g., photographs, videos, receipts) to validate the occurrence of a past event (Nash & Takarangi, 2011; Wade, Nash, & Garry, 2014). In Wade et al. (2014), participants were asked to describe how they would verify a vivid autobiographical memory if someone else told them that the event "never happened." Results showed that in these hypothetical challenging scenarios, participants tended to consider both cost (i.e., money, time, energy, effort, labor, and aggravation) and reliability (i.e., indisputable, trustworthy, and accurate information) in choosing strategies like asking a family member or searching for physical evidence to verify their autobiographical memories. It was further concluded that participants sought social input (e.g., asking family members, friends) because they regarded it as providing an optimal balance between reliability and cost to access. In a more recent publication, Wade, Nash, Garry and Adelman (2017) showed that participants consistently prioritized cheap-and-easy (i.e., minimal cost, effort, time, and money) over reliable strategies for verifying autobiographical events. Of relevance to this investigation, the work of Wade, Nash and colleagues demonstrates that challenges may occur because individuals may wish to verify details about an autobiographical memory. Similarly, individuals may also challenge to assist someone else with verifying or confirming details about a shared past event (i.e., Sheen, Kemp, & Rubin, 2001, 2006).

Functions of autobiographical remembering. That individuals may challenge

another's recollection to verify their own recollection is also echoed in Pillemer's work. Pillemer (1992) argued that sharing autobiographical memories serves a social function in facilitating the development, maintenance, and strengthening of interpersonal interactions. This notion has also been discussed by others who found that sharing past personal events served to connect with others (Webster, 2003), elicit or provide empathy from others (Alea & Bluck, 2003; Bluck, 2003), teach, inform, and reminisce (Webster, 2003). This social function is also reflected in Fivush's (2012) work on parental reminiscing; in these instances, parents, through what could be construed as challenges, help their children scaffold and make sense of their narratives. Similar motives involving helping someone else make sense of their narrative, teaching, informing, providing support, entertaining, and/or reminiscing may also emerge in the present investigation.

Pillemer (2003) also viewed autobiographical remembering as serving a directive function whereby recalling past events assists with describing problems, solving problems, making plans, and generally guiding future behaviours. As an example, he proposed that memories of traumatic events could serve a directive function in reminding the individual about which situations are safe and which ones must be avoided (Pillemer, 2003). A note of caution here that this example is not meant to imply any blame towards the victim of a traumatic event. Rather, Pillemer appears to discuss more general operant conditioning processes whereby situations that have caused pain in the past are avoided, and memories of such painful events may assist with this very avoidance.

In a more recent study, Biondolillo and Pillemer (2015) demonstrated that recalling a specific exercise episode produced higher subsequent exercise activity. It is therefore possible that challenges examined in this investigation could also be motivated

by similarly instrumental functions – describe problems, solve problems, motivate change, and/or ensure that certain outcomes occur in lieu of others.

According to Pillemer (2001) and later Conway (Conway & Pleydell-Pearce, 2000), Bluck, and colleagues (Bluck, 2003; Bluck, Alea, Habermas, & Rubin, 2005; Wilson & Ross, 2003), autobiographical remembering also serves a self function, meaning that past autobiographical memories are retrieved to help maintain and consolidate a sense of identity over time, a sense of "I." In other words, memories are recalled that are coherent with one's self-concept and that offer a sense of continuity of self over time. When recalled memories are not coherent with the self-concept, they risk creating instability and psychological discomfort (Conway & Pleydell-Pearce, 2000), which, in line with Aronson's (1969, 1992) revision of cognitive theory, would produce an impetus to reduce the discomfort. In the context of challenges, shared memories may be recounted that create dissonance for the individual because aspects of the recollection may conflict with their self-concept. It is therefore conceivable that one may challenge another's recollection of a shared past event to preserve the self-concept as a moral, competent, stable, and predictable individual (Aronson, 1969, 1992).

Section conclusion. The literature reviewed in this section suggests several reasons for an individual choosing to challenge another's recollection of a past shared event including self motives (e.g., dispositional qualities, belief in superiority of one's own memory or the inferiority of the other's memory, preserve memory ownership, self-enhance), social motives (e.g., teach, inform, provide support, entertain, reminisce), and directive motives (e.g., solve problems, plan). More central to this investigation, one reason to challenge could also be to preserve the self-concept as a moral, competent,

stable, and predictable individual (Aronson, 1969, 1992; Conway & Pleydell-Pearce, 2000).

Self-Discrepant Autobiographical Memories and Cognitive Dissonance

Beyond exploring why individuals challenge another's recollection of a past shared event, the current study sought to examine challenges in response to self-discrepant autobiographical memories. A key assumption of this study is that self-discrepant autobiographical memories and responses to them unfold in the same manner as cognitive dissonance processes. This assumption is made on the basis of Aronson's (1969, 1992) revised cognitive dissonance theory and Conway's self-memory-system (2000). I draw on Swann's (Swann, 2012; Swann & Ely, 1984; Swann & Read, 1981) self-verification theory to argue that dissonant information provided by another individual can also conflict with one's self-concept and cause dissonance.

Aronson's (1969, 1992) revision of cognitive dissonance theory predicts that dissonance arises when an individual's behaviour violates their own self-concept as a moral, competent, stable, and predictable individual. Dissonance-reduction then centers on preserving or re-establishing the self-concept as moral, competent, stable, and predictable. Conway's self-memory-system (Conway & Pleydell-Pearce, 2000) further emphasizes the value of having a self-concept that is supported by one's autobiographical memories. This notion of coherence between one's self-concept and one's autobiographical memories suggests that if autobiographical memories conflict with the current self-concept, they could create processes similar to dissonance. Beike and Landoll (2000) advanced a similar argument when proposing that the unpleasant autobiographical memories they asked participants to recall were comparable to the dissonant element in

cognitive dissonance terms.

Other theories arguably contained within the larger umbrella of cognitive dissonance theory, like self-verification theory (Swann & Read, 1981), have also expanded on how dissonance may occur and how it can be reduced, especially when the dissonant information comes from another individual, which is the case in Study 1. According to Swann and his colleagues (Swann, 2012; Swann & Ely, 1984; Swann & Read, 1981), dissonance may be resolved by (a) confronting the person providing the dissonant feedback with a view to correcting their mistaken impression, (b) ignoring and forgetting the dissonant information, or (c) avoiding the source of dissonant information altogether. I build on these theories by arguing that autobiographical memories, as recalled by another individual, could conflict with one's self-concept as moral, competent, and/or stable and predictable, and elicit dissonance, which is then resolved by confronting, ignoring, or avoiding. This argument is consistent with Scoboria, Boucher, and Mazzoni, (2015), who similarly proposed that cognitive dissonance might result from social processes, such as when one receives information from someone else that undermines their current memory for a past event.

Aspects of cognitive dissonance theory, as conceptualized by Aronson (1969, 1992) and contextualized within autobiographical memory theorizing by Conway (Conway, 2005; Conway & Pleydell-Pearce, 2000), have been applied to a handful of empirical investigations elaborated upon in the next section. For ease of presentation, these findings are grouped into appraisals of importance, wherein the dissonance-reducing strategies involve re-evaluating the importance of the memory (or aspects of it) or the importance of past self, and appraisals of veridicality, wherein the dissonance-

reducing strategies involve re-evaluating the belief in the occurrence and/or accuracy of an autobiographical memory.

Appraisals of importance. Reappraisals of the importance of events may serve to reduce dissonance by re-evaluating and devaluing the importance of a past event (or aspects of it) or the importance of aspects of the self. In a series of experiments, Beike and Landoll (2000) asked undergraduate male and female participants to recall autobiographical memories that were either pleasant (indicative of strength and independence) or unpleasant (indicative of weakness and dependence). They then asked participants to compare the chosen autobiographical memory to the present lifetime period in order to draw attention to any discrepancies with the participant's current sense of self. Finally, they directed participants to engage in various dissonance-reducing strategies, such as making causal attributions about the autobiographical memory in question (i.e., how much of the autobiographical memory was caused by themselves and how much of it was caused by other external factors), and rate the degree of perceived closure achieved on the autobiographical memory in question. Beike and Landoll found that participants who recalled unpleasant and arguably self-discrepant autobiographical memories were more likely to reappraise the event as closed or to justify its occurrence than participants who recalled pleasant autobiographical memories. In other words, compared to memories indicative of strength and independence, participants responded to the retrieval of memories indicative of weakness and dependence by reappraising them. Beike and Landoll did not report any gender differences, although their samples were composed primarily of female undergraduates.

Comparable findings emerged from Sheen and colleagues (2006), who found that

childhood memories of achievement and misfortune were more likely to be appropriated, whereas childhood memories of wrongdoing were more likely to be disowned.

A similar intention to distance the self from unpleasant autobiographical memories, possibly because they cast a negative perception of the self, also emerged from the work of Baumeister, Stillwell, and Wotman (1990), who asked undergraduates (unspecified gender composition) to provide both perpetrator and victim autobiographical memories about angering someone else or being angered by someone else, respectively. The authors found that perpetrator-autobiographical memories tended to contain denial of any lasting negative consequences, justifications as to why their actions may have been reasonable or even legitimate, mitigating circumstances, partially or entirely blaming the victim, and claims that the incident was impulsive, could not be helped, or was uncharacteristic of them and had little to do with the present. In contrast, victim-autobiographical memories tended to contain references to lasting negative consequences, long-term relationship damage, enduring anger, and self-blame.

As another example of reappraising event importance, McFarland and Alvaro (2000) randomly assigned male and female undergraduates to describe either a severe or a mild negative autobiographical memory, and then instructed them to provide current and pre-event ratings on various dispositional attributes (e.g., tolerant, mature). Even though random assignment would have ensured that pre-event ratings were comparable between the two groups, participants describing the more severe autobiographical memory were more critical of their pre-event selves (e.g., rated themselves as less tolerant, less mature) than participants describing the mild negative autobiographical memory. According to McFarland and Alvaro, and consistent with cognitive dissonance

theory, recalling a severe autobiographical memory likely created distress; this distress was reduced by belittling past selves, which in turn bolstered the illusion of personal growth (e.g., "I was less mature back then but I am much more mature now"). The manipulation was repeated with participants asked to visualize and describe either a pleasant autobiographical memory or a negative and unpleasant autobiographical memory (an event that lowered your self-esteem and made you feel bad about yourself). The authors again found that participants who had described a negative and unpleasant autobiographical memory demonstrated more belittling or were more critical towards their past selves than those who had described a pleasant autobiographical memory. McFarland and Alvaro do not investigate or report on any gender differences in their sample.

Ross and Wilson (2002) built on the findings of McFarland and Alvaro (2000) by investigating individuals' subjective sense of distance—a feeling of subjective temporal distance from an event regardless of how long ago it actually occurred. The authors concluded that participants self-identifying as socially unsuccessful during the last year of high school tended to feel subjectively more distant from their high school self than participants self-identifying as socially successful. They replicated these findings in a second study, where they found that male and female undergraduate students reported subjectively feeling more distant from embarrassing autobiographical memories (e.g., events where you said or did something foolish) than proud autobiographical memories (e.g., special achievement or kind act). In addition to subjective temporal distance, there was also a change in the single-item rating of personal importance; participants rated proud autobiographical memories as more important to them than embarrassing

autobiographical memories, a finding also echoed in D'Argembeau and Van der Linden's (2008) study. Ross and Wilson (2002) further observed that, although past autobiographical memories were overall rated as less important, ratings of importance showed steeper decline for embarrassing autobiographical memories than for proud autobiographical memories, possibly because proud autobiographical memories were viewed as having relatively longer impact. Ross and Wilson did not find any gender differences in their study.

This brief literature review demonstrates that reappraising the importance of an event may involve, among other things, devaluing an autobiographical memory by claiming that it is closed (no longer connected to the present), it is less important, or that it feels more temporally distant. Alternatively, the reappraisal process may take the form of belittling or devaluing aspects of a past self. Consequently, reappraisals of importance were expected to emerge through lower self-reported ratings of event importance.

Appraisals of veridicality. Appraisals of veridicality are hypothesized to reduce dissonance by re-evaluating the attributions made about how much a past event is believed to have truly occurred (belief in occurrence) and/or how accurate its recall is (belief in accuracy; Scoboria et al., 2014). Although not initially conceptualized as post-hoc memory appraisals, belief in occurrence and belief in accuracy can arguably function to reduce dissonance.

That belief in occurrence may be altered to reduce dissonance and protect the self from discomfort was first discussed in Scoboria, Jackson, et al. (2014). It was elaborated by Scoboria and colleagues (2015), who documented instances in which participants reported successful altering of belief in occurrence when potentially intrusive trauma-

related memories were involved. In other words, unwanted or dissonant autobiographical memories may be accompanied by comparatively lower belief in occurrence ratings as a way to resolve or reduce dissonance.

Self-reported changes in belief that the event is real may also serve to reduce dissonance. D'Argembeau and Van der Linden (2008) asked male and female community volunteers to recall both shame- and pride-inducing autobiographical memories and then had them rate their memories on various phenomenological characteristics. The authors found that shame-inducing autobiographical memories were rated as less coherent, contained fewer sensory details, and produced less of a sense of re-experiencing than pride-inducing autobiographical memories. Relevant to this investigation, shame-inducing autobiographical memories received a lower rating on "I believe the event in my memory really occurred in the way I remember it and that I have not imagined or fabricated anything that did not occur" than pride-inducing autobiographical memories. The item used by D'Argembeau and Van der Linden, however, has been criticized because it arguably refers to multiple concepts and tends to cross-load with belief in occurrence, accuracy, and recollection (Scoboria, Talarico, & Pascal, 2015). The authors did not find any effect for gender or interaction involving gender.

Taken together, it would appear that wanted or consonant memories are accompanied by higher belief in accuracy and occurrence ratings, whereas unwanted or dissonant memories are accompanied by lower belief in accuracy and occurrence ratings. Extending this conclusion to the present investigation, it was expected that autobiographical memories that were unwanted or dissonant would be accompanied by lower ratings of belief in occurrence and belief in accuracy, whereas autobiographical

memories that were wanted or consonant would be accompanied by higher ratings of belief in occurrence and belief in accuracy.

Objectives and Hypothesis

The objectives of this study were to (a) explore why individuals challenge another's recollection of a past event that is incompatible with their recollection and, at times discrepant with their self-concept, (b) establish that challenges involving self-discrepant autobiographical memories are different from other challenges, and (c) explore the role of narcissistic features.

To meet the first objective, participants' self-reports about why they challenged another's memory were collected and used in conjunction with prior work to devise a coding frame. A number of motives for challenging were expected to emerge, including self-motives, social motives, and directive motives. Instances of self-discrepant autobiographical memories, where the motive to challenge revolves around protecting or preserving a current self-concept, were also expected to emerge.

In their meta-analysis, Campbell and Sedikides (1999) showed that higher levels of self-threat produced more extreme appraisals. It stands to reason then that higher self-threat would result in higher dissonance. Due to the relatively novel and exploratory nature of this study, however, it is difficult to reliably disentangle dissonance from self-threat. As Festinger (1957) and Aronson (1969, 1992) have argued, even the presence of dissonance itself is not easily observed but rather deduced from the presence of dissonance-reduction strategies. I therefore will not attempt to distinguish between dissonance and self-threat; rather, I will assume based on Aronson's and Conway's work that self-threat and dissonance are inherently present whenever self-protective motives

emerge. I expected challenges stemming from self-discrepant autobiographical memories, in which there is arguably self-threat, dissonance and self-protection motives, to be different from challenges stemming from simply incompatible autobiographical memories. Relative to challenges not involving self-discrepant autobiographical memories, challenges involving self-discrepant autobiographical memories were expected to:

2.1. Contain proportionally more negative emotional states, a prediction in line with the conceptualization of self-threat as self-referent negative emotions with negative implications for the self (Aronson, 1969, 1992; McFarland & Alvaro, 2000; Sedikides & Green, 2009), such as shame (Pinto-Gouveia & Matos, 2011; Aronson, 1992) or fear (Berntsen & Rubin, 2006).

2.2. Have higher ratings on the question "*during the challenge, how important was it for you to convince the other person that you were right*?" This question was asked to gauge the extent to which the challenge involved elements central or important to the self that would be expected to arouse dissonance. This prediction is in line with the mnemic neglect model (see General Introduction chapter; Sedikides & Green, 2009), Festinger's (1957) view that the magnitude of dissonance is contingent upon the importance, value, and consequence of the elements involved, and Aronson's revision of cognitive dissonance theory (1969, 1992).

2.3. Have higher ratings on the question "*during the challenge, how motivated were you to present a positive image of yourself*?" This prediction is in line with Aronson's view that dissonance is most powerful and most upsetting when actions contradict one's positive self-concept as moral, competent, stable, and predictable

(Aronson, 1969, 1992). When participants respond to this question with higher ratings, it might suggest that the response from the other person threatened the participant's positive self-concept.

2.4. Have higher ratings on the question "*At the time, how much did it bother you that you disagreed with what the other person said or did*?" and higher ratings on the question "*Currently, how much does it still bother you that you disagreed with what the other person said or did?"* Both questions are arguably proxies for dissonance and should show higher ratings whenever dissonance is present.

2.5. Have greater confidence in self-reported judgments of memorial occurrence and accuracy, arguably a way of increasing the number of consonant elements. This prediction is aligned with Scoboria, Boucher, and Mazzoni's (2015) view that autobiographical memories central to the self-concept may be more resistant to changes in belief than autobiographical memories more peripheral to the self-concept.

2.6. Have lower ratings of event importance. As noted earlier, one way to lower dissonance would be to reappraise the importance of an event (D'Argembeau & Van der Lind, 2008; Ross & Wilson, 2002). If one assumes that centrality is an indicator of importance, then mean Centrality of Event Scale ratings would be expected to be lower whenever self-discrepant autobiographical memories are present.

Regarding the third objective, the autobiographical memory literature on this aspect is scant as no prior work has investigated autobiographical memories in the context of disposition and/or interpersonal dynamics. In light of research examining narcissism, rejection, and the self-serving bias (Campbell & Sedikides, 1999; Rhodewalt & Eddings, 2002; Rhodewalt & Morf, 1998), it was expected that individuals scoring

higher on narcissistic traits would be disproportionally represented among self-discrepant autobiographical memories.

Study 1 Method

Participants

The original dataset consisted of 330 participants recruited online. Of those, 299 indicated that the challenged event was an autobiographical memory, 29 indicated not being present when the challenged event originally occurred, and two did not answer. On review of the responses, these two participants were deemed to have been present when the event occurred and therefore had an autobiographical memory. Of the 301, 10 cases were excluded because no specific memory was offered (n = 4), the participant wrote about distinctively different events in response to the questions (n = 1), the challenge was not initiated by the participant (n = 1), the participant wrote about a disagreement that was not based on a memory (n = 1), and the participant admitted in their answers to having no memory of the challenged event (n = 3). The remaining 291 participants passed two embedded validity checks. Median time-to-completion was 23 m 9 s, with the fastest taking a little over nine minutes. No cases were excluded based on time-to-completion because of a slow and steady increase in times that was suggestive of normal within-subject variance.

The final sample of 291 consisted of 155 men and 136 women, and had a mean age of 33.24 (Mdn = 30, SD = 10.54, range 18– 66). The majority of participants self-identified as White (n = 214, 75.1%), followed by Black (n = 22, 7.7%), East Asian (n = 15, 5.3%), Hispanic/Latino (n = 6, 2.1%), South Asian (n = 3, 1.1%), Native (n = 2, 0.7%), Middle Eastern (n = 1, 0.3%), and Multiracial (n = 22, 7.6%). Six participants did

not report their ethnicity. Highest level of education achieved was Doctorate degree (*n* = 2, 0.7%), followed by Professional degree (*n* = 3, 1.0%), Master's degree (*n* = 22, 7.6%), Bachelor's degree (*n* = 116, 40.3%), community college (*n* = 80, 27.8%), high school/GED (*n* = 64, 22.2%), and elementary school (*n* = 1, 0.3%). Three participants did not report their highest level of education.

In order to protect participant anonymity, geographic location tracking was deactivated on Fluid surveys. Prior studies using Mechanical Turk in Dr. Scoboria's lab, however, have indicated that the majority of participants come from North America. Participants whose Mechanical Turk account was affiliated with India were excluded from this study because of the large proportion of these individuals not comprehending similar tasks in prior projects conducted in Dr. Scoboria's lab.

Measures (see Appendix E for a complete list)

Qualitative questions and ratings about the challenged event. Participants answered several open-ended questions about the nature of the challenge they initiated (see Appendix E), including *how* they challenged the other's memory and *why* they chose to challenge. Of relevance to this study, participants were also asked to rate the following questions: "*during the challenge, how important was it for you to convince the other person that you were right?*" (1 = *not at all important*; 10 = *very important*); "*during the challenge, how motivated were you to present a positive image of yourself*" (1 = *not at all motivated to present a positive image of myself*; 10 = *very motivated to present a positive image of myself*); "*at the time, how much did it bother you that you disagreed with what the other person said or did?"* (1 = *it did not bother me at all*; 10 = *it bothered me very much*); and "*currently, how much does it still bother you that you disagreed with what the*

other person said or did? (1 = *not at all*; 10 = *very much*).

Interpersonal Adjective Scales (Wiggins, 1995): The Interpersonal Adjective Scales is a self-report measure that assesses interpersonal traits based on the circumplex model of personality, which posits that interpersonal traits can be located along two principal orthogonal dimensions: Dominance (which ranges from submissive to dominant and controlling) and Nurturance (which ranges from cold and hostile to warm and friendly). Participants are instructed to rate a list of 64 adjectives (e.g., "timid") on an 8-point Likert scale (1 = *extremely unlikely*; 8 = *extremely likely*) based on how accurately each adjective describes them. There are eight adjectives that contribute to each of the eight octants: Assured-Dominant, Arrogant-Calculating, Cold-Hearted, Aloof-Introverted, Unassured-Submissive, Unassuming-Ingenuous, Warm-Agreeable, and Gregarious-Extraverted. Octant scores for each participant are computed by averaging across the eight adjective scores contributing to that particular octant. A Dominance score and a Nurturance score can also be computed for each participant based on their octant *z* scores and weights specified in the scoring manual (Wiggins, 1995). The Interpersonal Adjective Scales has demonstrated adequate psychometric properties (Wiggins, 1995). In the present study, the Interpersonal Adjective Scales and in particular the Assured-Dominant, Arrogant-Calculating, and Cold-Hearted octants were used to gauge narcissistic traits (Miller et al., 2012; Wiggins, 1995).

Measures of belief in occurrence and belief in accuracy. The three items used in Scoboria, Jackson, et al. (2014) were also used here to assess belief in the occurrence of events (i.e., autobiographical belief that the event truly occurred to the self). Two of the times are scored on a 7-point scale, whereas the third item is scored on an 8-point scale.

The three items are averaged (Scoboria, Jackson, et al., 2014), with higher scores indicative of stronger autobiographical belief. In the current study, the Cronbach's alpha value for belief in occurrence was .83.

Belief in accuracy, which broadly refers to attributions made about the degree to which the contents of a current mental representation correspond to the details that in fact occurred in the past, were captured by using three items from Scoboria, Talarico, and Pascal (2015). These items assess confidence in the accuracy of the memory, proportion of memory that is accurate, and doubts as to the accuracy of the memory on 7-point scales. The items are averaged, and higher scores are indicative of greater confidence in the accuracy of one's own memory. In the current study, the Cronbach's alpha value for belief in accuracy was .84. Measures of belief in accuracy and belief in occurrence were used to capture participant's appraisals of the veridicality of remembered events.

Centrality of Event Scale, 7 item version (Berntsen & Rubin, 2006). The Centrality of Event Scale is a self-report instrument that measures the extent to which a past event is appraised as central to a person's life story and identity. Participants are asked to rate on a 5-point Likert scale (1 = *totally disagree*; 5 = *totally agree*) statements about the subjective impact of a past event (e.g., "This event has colored the way I think and feel about other experiences"). The 7-item version of Centrality of Event Scale has a .96 correlation with the 20-item version of the scale, and has demonstrated good internal consistency (Cronbach's alpha of .92 in Berntsen & Rubin, 2006; alpha of .93 in the current study). The Centrality of Event Scale score is obtained by averaging across the seven items, with higher scores indicative of greater importance attributions. In the current study, Centrality of Event Scale was used in the post-hoc analysis as a potential

indicator of importance.

Procedure

Participants were recruited online via Mechanical Turk, a service of Amazon.com (see Appendix A for a brief description of Mechanical Turk). The advertisement, visible to all Turk workers whose address was not in India, asked for participants to take part in a survey about challenging another person's memory (see Appendix C for the recruitment advertisement). Participant eligibility was determined through a two-step process. In step one, Turk workers accessed a screening website where they provide their Turk ID. Only Turk workers who had not already completed a similar study in Dr. Scoboria's lab were eligible to continue and referred to the study survey. Potential participants were deemed eligible if they answered "yes" to "*Have you ever challenged another person's memory for a past event (e.g., disagreed with their memory, told them something about their memory was wrong)?*" See Appendix D for the eligibility screen.

Those who consented were instructed to "*Select a time that you challenged another person's memory for a past event (e.g., disagreed with their memory, told them something about their memory was wrong). Select a time in which you initiated/started the challenge to the other person's memory.*" Participants answered open-ended questions about the challenge itself and then completed a series of questionnaires, including the Interpersonal Adjective Scale, measures of Belief in Occurrence, Belief in Accuracy, Centrality of Event Scale, and demographic information. The study took approximately 30 minutes to complete. Participants were compensated $2.50 (USD) as a token of appreciation. The study received clearance from the University of Windsor Research Ethics Board.

Analytical Approach

This investigation used a mixed methods approach that contained both qualitative and quantitative steps. A qualitative approach was selected because it was well suited to the overarching research goal, which was to explore and reliably describe an aspect of a relatively new line of inquiry, in this case exploring reasons for challenging autobiographical memories. It was also selected because it affords participants greater freedom to reflect on their lived experiences, rather than limit them by imposing a set of answers to choose from (Biggerstaff, 2012). A quantitative approach was chosen to supplement the qualitative analysis by further exploring the themes that emerged from the qualitative work.

Given the study objective of creating a coding system that can be reliably coded by independent observers and imported into subsequent studies, qualitative content analysis was selected over other approaches like grounded theory (Cho & Lee, 2014; Schreier, 2012, 2014). Qualitative content analysis is a method for systematically describing the meaning of qualitative material by assigning parts of the material to categories and subcategories (Schreier, 2014). In addition to its better fit with the nature of the current material and the scope of the current study, qualitative content analysis allows greater flexibility in combining deductive and inductive approaches and allows the processing of a larger quantity of data (Cho & Lee, 2014; Schreier, 2012, 2014).

In light of the richness of experiences under investigation, quantitative methods were also included in order to complement and strengthen findings emerging from the qualitative work. To this end, an explanatory mixed-design (Schwab & Syed, 2015) was implemented by initially employing qualitative methods to identify and describe motives

for challenging another's recollection, and then using quantitative methods to provide greater depth to the motives emerging from the qualitative work.

Development and Validation of the Coding Scheme

Despite lacking the more established procedures of some other qualitative methods, several overlapping steps have been proposed for conducting qualitative content analysis (Cho & Lee, 2014; Mayring, 2014; Schreier, 2012;). The procedures used in this study and the steps outlined below follow the guidelines proposed by Schreier (2012, 2014) and Mayring (2014).

Step 1: Building a coding frame. The following steps for building a coding frame, although presented in a linear fashion, are not necessarily linear in practice. Rather, the process is iterative and dynamic, with several cycles between the substeps described in this section. Ongoing meetings with the research supervisor were held throughout those cycles to inform the building of the coding frame. The coding frame took about one year and a half to develop.

1.1 Selecting the material. The primary objective of this study was to answer the question: Why do individuals challenge another person's memory? Participants' responses to the question, "*Why did you challenge the other person's memory*" were prioritized in building the coding frame. Participants' complete responses to the question "*How did you challenge the other's memory*" served as context. It was possible to code some parts of the "*how*" responses as motives, provided that the coded part was contained, discussed, or hinted at while answering "*why*." This rule was implemented in order to strike a balance between comprehensively coding motives (exhaustiveness requirement, Schreier, 2014), staying as close as possible to what the participant

identified as motivating their challenge, and being mindful of the difference between "*how*" the challenge was carried and "*why*" it was carried out.

1.2 Structuring and generating. Following an initial reading of all participants' responses to "*why*" they challenged, a list of potential categories was generated deductively to help structure thinking around the coding frame. In the course of a second reading, participants' responses were segmented into units of analysis using the thematic criterion. The thematic criterion consists of looking for topic changes such that one unit of analysis corresponds roughly to one proposition (i.e., a logical statement that is paraphrased, meaning it is independent of any embellishing or repetitive words; Mayring, 2014), or in this case, one reason for challenging. After all participant responses to "*why*" were segmented and paraphrased in this manner, a strategy of successive summarizing was adopted in order to organize and summarize similar segments, which were thereafter turned into categories and subcategories.

Following this more deductive generation of categories and subcategories, prior theory and related coding manuals (e.g., Pasupathi, Lucas, & Coombs, 2002; Scoboria, Boucher, & Mazzoni, 2015) were consulted to inform the generation of any additional (sub)categories. The "*why*" responses were reviewed again after this inductive step in order to search for any relevant concepts that had not been detected before, and if needed, new categories and subcategories were created to cover them. The categories and subcategories developed by Scoboria, Boucher, and Mazzoni, (2015) were also adopted at this stage and revised to account for the change in type of event (from nonbelieved memories to challenging another's memory) and the perspective of the participant in

relation to the challenged event[3]. This mixed approach to generating codes was implemented in order to reach saturation and ensure that the codes generated captured all the relevant material (Schreier, 2014).

1.3 Defining categories. At this stage, category and subcategory labels were defined. In addition to a definition, each subcategory also consisted of indicators (i.e., coding aids) and typical positive examples. In practice, this step was an iterative process whereby definitions were continually refined to optimally capture the nature of the subcategory and aim for mutual exclusiveness of codes such that one unit of analysis always received only one subcategory code within a certain category (Schreier, 2012). Of note, however, mutual exclusiveness proved particularly difficult to achieve within the Self-focused motives category where there was frequent overlap between two subcategories, Correcting views of me and Defending the self.

1.4 Revising and expanding. At this stage, the structure of the coding frame was examined, and definitions were expanded or amended where needed. In cases of overlap, such as the same unit receiving more than one subcategory code within the same category, subcategories were collapsed, or other indicators were added to help differentiate among subcategories where possible. Decision rules were added to improve the exclusivity of subcategory codes although, again, this was not always possible.

Step 2: Piloting phase. Piloting of the coding frame was done in stages in order to manage the complexity and cognitive load of the codes, and to ensure that distinct categories were coded independently. The primary investigator and one research assistant each coded 30 consecutive cases using a portion of the coding frame. They then met to

[3] Whereas Scoboria, Boucher, and Mazzoni (2015) coded the perspective of the challenged individual, the current study coded the perspective of the challenger.

discuss the coding process, assess consistency of codes, and when needed, amend the coding frame in terms of definitions, indicators, decision rules, etc. This process was repeated several times until the entire coding frame had been pilot tested. A second pilot phase was conducted with a second research assistant using a similar procedure but following a different order of coding and using an entirely different set of cases for calibration.

Step 3: The main analysis phase. Participants' responses to "*why*" they had challenged were coded by two research assistants using the finalized coding frame. As during the piloting, the final coding was completed in stages. Please see Table 1 and Table 2 for a summary of the codes developed and Table 3 for a description and related examples. On average, each participant provided three reasons for challenging the other's memory. The coding manual is included in Appendix J.

Reliability of the Coding Scheme

In order to determine the inter-rater reliability of categories and subcategories adapted from Scoboria, Boucher, and Mazzoni (2015), one research assistant, who served as the primary coder, coded the entire dataset. The principal investigator coded 20% of the dataset (i.e., 70 randomly drawn cases from 330; Syed & Nelson, 2015) in each category. Only the primary coder's codes were used in the final analysis. The inter-rater reliability statistics for those categories and subcategories are reported in Table 1.

In order to determine the inter-rater reliability of categories and subcategories generated exclusively for this study, two research assistants coded the entire dataset. Any discrepancies in coding were resolved by having the principal investigator consult the assistants' coding notes (Schreier, 2012); if one research assistant had identified a

particular code and that code was supported by their notes, that code was kept in the final dataset. The inter-rater reliability statistics for those categories and subcategories are reported in Table 2.

Three indices of interrater reliability are reported in Tables 1 and 2: Percentage agreement, Cohen's kappa, and delta (Martin Andres & Femia Marzo, 2004). Cohen's kappa is reported because of its wide use. According to Syed and Nelson (2015), however, the kappa index performs poorly in cases of highly skewed marginal distributions, as is the case in the present study. When this occurs, it has been recommended that the kappa statistic be presented alongside delta (Syed & Nelson, 2015). Of note, relatively equal marginal distributions tend to produce comparable kappa and delta values (Syed & Nelson, 2015). The kappa and delta values were calculated using the Delta 4.1.4 software (Andres & Marzo, 2004).

For interpretation purposes, kappa values between .40 and .60 indicate fair agreement, kappa values between .60 and .75 indicate good agreement, and kappa over .75 indicate excellent agreement (Fleiss, 1981). Although the Fleiss guidelines are widely referenced, they are not the only kappa interpretation guidelines (Viera & Garrett, 2005). As suggested by Syed and Nelson (2015), lower kappa values are acceptable in cases of uneven marginal distribution. Interpretation guidelines for delta are not currently available. The recommendation is to consider higher delta values as demonstrating greater interrater reliability and to interpret those values alongside kappa statistics (Syed & Nelson, 2015).

Overall, with a few exceptions, the reliability coefficients provided in Table 1 and Table 2 were deemed acceptable. For the purposes of describing the reasons for

challenging, each category and subcategory was consulted for consistency across reliability indices and frequency of endorsement, and a judgment was made as to whether to retain or drop that category (see Tables 1 and 2). Categories and subcategories were dropped if (a) frequency of code was 0, (b) kappa and delta indices could not be computed, or (c) kappa fell below .40.

Table 1

Interrater Reliability Statistics for Categories and Subcategories Adopted from Scoboria, Boucher, & Mazzoni (2015)

Category	*Subcategory*	*Rate of endorsement % (/291)*	*% Agreement* [a]	*Kappa* [b]	*Delta* [b]	*Decision*
A. General meta-memory beliefs	A1. General beliefs regarding memory & age	2.75% (8)	100.00%	1.00	.96	Retain
	A1a. Comparative statements	0.69% (2)	100.00%	1.00	.96	Retain
	A1b. Absolute statements	2.06% (6)	100.00%	1.00	.96	Retain
	A2. General beliefs regarding memory ability	6.18% (18)	96.88%	0.73	.90	Retain
	A2a. Comparative statement	1.72% (5)	98.44%	0.66	.93	Retain
	A2b. Absolute statement	4.81% (14)	98.44%	0.79	.93	Retain
	A3. General beliefs regarding memory integrity	51.20% (149)	84.38%	0.68	.67	Retain
B. Internal features	B1. Internal features/memory characteristics	7.22% (21)	93.75%	0.47	.84	Retain
C. External evidence	C1. External evidence present	2.41% (7)	100.00%	1.00	.96	Retain
	C2. Lack of external evidence	0.69% (2)	100.00%	1.00	.96	Retain
D. Alternate attributions	D1. Alternate attribution - internal	3.09% (9)	96.88%	0.23	.90	Drop
	D1a. Imagination/ confabulation/ exaggeration/ simplification/ fantasy/ daydream	3.09% (9)	96.88%	0.23	.90	Drop
	D1b. Dream/ nightmare	0.00% (0)	100.00%	n/a	n/a	Drop
	D2. Alternate attribution – External	0.00% (0)	98.44%	0.32	.93	Drop
	D3. Other alternate attribution	3.44 % (10)	92.19%	0.12	.84	Drop
E. Plausibility	E1. Subjective plausibility	2.06% (6)	98.41%	0.66	.93	Retain
F. Belief in occurrence	F1. The event did not occur	20.96% (61)	92.06%	0.58	.84	Retain
	F2. The event could not occur	0.34% (1)	100.00%	n/a	n/a	Drop
	F3. The event is unlikely to have occurred	1.72% (5)	100.00%	1.00	.96	Retain
	F4. Lack of corroboration from another person/persons/third-party	7.90% (23)	100.00%	1.00	.96	Retain
	F5. The Event was not witnessed	0.68% (2)	100.00%	n/a	n/a	Drop
G. Belief in accuracy	G1. The event happened differently	62.89% (183)	82.54%	0.59	.65	Retain

Note. [a] All interrater statistics are based on the principal investigator coding 20% of the dataset for each category.
[b] Kappa and Delta statistics could not be computed if neither the primary rater nor the principal investigator marked a code as present among the cases coded by both of them.

Table 2

Interrater Reliability Statistics for Categories and Subcategories Emerging From This Study

Category	*Subcategory*	*Rate of endorsement % (/291)* [a]	*% Agreement*	*Kappa* [b]	*Delta* [b]	*Decision*
H. Prosocial motives	H1. Seeking confirmation	2.75% (8)	98.63%	.66	.96	Retain
	H2. Providing emotional support	3.44% (10)	97.59%	.45	.94	Retain
	H3. Passing on knowledge/ information	9.28% (27)	96.56%	.72	.92	Retain
	H4. Reminiscing	3.78% (11)	96.56%	.57	.93	Retain
	H5. Relationship maintenance	1.72% (5)	98.63%	.49	.96	Retain
	H5a. Relationship maintenance through manipulation/deception	1.03% (3)	99.66%	.80	.98	Retain
	H5b. Relationship maintenance through other means	0.68% (2)	98.97%	.00	.97	Drop
I. Internal models of self and others	I1. Dispositional view of other	10.65% (31)	92.44%	.52	.85	Retain
	I2. Situational view of other	16.84% (49)	85.57%	.29	.76	Drop
	I3. Discrepant view of other	4.47% (13)	96.22%	.57	.92	Retain
	I3a. Discrepant view of 3rd party other	4.47% (13)	97.25%	.62	.94	Retain
	13b. Discrepant view of challenged other	0.00% (0)	98.28%	.00	.96	Drop
	I4. Dispositional view of self	9.62% (28)	91.41%	.43	.83	Retain
	I5. Changing view of self	2.41% (7)	97.59%	.52	.94	Retain
	I5a. Deviate from own dispositional tendencies this one time.	1.37% (4)	98.97%	.66	.97	Retain
	I5b. Deviate from own disposition tendencies from now on	0.00% (0)	100.00%	N/a	N/a	Drop
	I6. Consistent view of self over time	2.75% (8)	97.59%	.45	.95	Retain
J. Self-focused motives	J1. Correcting the event interpretation	7.90% (23)	94.50%	.47	.89	Retain
	J2. Correcting views of me	8.59% (25)	95.88%	.68	.92	Retain
	J3. Personal need to correct this event	16.49% (48)	89.35%	.53	.79	Retain
	J4. Seeking validation	6.19% (18)	95.88%	.52	.92	Retain
	J5. Seeking recognition	4.47% (13)	97.25%	.54	.95	Retain
	J6. Managing anticipated outcomes to the self	10.31% (30)	92.10%	.40	.85	Retain
	J7. Defending the self	6.87% (20)	93.81%	.41	.88	Retain
	J8. Social mischief	2.75% (8)	98.97%	.80	.97	Retain
	J9. Social comparison	1.37% (4)	99.31%	.75	.98	Retain
K. Emotions	K1. Emotional states	26.46% (77)	76.98%	.46	.64	Drop in favour of k1a
	K1a. Negative emotional states	20.27% (59)	86.60%	.61	.79	Retain
	K1b. Positive emotional states	6.53% (19)	89.35%	.24	.81	Drop
	K1c. Neutral emotional states	0.00% (0)	100.00%	N/a	N/a	Drop

Note. [a] Rate of endorsement after reconciling codes from both raters
[B] Kappa and Delta statistics could not be computed if neither the primary rater nor the principal investigator marked a code as present among the cases coded by both of them.

Study 1 Results

Qualitative Content Analysis

Research Question 1: Themes characterized by self-discrepant autobiographical memories and themes not characterized by self-discrepant autobiographical memories were anticipated to emerge. The presence of themes involving self-discrepant autobiographical memories was expected to be apparent by the emergence of self-protective motives in the coding framework.

Reasons for challenging another individual's version of a past event. This section includes a brief description of the categories and subcategories that emerged from the coding. Category and subcategory definitions and prototypical examples for each subcategory can also be found in Table 3. Categories A through G were adapted from Scoboria, Boucher, and Mazzoni (2015). Categories H through K emerged from this study.

Table 3

Retained Motives Reported For Choosing To Challenge

Motives For Challenging	*Definition*	*Example*
CATEGORY A: GENERAL META-MEMORY BELIEFS = The challenge is based on the participant's assumption(s) regarding how memory generally works, which is in turn used to bolster the validity of one's own account or undermine the validity of the other's account.		
A1. General beliefs regarding memory & age	Age influences memory such that memories cannot be formed when one is very young, memory impairment is common in old age, etc.	"[I challenged because] I was concerned with her memory as she is getting quite old."
A2. General beliefs regarding memory ability	Some people are better than others at recalling the past (e.g., I rarely forget, he has a horrible memory).	"[I challenged because] I have very, very good memory so I clearly know she said it."
A3. General beliefs regarding memory integrity	Memory quality, origin, and/or structure operate differently (e.g., memories can be reconstructed, can be false, borrowed, exaggerated).	"I challenged because the order in which things took place along with the outcomes from this event were being misconstrued by false recollection."
CATEGORY B: INTERNAL FEATURES = The challenge is based on the participant's mental representation for the shared event, which is in turn used to bolster the validity of their own account or undermine the validity of the other's account.		
B1. Internal features/memory characteristics	The quality of the participant's mental representation is vivid, strong, clear, has something compelling about it, etc.	"[I challenged] because it was so clear in my memory what he said"
CATEGORY C: EXTERNAL EVIDENCE = The challenge is based on the presence or absence of external evidence, which is in turn used to bolster the validity of their own account or undermine the validity of the other's account..		
C1. External evidence present	The participant possesses external evidence.	"[I challenged because] I had evidence to the contrary, an email"
C2. Lack of external evidence	The participant relies on the absence of external evidence.	"[I challenged because…] if he had rode the merry-go-round, there would have been pictures because I had my camera all ready to take them."
CATEGORY E: PLAUSIBILITY = The challenge is based on the participant's view that the challenged memory is implausible or impossible to have occurred in reality.		
E1. Subjective plausibility	The event could not have occurred (e.g., it is impossible, implausible, or illogical) based on personal knowledge, preference, feelings, and/or opinions.	"[I challenged] because I thought the thing she said happened was absurd. I don't even think we have the same blood type, plus she lives out of the country!"
CATEGORY F: BELIEF IN OCCURRENCE = The challenge is based on the participant's view that the challenged memory did not actually occur in reality.		
F1. The Event did not occur	The event did not occur.	"[I challenged because] I'm quite sure that this never happened"
F3. The Event is unlikely to have occurred	The event could have occurred but it is unlikely (e.g., it is implausible).	"I was fairly certain that I did not say what she said that I did."

F4. Lack of corroboration from another person/persons/third-party	Others cannot confirm the occurrence of the event.	"[I challenged him] because I thought it was ridiculous that he could not remember."
CATEGORY G: BELIEF IN ACCURACY = The challenge is based on the participant's perceived accuracy of the recalled memory, which is in turn used to bolster the validity of their own account or undermine the validity of the other's account.		
G1. The Event happened differently	Feature(s) of the event are inaccurate, wrong, or happened differently (e.g., happened to another party, happened to the challenger)	"I challenged his memory because his recollection of the event was not exactly how it had unfolded in reality,"
CATEGORY H: PROSOCIAL MOTIVES = The challenge is based on the participant's desire to develop, maintain, and/or nurture closeness in social relationships.		
H1. Seeking confirmation	Seek out, verify, or confirm details about a past event and/or negotiate a shared interpretation of a past event.	"I challenged her memory because I thought it was different from mine and I figured between the two of us we could iron out the parts that were incorrect on both sides."
H2. Providing emotional support	Offer empathy and emotional support.	"I challenged this person's memory because I wanted to instill confidence in them so that they would succeed. Whether true or not, I wanted them to see the events that happened as positive rather than negative"
H3. Passing on knowledge/information	Pass on valuable life lessons or information.	"I did so partly because I wanted to inform her of [a childhood disease] she actually had that she believes she never had".
H4. Reminiscing	Indulge in the enjoyable recollection of a past event.	"[I challenged] to reminisce on the good times. To take us back to a happy time."
H5. Relationship maintenance	Rebuild, develop, or maintain a relationship with another person.	"[I challenged because] I have hopes of re-creating our friendship. I want it to be like it was before."
CATEGORY I: INTERNAL MODELS OF SELF AND OTHERS = The challenge is based on the participant's internal models of self and/or others.		
I1. Dispositional view of other	The other's disposition undermines their credibility.	"[I challenged because] she had a way of embellishing trifling things to make them sound worse than they really are."
I3. Discrepant view of other	The participant's view of a third party person is incompatible with the other's view of that same person.	"[I challenged because] she created a memory in her mind that was not fair to our mother"
I4. Dispositional view of self	The participant wishes to reaffirm their own dispositional tendencies and habits as the kind of person who speaks up, challenges, needs to be right, etc.	"[I challenged] because I don't like to be misunderstood, but most importantly I don't like being lied on."
I5. Changing view of self	The participant wishes to depart from own dispositional tendencies and habits.	"[I challenged because] on that day I got tired of playing along and not wanting to rock the boat with her."
I6. Consistent view of self over time	The participant's internal models of "past self" and "present self" are incompatible.	"[I challenged because] my husband claimed I had said something that I didn't. I tried to tell him I

		would never say something of the sort and told him why I wouldn't have"
CATEGORY J: SELF-FOCUSED MOTIVES = The challenge is based on the participant's desire to consolidate, preserve, protect, and/or enhance a sense of "I" and "who I am".		
J1. Correcting the event interpretation	Correct, clear up, or clarify the other's interpretation of a past event.	"[I challenged because] I wanted to make it very clear that I didn't mention the drinking and cheating to call [my mother] stupid or a whore. I wanted to make it clear that I was just worried about her behavior."
J2. Correcting views of me	Correct an unfavourable view and/or establish a favourable view.	"[I challenged because] it bothered me that she thought of me as a heavy drinker when I was younger."
J3. Personal need to correct this event	A subjective desire for a past event to be recalled accurately.	"[I challenged because] I couldn't justify letting her continue to believe that my hair was long just for the sake of some laughs"
J4. Seeking validation	Elicit empathy from the other, ask them to take responsibility, and/or have them validate a past experience.	"[I challenged because] her version was so far off that it functioned as a violent denial of the pain we children had experienced at various points in our childhoods"
J5. Seeking recognition	Attain recognition/acknowledgement for one's role in something deemed positive, valuable, or helpful.	["I challenged because] I was upset that he did not [give me] credit for playing a part in his eventual marriage."
J6. Managing anticipated outcomes to the self	Prevent a negative, unfavourable, or unwanted situation from occurring or ensure that a positive, favourable, or wanted situation does occur.	"I challenged it because I wanted to go on that rollercoaster with my dad. This was the bargain I had been promised, not the ice cream!"
J7. Defending the self	Protect oneself in response to an actual or anticipated physical and/or emotional threat to the self.	"[I challenged because] I was defending myself" "I challenged this particular memory because it is one of the most painful experiences that I have ever had to endure"
J8. Social mischief	Pursue thrill or amusement at the expense of the other (e.g., through teasing, pranks)	"[I challenged because] I wanted to have some fun challenging my sister's memory because she prides herself in her memory"
J9. Social comparison	Show superiority in an area relative to another individual.	"[I challenged because] I wanted to be able to say I knew more than him"
CATEGORY K: EMOTIONS = The challenge is based on the participant's experience of certain emotional state(s).		
K1a. Negative emotional states	Experiencing a particular negative emotional state (e.g., anger, pain, shame).	"[I challenged because] I had all this pent up frustration and anger even years later"

Category A: General meta-memory beliefs (A). This category captures challenges driven by participants' assumption(s) of how memory generally works, such as memory declines with age, or memory can be false, or reconstructed. This category was divided into three subcategories. The first subcategory (A1) involved beliefs regarding memory and age (e.g., "Considering my cousin was two-and-a-half at the time, I doubt she could actually remember that far back"). This A1 subcategory was further divided into two subcategories. The first subcategory (A1a) included instances where the challenger compared the age of the challenged party to their own as part of the challenge (e.g., "I challenged his memory because I was older than him and I know the event didn't happen."). The second subcategory (A1b) included instances where the challenger made statements about the relation between memory and age but did not evoke comparative statements about theirs and the challenged other's respective ages (e.g., [I challenged because] I was concerned with her memory as she is getting quite old").

The second subcategory (A2) involved beliefs about memory ability (e.g., "[I challenged because] I have very, very good memory so I clearly know she said it."). This was further divided into two subcategories. The first subcategory (A2a) was comprised of statements that compared the challenger's memory to the memory ability of the challenged party (e.g., "I challenged because I have a pretty good memory and rarely forget things. So I was sure she had forgotten because she always does"). The second subcategory (A2b) was comprised of statements that commented on memory ability without a comparison (e.g., "I challenged because my memory is excellent").

The third subcategory (A3) within the general-meta-memory beliefs category

involved beliefs about memory integrity (i.e., memories can be borrowed, memories can be false, memories can be exaggerated; "I challenged because the order in which things took place along with the outcomes from this event were being misconstrued by false recollection."). Across the subcategories, participants appeared to use general meta-memory beliefs to increase the validity of their own version and/or undermine the validity of the other's version.

Category B: Internal features (B). Internal features (B1) refer to the quality of the participant's mental representation, which could be vivid, strong, clear, or have something compelling about it. This category was intended to capture challenges driven by the quality of participants' mental representation of the challenged event. For example, participants stated, "I challenged because I remember the event so clearly" or "I challenged because it was so clear in my memory what he said." As was the case for General meta-memory beliefs, Internal features also appeared to have been used to evaluate the validity of the participants' version.

Category C: External evidence (C). This category was used to capture challenges driven by the presence or absence of external evidence. External evidence in this case referred to anything that was concrete and/or tangible, such as photos, receipts, or emails. This category was divided into two subcategories. The first subcategory (C1) involved participants challenging because they were in possession of external evidence that supported their version and/or undermined the validity of the others' (e.g., "[I challenged because] I had evidence to the contrary, an email"). The second subcategory (C2) involved participants challenging because of the conspicuous absence of external evidence, which supported their version and/or undermined the validity of the others'

(e.g., "[I challenged because] if he had rode the merry-go-round, there would have been pictures because I had my camera all ready to take them.").

Category D: Alternate attributions (D). Alternate attributions refer to internal or external sources that affect an event-specific memory or parts of it. This category was used to capture challenges driven by participants' views that an alternate source is interfering with the other's version to the point of being confused with reality. This category was divided into three categories. The first subcategory (D1) involved challenges motivated by belief or knowledge that the other's version resulted from or was influenced by an alternate internal source. This subcategory was further divided into two subcategories. The first subcategory (D1a) involved challenges motivated by participants' knowledge or belief that the others' version resulted from or was influenced by imagination, fantasy, etc. (e.g., "[because] what he said was a complete fabrication." The second subcategory (D1b) involved challenges motivated by participants' knowledge or belief that the others' version resulted from or was influenced by dreams and/or nightmares. The subcategory D1 was dropped because it was not coded reliably.

The second subcategory (D2) under the Alternate attributions category involved challenges motivated by participants' belief or knowledge that the others' version resulted from or was influenced by external sources, such as movies, TV shows, or books. Because it was not reliably coded, this subcategory was also dropped.

The third subcategory (D3) under Alternate attributions involved challenges motivated by participants' belief or knowledge that the others' version resulted from or was influenced by other alternate sources, such as substance use, medication, and/or mental health (e.g. "I challenged my friend's memory because they have a mental illness

that impairs their perception of reality and memory"). This subcategory was dropped because it emerged as unreliable.

Category E: Plausibility (E). Plausibility refers to an assessment of whether an event could have actually occurred based on one's knowledge of the world. Plausibility differs from belief in occurrence in its assessment of whether something could have happened rather than whether something did happen. This category (E1) was used to capture challenges driven by participants' view that the challenged event was impossible, implausible, or illogical to have occurred based on personal feelings, tastes, or opinions (e.g., [I challenged] because I thought the thing she said happened was absurd."]. Like the categories before, Plausibility also appeared to have been used to undermine the validity of the others' version.

Category F: Belief in occurrence (F). Unlike plausibility, belief in occurrence refers to an assessment of whether a past event actually occurred. This category was used to capture challenges driven by participants' doubts about the actual occurrence of the challenged event. This category was originally divided into five categories, but only three subcategories were reliably coded and retained to describe the dataset. The first subcategory (F1) involved participants' belief that the challenged event did not occur (e.g., ""[I challenged because] I'm quite sure that this never happened"). The second subcategory (F3) involved participants' belief that the challenged event was unlikely to have occurred ("I was fairly certain that I did not say what she said that I did." or "My brother said our parents were overly mean and almost abusive to us as children …[I challenged because] I had no memory of most of the incidents, and I didn't think they had happened…"). The third and final subcategory (F4) involved participants' belief that the

challenged event lacked corroboration from another person or a third party other ("[I challenged because] he didn't remember the experience").

Category G: Belief in accuracy. This category encompassed challenges driven by participants' knowledge or belief that the others' version is inaccurate, wrong, or happened differently. It encompassed beliefs that the challenged event occurred at a different time, different place, involved different objects, occurred over a different length of time, etc. Examples include, "[I challenged because] her perception of how many cigarettes she had was wrong. My mother claimed that I stole a large portion of cigarettes from her. I immediately let know that I only took one and she insisted that there were many missing," and "[I challenged because] she was clearly wrong [when stating that she got the doll in the blue dress and I got the doll in the green dress]. I remember because we each got the doll with the dress that matched our eye color."

Category H: Prosocial motives (H). This category was created upon observing that some challenges were more benign and helpful than others, and because some individuals reported feeling helped by others who challenged their memories in another study (Barcic, 2015; Wysman, 2016). The Prosocial motives category captures challenges driven by participants' desire to develop, maintain, and/or nurture closeness in social relationships. Challenges prompted by Prosocial motives tended to (a) consist primarily of an external, social focus, (b) be accompanied by participants' explicit expression of helpful and/or positive intention, and (c) be focused primarily on another person, rather than the challenger.

Inspired by the work of Alea and Bluck (2003), Bluck et al., (2005), Webster (2003), and Pasupathi et al., (2002), the Prosocial motives category was divided into five

subcategories. The first subcategory (H1) involved challenges driven by a desire to seek out, verify, or confirm details about a past event (e.g., "[I challenged because] I was unsure about my recollection of the event and wanted to see if I was just being crazy)." In a minority of cases there was a sense of collaboration and co-construction as the two parties attempted to negotiate a shared interpretation of the challenged event (e.g., "I challenged her memory because I thought it was different from mine and I figured between the two of us we could iron out the parts that were incorrect on both sides.").

The second subcategory (H2) involved challenges driven by a desire to provide emotional support, care, understanding, and/or empathy. Those instances had a quasi-therapeutic tone as participants used the challenge to instill confidence, show care, or alleviate distress (e.g., "I challenged this person's memory because I wanted to instill confidence in them so that they would succeed. Whether true or not, I wanted them to see the events that happened as positive rather than negative").

The third subcategory (H3) involved challenges driven by a desire to pass on valuable knowledge and/or information (e.g., "[I challenged because] I thought it was important for my mother to realize that the reason my dad was making more money was because his boss wasn't managing the company correctly"). The fourth subcategory (H4) involved challenges driven by a desire to indulge in the enjoyable recollection of a past event. These challenges invoked more positive emotions and used more neutral and/or positive labels to refer to the challenge, such as "conversation" or "reminiscing" (e.g., "[I challenged] to reminisce on the good times. To take us back to a happy time."].

The fifth and last subcategory (H5) involved challenges driven by a desire to rebuild, develop, or maintain relationships. Although this subcategory was originally

divided into two additional subcategories, only relationship maintenance through manipulation and/or deception (H5a) emerged as the more reliable subcategory. In this subcategory, challenges involved instances of lying, deceiving or blaming in the hopes of rebuilding or maintaining relationships. For example, one participant stated,

> *"I had a best friend in high school. We were so close and did everything together, and then I started making bad choices in my life. She stopped talking to me, saying that she didn't want to associate herself with someone that made these choices. When she and I started talking again a few weeks ago, she said to me "I don't even remember why we stopped talking." I told her that she must have just been too busy, because I didn't do anything wrong and she was the one who chose to drift away. I knew that I was the one who caused problems, but if she forgot, there was no point in saying it. [I challenged because] I have hopes of re-creating our friendship. I felt like it would be better to completely start over than start again on the wrong foot. If she didn't remember, it was for the better. Maybe it was meant to be that way."*

Category I: Internal models of self and others. Inspired by the psychodynamic construct of internal working models, this category was created to capture challenges driven by participants' internal model(s) of themselves, the challenged party, and/or a third party. These internal models involve qualities, values, characteristics, personality traits, typical behaviours and preferences that individuals hold in relation to others and themselves. This category was originally divided into six subcategories, but only five subcategories emerged as reliable and were retained to describe the dataset.

The first subcategory (I1) involved challenges driven by participants'

dispositional view of the other as someone of dubious credibility. For example, "[I challenged because] she had a way of embellishing trifling things to make them sound worse than they really are" or "I challenged because he is a liar and is constantly full of shit regarding his stories and memories."

The second subcategory (I3) was comprised of challenges driven by a disagreement between how the participant and the challenged other view a third person (I3a) or how they view the challenged other (I3b). Subcategory I3b was deemed unreliable and therefore not retained to describe the dataset. Given the better reliability found with I3a, this was the sole subcategory retained under I3. Frequently, challenges coded under I3a involved participants standing up for or protecting a third party. For example, "[I challenged because] I didn't think it was right for her to continue to blame her sister for things [her sister] is not at fault" or "[I challenged because] she created a memory in her mind that was not fair to our mother."

The third subcategory (I4) involved challenges driven by participants' dispositional view of themselves. Through the challenge, participants appeared to reaffirm their own dispositional tendencies as the type of person who speaks up, challenges, needs to be right, etc. (e.g., "[I challenged] because] I can't stand when something is incorrect. Besides that, I always feel the need to be right" or "[I challenged because I generally don't like to back down when I think I'm right."

The fourth subcategory (I5) involved challenges driven by participants' changing view of themselves. In these instances, participants' appeared motivated by a desire to deviate or break away from their dispositional tendencies and habits. Although this subcategory was originally divided further into two subcategories, only subcategory I5a

was retained due to its more reliable coding. Examples of subcategory I5a include, "[I challenged because] on that day I got tired of playing along and not wanting to rock the boat with her" or "Usually I just go along with her. This time however, I didn't feel like just sitting back and allow her to inaccurately recall a past event. In a way, I felt like I was standing up for myself by holding her accountable."

The fifth and last subcategory (I6) involved challenges driven by participants' belief that aspects of the challenged event were inconsistent with whom they perceived themselves to be at the time of the challenge. Inherent in those challenges was an assumption of continuity and consistency between past-self and current-self. For example, participants stated, "[I challenged because] I wouldn't have gotten rid of those [belongings] myself because they had sentimental value to me" or "[I challenged because] my husband claimed I had said something that I didn't. I tried to tell him I would never say something of the sort and told him why I wouldn't have"].

Category J: Self-focused motives. This category was created to capture challenges resulting from participants' desire to consolidate, preserve, protect, and/or enhance a sense of "I" and "who I am." Challenges prompted by self-focused motives tended to (a) consist primarily of an internal, self-focus, and (b) were focused primarily on the self, rather than or in addition to the other(s). This category was divided into nine subcategories.

The first subcategory (J1) involved challenges driven by a desire to correct, clear up, or clarify the other's interpretation of a past event. For example, one participant stated,

"When I was little I used to cherish this rabbit and hugged and slept with it every

> *night. My sister thought I just outgrew the rabbit when I stopped caring about it, but I told her she was the one who made me stopped caring about the rabbit. I told her that she told me a scary story about stuffed animals coming to life and killing their owners, and that I got scared and locked my rabbit in the closet. My sister said she did not remember telling that scary story at all, and the look on her face was one of denial. [I challenged because] I wanted to correct my sister that I didn't outgrow the rabbit."*

The second subcategory (J2) involved challenges driven by a desire to correct an unfavourable self-presentation and/or establish a favourable self-presentation. In all these instances, participants believed that the others' impression of them was inaccurate and reflected poorly on them. In particular, concerns around being perceived as possessing undesirable qualities, like ignorance, violence, or deceit, were observed. For example, participants stated "[I challenged because] it bothered me that she thought of me as a heavy drinker when I was younger" or "[I challenged because] I didn't want people thinking me and my brother fight MMA style over stupid things."

The third subcategory (J3) involved challenges driven by a personal need for a past event to be recalled accurately. In all these instances, participants acknowledged their own need for accuracy through statements like "I *wanted* to set the record straight." Such challenges also made clear that recalling accurately the challenged event accurately primarily benefited the participant. Examples included, "[I challenged because] but I couldn't justify letting her continue to believe that my hair was long just for the sake of some laughs" and "[I challenged because] I wanted to make sure the story that I was listening to was accurate."

The fourth subcategory (J4) involved challenges driven by a desire to elicit an acknowledgment and/or taking of responsibility regarding the challenged event, as well as elicit understanding regarding the emotional consequences of the challenged event. A number of these challenges involved past traumas or distressing memories (e.g., "[I challenged because] her version was so far off that it functioned as a violent denial of the pain we children had experienced at various points in our childhoods" or "I challenged his memory of it because I just wanted him to admit the truth."

The fifth subcategory (J5) involved challenges driven by a desire to be recognized or acknowledged for one's role in something deemed positive, valuable, or helpful (e.g., ["I challenged because] I was upset that he did not [give me] credit for playing a part in his eventual marriage.")

The sixth subcategory (J6) involved challenges driven by a desire to prevent a negative, unfavourable, or unwanted situation from occurring or to ensure that a positive, favourable, or wanted situation did occur. Examples included, "I challenged because I wanted to go on that rollercoaster with my dad. This was the bargain I had been promised, not the ice cream!" and "[I challenged because] I wanted her to keep her promise to me to do something for me... I wanted her to fulfill her promise."

The seventh subcategory (J7) involved challenges driven by a desire to protect oneself in response to actual or anticipated physical and/or emotional threat. In other words, participants challenged in self-defense, and in fact most instances coded under this subcategory included an explicit acknowledgement of this self-defense motive (e.g., "[I challenged because] I was defending myself").

The eighth subcategory (J8) involved challenges driven by the pursuit of thrill or

amusement at the expense of the other (e.g., through teasing, pranks). For example, participants stated, "[I challenged because] I wanted to have some fun challenging my sister's" or "[Even though he actually returned the money owed to me 2 weeks ago, I challenged him about not returning the money because] I wanted to see if I could do it."

The ninth and last subcategory (J9) involved challenges driven by a desire to show superiority or dominance in a certain area relative to another individual. For example, participants stated, "[I challenged because] I wanted to be able to say I knew more than him, about the house that we lived in" or "[I challenged because] I suppose there was a part of me that felt superior in knowing something that she didn't."

Of the nine subcategories within the Self-focused motives category, challenges coded under Correcting views of me (J2) and Defending the self (J7) both arguably captured self-protective motives arising as a result of dissonant information recounted by another individual. To illustrate, one participant described the challenge as follows:

> *"My wife was recounting to a mutual friend about a time when we were in the city and a kid shoved her from behind for no reason. I grabbed him and punched him hard in the shoulder before he ran off, but in the story my wife said I cuffed him on the cheek. I told her she had it wrong, probably because her back was turned, or she was in shock."*

In response to why they challenged, the participant wrote,

> *"Because the memory didn't happen the way she said it, and it made me look a little more violent than I had been."*

As another example, one participant described the challenge as follows:

> *"My mother claimed recently that I went out drinking a lot with my friends and*

that it had become a bad habit when I was younger and that she was glad I straightened up my act. I challenged her to remember how many times she thought I went out drinking? Because I knew for sure I would only go out on Friday nights, and not even every Friday of the month. I discussed and said if I went drinking a lot as she claimed, that maybe three days out of a month max certainly does not qualify as a lot. We discussed the topic and she in the end agreed she must have perceived it much worse than it was because I was her son and she was worried. "

When asked about why they challenged, the participant explained,

"Because what was said was untrue and it bothered me that [my mother] thought of me as a heavy drinker when I was younger."

In both instances, participant's self-concept as "not violent" and "not a heavy drinker" respectivey was at odds with the other's recounting of a past event. In order to protect or preserve the self-concept as "not violent" and "not a heavy drinker," and correct the others' impression of them, the participant confronted the source of dissonant information, as would be expected from cognitive dissonance theory.

Although the other subcategories within Self-focused motives category may have also included challenges driven by wanting to defend or preserve the self-concept, articulation of this motive was not as fleshed out as it was in subcategories J2 and J7. In fact, the coding of subcategories J2 and J7 overlapped greatly and as such, I collapsed them into one Self-protective index (used in the quantitative analyses below), rather than treat them separately.

Category K: Emotions. This category was created to capture challenges stemming

from participants' experience of certain emotional state(s). Although originally divided into three subcategories, only the Negative emotional states subcategory (K1a) emerged as a reliable subcategory and was retained to describe the dataset. This subcategory consisted of challenges driven by participants experiencing intense and distressing negative emotional states, such as pain, anger, or anxiety. For example, a participant stated, "I challenged because it is one of the most painful experiences that I have ever had to endure" or "[I challenged because] I was trying to be honest about what happened in the past and come clean about something that I had felt guilt over when I was younger."

Quantitative Data Analysis

All quantitative analyses were conducted using SPSS 23. Prior to any statistical analyses, data were checked against corresponding statistical assumptions; only violations and corrections are reported in the appropriate sections below. Whenever possible, bootstrapping with 5000 samples was used to calculate statistics of interest. In light of the relatively novel and exploratory nature of this study, the alpha level was set at .05.

Missing data. A missing values analysis revealed a relatively low amount of missing data (i.e., 2.4% or lower per variable) but the missing items did not appear to be distributed randomly (Little's MCAR test $\chi^2_{(6633)} = 7005.06$, $p = .001$). Further analysis revealed that only the Interpersonal Adjective Scales data produced a significant Little MCAR test (Little's MCAR test $\chi^2_{(4341)} = 4629.51$, $p = .001$), but not the other variables (Little's MCAR test $\chi^2_{(299)} = 246.40$, $p = .988$).

Mean Belief in Occurrence and mean Belief in Accuracy were computed with the data available; no replacement values were used. This was deemed appropriate given the

low amount of data missing (Tabachnik & Fidell, 2001) and the fact that these are both average-based rather than summative indices.

Missing values on the Interpersonal Adjective Scales were handled based on the recommendations from the manual (Wiggins, 1995), which are based on normed data. Specifically, a participant profile was deemed valid if at least six of the eight octant adjectives were present and fewer than five items were missing in the entire Interpersonal Adjective Scales. Based on these criteria, four cases were excluded from the total of 291 whenever Interpersonal Adjective Scales variables were used in the analyses. Incidentally, those four cases were also the only ones that had more than 5% (but less than 10%) of their data missing because of their incomplete Interpersonal Adjective Scales. A series of Mann Whitney U tests between the cases retained and the cases excluded did not reveal any significant differences on any of the variables of interest.

Given the significant Little MCAR finding, Expectation Maximization was used to impute the missing values on the retained Interpersonal Adjective Scales cases (n = 287). Analyses were conducted both with the imputed data and without, with very similar results. The imputed Interpersonal Adjective Scales data, however, was retained because of the MCAR finding.

Hypothesis 2.1. To test the hypothesis that relative to challenges not involving self-discrepant autobiographical memories, challenges involving self-discrepant autobiographical memories would be more likely to include negative emotional states, a Self-protective index was computed by using subcategories “Correcting views of me” (J2) and “Defending the self” (J7) from the qualitative coding. If either or both codes were present in a challenge, that challenge was coded as containing a Self-protective

motive and given a dummy code of 1 (n = 38). If neither was present in a challenge, that challenge was coded as not containing a Self-protective motive and given a dummy code of 0 (n = 253). I used the Self-protective index in testing hypotheses 2.2 to 2.6 as well. To index negative emotional states, subcategory "Negative Emotional States" (K1a) was used from the qualitative coding. Consistent with the hypothesis, a chi-square analysis revealed that challenges containing Self-protective motives included proportionally more negative emotional states than challenges not containing Self-protective motives, χ^2 (291) = 5.25, p = .030 (two-tailed), d = .27.

Hypothesis 2.2. It was expected that relative to challenges not involving self-discrepant autobiographical memories, challenges involving self-discrepant autobiographical memories would have higher ratings on the question "*during the challenge, how important was it for you to convince the other person that you were right?*"

Participants' responses to "*during the challenge, how important was it for you to convince the other person that you were right*?" had an overall mean of 7.82 (*Mdn* = 8; *SD* = 2.40, range 1–10) and acceptable skewness and kurtosis, with no values exceeding +/–3SD. The same Self-protective index computed to test hypothesis 2.1 was also used here. When Self-protective motives were present, mean ratings on the question reached 8.11 (*SD* = 2.15; *n* = 38), whereas when Self-protective motives were absent, mean ratings on this same question reached 7.78 (*SD* = 2.43; *n* = 250). Contrary to the hypothesis, a *t* test comparing mean ratings between the two groups did not reach statistical significance, mean difference = 0.33 95% CI [–0.44; 1.08], *t* (286) = .789, *p* = .431, *d* = .14.

Given the unbalanced groups in the *t* test above, a second comparison was set up. The "Prosocial motives" category that emerged out of the qualitative coding and the Self-protective index created in hypothesis 2.1 were used to create a dummy coded variable that contrasted self-protective and prosocial motives. The Prosocial motives category was chosen because, unlike the Self-protective index, which consisted of challenges with an internal, self focus and centered more on the self rather than or in addition to the other, the Prosocial motives category consisted of challenges with an external, social focus and centered more on a specific person other than or in addition to the self. The dummy coding was set up as follows: If the challenge contained a Self-protective index code, it was dummy coded as 1. If the challenge contained a Prosocial motives category code, it was dummy coded as 0. Only non-overlapping cases were used, meaning that four cases that contained both codes were excluded. I used the Self-protective vs. Prosocial-motives index in testing hypotheses 2.3 to 2.6 as well.

When a Self-protective-but-not-a-Prosocial code was present, mean ratings reached 8.12 (SD = 2.25, n = 33), whereas when a Prosocial-but-not-a-Self-protective code was present, mean ratings reached 6.81 (SD = 2.76, n = 52). Consistent with the hypothesis, a *t* test comparing ratings between the two groups revealed a statistically significant mean difference of 1.31 [0.26; 2.39], with ratings within the Self-protective group being significantly higher than ratings in the Prosocial motives group, t (83) = 2.29, bootstrapped p = .020, d = .52.

Hypothesis 2.3. It was expected that relative to challenges not involving self-discrepant autobiographical memories, challenges involving self-discrepant autobiographical memories would have higher ratings on the question "*during the*

challenge, how motivated were you to present a positive image of yourself?"

Participants' responses to "*during the challenge, how motivated were you to present a positive image of yourself*?" had an overall mean of 6.30 (*Mdn* = 6.50; *SD* = 2.85, range 1–10) and acceptable skewness and kurtosis, with no values exceeding +/- 3SD. When Self-protective motives were present, mean ratings were 7.76 (*SD* = 2.39; *n* = 38), whereas when Self-protective motives were absent, mean ratings were 6.08 (*SD* = 2.86; *n* = 251). Consistent with the hypothesis, a *t* test comparing the two groups revealed a significant difference in ratings of 1.69 [0.82; 2.52], *t* (287) = 3.46, bootstrapped $p < .001$, $d = .60$. Because the Levene's test was significant, a Mann-Whitney U test was set up, which, consistent with the hypothesis, also demonstrated significant difference in ratings between the two groups, $U = 3123.50$, $Z = 3.46$, p (two-tailed) < .001.

Given the disparity in *n* between the two groups, another comparison was set up using the dummy coded Self-protective vs. Prosocial motives variable created in hypothesis 2.2. When Self-protective motives were present, mean ratings reached 7.73 (*SD* = 2.35, *n* = 33), whereas when Prosocial motives were present, mean ratings reached 6.21 (*SD* = 2.59, *n* = 52). Consistent with the hypothesis, a *t* test comparing ratings between the two groups yielded a statistically significant mean difference of 1.52 [0.44; 2.55], with significantly higher ratings in the self protective group than the prosocial group, *t* (83) = 2.73, bootstrapped $p = .007$, $d = .62$.

Hypothesis 2.4. It was expected that relative to challenges not involving self-discrepant autobiographical memories, challenges involving self-discrepant autobiographical memories would have higher ratings on the questions "*at the time, how much did it bother you that you disagreed with what the other person said or did*?" and

"*currently, how much does it still bother you that you disagreed with what the other person said or did?*"

Participants' responses to "*at the time, how much did it bother you that you disagreed with what the other person said or did?*" had an overall mean of 5.04 (*Mdn* = 5.00; *SD* = 3.30, range 1–10), acceptable skewness and kurtosis, and no values exceeding +/-3SD. The same Self-protective index computed in hypothesis 2.1 was also used here. When Self-protective motives were present, mean ratings were 6.24 (*SD* = 3.19; *n* = 38), whereas when Self-protective motives were absent, mean ratings were 4.85 (*SD* = 3.29; *n* = 250). Consistent with the hypothesis, a *t* test comparing the two groups was statistically significant, mean difference = 1.39 [0.29; 2.48], *t* (286) = 2.43, bootstrapped *p* = .014, *d* = .43.

Given the disparity in *n*, another comparison was conducted using the dummy coded Self-protective vs. Prosocial motives variable created in hypothesis 2.2. When Self-protective motives were present, ratings reached 6.24 (*SD* = 3.29, *n* = 33), whereas when Prosocial motives were present, ratings reached 4.23 (*SD* = 3.08, *n* = 53). Consistent with the hypothesis, a *t* test comparing ratings between the two groups yielded a statistically significant mean difference of 2.02 [0.60; 3.41], with significantly higher ratings in the Self protective group than the Prosocial group, *t* (84) = 2.88, bootstrapped *p* = .005, *d* = .64.

Participants were also asked, "*currently, how much does it still bother you that you disagreed with what the other person said or did?"* Relative to the question above, responses to this question had a lower overall mean of 3.12 (*Mdn* = 2.00; *SD* = 2.77), acceptable skewness and kurtosis, and no values exceeding +/-3SD. When Self-protective

motives were present, mean ratings reached 4.11 (*SD* = 3.20; *n* = 38), whereas when Self-protective motives were absent, mean ratings reached 2.96 (*SD* = 2.65; *n* = 250). Because the Levene's test showed significant unequal variances, the nonparametric Mann-Whitney U test was used, which, consistent with the hypothesis, showed significant differences between the two groups, *U* = 3847.50, *Z* = 2.08, *p* (two-tailed) = .037. Consistent with the hypothesis, using the dummy coded Self-protective vs. Prosocial motives variable revealed a similar pattern of findings, with higher distress ratings observed whenever Self-protective motives were present, Mann-Whitney *U* = 651.50, *Z* = 2.11, *p* (two-tailed) = .035.

Hypothesis 2.5. It was expected that relative to challenges not involving self-discrepant autobiographical memories, challenges involving self-discrepant autobiographical memories would have greater confidence in self-reported judgments of memorial occurrence and accuracy.

Participants' ratings of Belief in Occurrence had an overall mean of 6.95 (*Mdn* = 7.33; *SD* = 1.02, range 1–7.50) but skewness and kurtosis values were outside acceptable limits, with the distribution itself appearing severely left (negatively) skewed. When Self-protective motives were present, mean Belief in Occurrence ratings were 7.06 (*SD* = 1.10; *n* = 38), whereas when Self-protective motives were absent, mean Belief in Occurrence ratings were 6.93 (*SD* = 1.01; *n* = 253). Contrary to the hypothesis, the Mann-Whitney U test revealed no significant differences between the two groups, *U* = 4090.00, *Z* = 1.96, *p* (two-tailed) = .050.

Participants' ratings of Belief in Accuracy had an overall mean of 6.46 (*Mdn* = 7.00; *SD* = 0.98, range 1–7) but again, the skewness and kurtosis values were outside

acceptable limits, with the distribution appearing severely left skewed. When Self-protective motives were present, mean Belief in Accuracy ratings were 6.64 (*SD* = 0.59; *n* = 38), whereas when Self-protective motives were absent, mean Belief in Accuracy ratings were 6.43 (*SD* = 1.02; *n* = 253). Contrary to the hypothesis, the Mann-Whitney U test revealed no significant differences in Belief in Accuracy ratings between the two groups, *U* = 4514.50, *Z* = 0.673, *p* (two-tailed) = .503.

The contrast variable created to test hypothesis 2.2 was then used to ascertain whether those endorsing Self-protective motives would have higher ratings of Belief in Occurrence and Belief in Accuracy than those endorsing Prosocial motives. When Self-protective motives were present, ratings of Belief in Occurrence reached 7.02 (*SD* = 1.18, *n* = 33), whereas when Prosocial motives were present, ratings of Belief in Occurrence reached 6.78 (*SD* = 1.25, *n* = 53). Contrary to the hypothesis, using a Mann-Whitney U test, there were no significant between-group differences in ratings, *U* = 704.50, *Z* = 1.88, *p* (two-tailed) = .060.

When Self-protective motives were present, ratings of Belief in Accuracy reached 6.60 (*SD* = 0.62, *n* = 33), whereas when Prosocial motives were present, ratings of Belief in Accuracy reached 6.11 (*SD* = 1.25, *n* = 53). Contrary to the hypothesis, the Mann-Whitney U test did not reach statistical significance, *U* = 718.50, *Z* = 1.48, *p* (two-tailed) = .139.

Hypothesis 2.6. It was expected that relative to challenges not involving self-discrepant autobiographical memories, challenges involving self-discrepant autobiographical memories would have lower Centrality of Event Scale ratings. Participants' mean centrality ratings reached 2.15 (*Mdn* = 1.71, *SD* = 1.15, range 1–5).

Although skewness and kurtosis values were within acceptable limits and no values exceeded +/-3*SD*, the distribution of scores was right skewed. The Self-protective index developed above was again used here. When Self-protective motives were present, centrality ratings reached 2.26 (*SD* = 1.07; *n* = 38); when Self-protective motives were absent, centrality ratings reached 2.13 (*SD* = 1.16; *n* = 253). Contrary to the hypothesis, a Mann-Whitney U test did not reveal significant differences in centrality ratings between the two groups, *U* = 4313.50, *Z* = 1.03, *p* (two-tailed) = .306. When the dummy coded Self-protective vs. Prosocial motives variable was used, centrality ratings in the Self-protective category reached 2.4 (*SD* = 1.09; *n* = 33), whereas centrality ratings in the Prosocial motives category reached 2.63 (*SD* = 1.29; *n* = 53). Contrary to the hypothesis, the difference in Centrality of Event Scale scores between the two groups, however, was not statistically significant, Mann-Whitney *U* = 731.50, *Z* = 1.28, *p* (two-tailed) = .204.

Hypothesis 3.1. It was expected that individuals scoring higher on narcissism would be disproportionally represented among self-discrepant autobiographical memories. Refer to Appendix B for a diagram of the interpersonal circumplex.

To test this hypothesis, Interpersonal Adjective Scales octant scores were computed and checked for normality and homogeneity of variance. In light of the previously reported gender differences, such as the tendency for men to receive higher scores than women on the Assured-Dominant, Arrogant-Calculating, and Cold-hearted octants (Wiggins, 1995), as well as the significant gender differences observed between men and women in the current investigation, tests were run separately for men and women. Given the small *n*s, a series of gendered Mann Whitney U tests were set up with the Self-protective index, originally created to test hypothesis 2.1, as the independent

variable, and the narcissism-related octants as the dependent variables. Contrary to the hypothesis, none of the tests reached statistical significance (see Table 4), although, among women, Self-protective challenges (n = 13) tended to be accompanied by higher Arrogant Calculating (p = .029, one-tailed) and Cold-Hearted scores (p = .063, one-tailed) scores.

As per the Interpersonal Adjective Scales manual guidelines, a Dominance score and a Nurturance score were also computed. Given significant gender differences on Dominance, Mann Whitney U tests were conducted separately for men and women, with the Self-protective index used as the independent variable, and the Dominance and Nurturance scores used as dependent variables. Again, results did not reach statistical significance (see Table 4), but there was an indication from consulting the mean ranks that Dominance scores were higher whenever Self-protective motives were present.

Table 4

Self-Protective Motives and Interpersonal Adjective Scales Octants

	Self-protective index				U	Z	*p* (two-tailed)	*p* (one-tailed)
	Present		Absent					
Variables	*M (SD)*	*n*	*M (SD)*	*n*				
			Men (*n* = 152)					
PA	4.54 (1.28)	25	4.60 (1.36)	127	1541.50	–0.23	.821	.411
BC	3.50 (1.09)	25	3.44 (1.68)	127	1475.50	–0.56	.580	.290
DE	2.30 (1.02)	25	2.64 (1.41)	127	1414.50	–0.86	.392	.196
DOM	–0.19 (1.57)	25	–0.47 (1.58)	127	1424.00	–0.81	.420	.210
LOV	–0.42 (1.25)	25	–0.85 (1.65)	127	1293.00	–1.46	.145	.072
			Women (*n* = 135)					
PA	4.45 (1.46)	13	4.06 (1.35)	122	672.00	–0.90	.372	.186
BC	3.00 (1.46)	13	2.29 (1.27)	122	540.00	–1.89	.058	.029
DE	2.59 (1.48)	13	1.96 (1.23)	122	588.00	–1.54	.125	.063
DOM	–0.60 (1.80)	13	–0.99 (1.56)	122	667.00	–0.94	.353	.177
LOV	–1.27 (2.21)	13	–0.48 (1.76)	122	608.00	–1.38	.171	.085
			Overall (*N* = 287)					
PA	4.51 (1.33)	38	4.33 (1.38)	249	4415.50	–0.66	.510	.255
BC	3.33 (1.23)	38	2.88 (1.60)	249	3611.50	–2.35	.018	.009
DE	2.40 (1.18)	38	2.31 (1.36)	249	4282.00	–0.94	.347	.173
DOM	–0.33 (1.64)	38	–0.72 (1.59)	249	4004.00	–1.53	.128	.064
LOV	–0.71 (1.66)	38	–0.67 (1.71)	249	4701.00	–0.06	.951	.475

Note. PA = Assured-Dominant, BC = Arrogant-Calculating, DE = Cold-Hearted, DOM = Dominance, LOV = Nurturance.

Post hoc Analyses. As noted earlier, although subcategories J2 and J7 arguably contain the most explicit instances of self-discrepant autobiographical memories, the other subcategories within Self-focused motives may also contain some degree of self-discrepancy. For this reason, subcategories J1 through J7 were used to create a Self-focused motives index. If any of the J1 through J7 codes were present in a challenge, that challenge was coded as containing a Self-Focused Motive and given a value of 1. If none of the J1 through J7 codes were present, that challenge was coded as not containing a Self-focused motive and given a value of 0. This index was thereafter used to test post

hoc hypothesis 2.1 through 2.4.

Post hoc 2.1*:* A chi-square analysis revealed that challenges containing Self-Focused Motives included proportionally more negative emotional states than challenges not containing Self-Focused Motives, χ^2 (291) = 15.73, $p < .001$ (two-sided), $d = .48$.

Post hoc 2.2*:* When Self-focused motives were present, mean ratings on the question *"during the challenge, how important was it for you to convince the other person that you were right?"* reached 8.03 (*SD* = 2.32; *n* = 144) whereas when Self-Focused motives were absent, mean ratings on this same question reached 7.61 (*SD* = 2.46; *n* = 144). A *t* test comparing mean ratings, however, did not reach statistical significance, mean difference = 0.42 [–0.15; 0.95], *t* (286) = 1.48, bootstrapped $p = .141$, $d = .18$.

Post hoc 2.3**:** When Self-focused motives were present, mean ratings on the question *"during the challenge, how motivated were you to present a positive image of yourself?"* were 6.38 (*SD* = 2.87; *n* = 145), whereas when Self-focused motives were absent, mean ratings on this same question were 6.22 (*SD* = 2.85; *n* = 144). A *t* test comparing the two groups did not reach statistical significance, mean difference = 0.16 [–0.51; 0.82], *t* (287) = 0.488, bootstrapped $p = .626$, $d = .06$.

Post hoc 2.4: When Self-focused motives were present, mean ratings on the question *"At the time, how much did it bother you that you disagreed with what the other person said or did?"* were 5.68 (*SD* = 3.32; *n* = 144), whereas when Self-focused motives were absent, mean ratings were 4.39 (*SD* = 3.18; *n* = 144). A *t* test comparing the two groups was statistically significant, mean difference = 1.29 [0.55; 2.03], *t* (286) = 3.37, bootstrapped $p = .001$, $d = .40$.

When Self-Focused motives were present, mean ratings on the question *"Currently, how much does it still bother you that you disagreed with what the other person said or did?"* were 3.51 (*SD* = 2.91; *n* = 144), whereas when Self-focused motives were absent, mean ratings were 2.72 (*SD* = 2.54; *n* = 144). A Mann-Whitney U test revealed statistically significant differences in ratings, $U = 8903.50$, $Z = 2.40$, $p = .016$.

Study 1 Discussion

This investigation sought to explore why individuals challenge another's recollection of a past event that is occasionally discrepant with their self-concept, establish that challenges involving self-discrepant autobiographical memories are different from other challenges, and explore the role of narcissistic features. These findings are discussed in three separate sections below.

Why Do Individuals Challenge Another's Recollection of a Past Event?

Based on participants' own accounts as well as prior research, a coding frame was developed in order to identify and describe the motives offered for challenging another's recollection of a past event. Several memorial beliefs were given as reasons for challenging, including, among others, believing that the challenged event happened differently, believing that the challenged event did not occur, and endorsing beliefs regarding memory integrity that were at odds with the other's recollection. These memorial beliefs were primarily used to strengthen the validity of one's own version of events and/or undermine the validity of the other's version.

Of note, the Alternate attributions category was dropped in its entirety because it was not reliably coded. From a theoretical perspective and consistent with the source

monitoring framework (Johnson, Hashtroudi, & Lindsay, 1993), this category is of interest because it implies that, at the time of recalling a memory, individuals evaluate and make attributions about how the memory was acquired (i.e., temporal, spatial, and social context). For example, in the current investigation, attributions were made about the other's memory being influenced by or resulting from drug use (e.g., "I challenged because they smoke too much marijuana and now their memory is failing them") or mental health states (e.g., "I challenged because they have a mental illness that impairs their perception of reality and memory"). Unlike in Scoboria, Boucher, and Mazzoni (2015), however, Alternate attributions in this study were not applied to one's mental representation. Rather, Alternate attributions were used to challenge the other's recall. Furthermore, their use indicated that participants understood how the context in which a memory was acquired might influence its accuracy and/or interpretation. Because of this, Alternate attributions - Internal (D1) in the current investigation overlapped with General beliefs regarding memory integrity (A3), and in fact seven of the nine challenges given D1 codes also received A3 codes.

Aside from Alternate attributions, Scoboria, Boucher, and Mazzoni (2015) found evidence of motives similar to the ones outlined in this investigation when exploring reasons for reducing or relinquishing belief that a past event occurred to the self. Unlike Scoboria, Boucher, and Mazzoni (2015), however, the present study focused on the deliverers of the challenge rather than on the recipients, and underscored the use of memorial beliefs in providing social feedback and even challenging others' recollection.

Prosocial motives emerged as yet another reason for challenging others' recollection of a past event. These challenges tended to have a social focus in that they

centered primarily on the challenged party (rather than the challenger), with the explicit intention of being helpful to that challenged party. For example, some challenges were quasi-therapeutic in their emotional support for the challenged other, whereas others prioritized delivering or clarifying valuable information to the other person. Challenges included in this category tended to be collaborative in that challengers reported reaching out to the challenged party for help with piecing together a shared interpretation of the challenged event or reminiscing on an old memory. A minority of prosocial challenges involved a degree of deception, specifically lying about a past event in order to improve or rebuild a strained relationship. These challenges were categorized under the prosocial motives because of their partial or whole focus on the relationship rather than on the self, although the lying is arguably indirectly self-serving in making the challenger appear in a positive light and worthy of the relationship. Taken together, the emergence of prosocial motives in this investigation echoes Pillemer's work (2001) on the social function of autobiographical remembering and the related notion that the sharing of memories helps develop, maintain, and strengthen interpersonal relationships (also Alea & Bluck, 2003; Bluck, 2003), as reflected in other areas of autobiographical memory work including Fivush's (2012) work on parental reminiscing and Hirst and Echterhoff's (2012) social sharing of memories.

Another category that surfaced as a way of describing the dataset was self-in-relation-to-others, which encompassed challenges resulting from participants' internal models of themselves, the challenged party, and/or a third party. In the case of the self, participants reported challenging because doing so was consistent with their dispositional view of themselves. This notion that dispositional qualities may be related to motives for

challenging is consistent with the work of Cuc et al. (2006), as well as that of Hirst and Echterhoff (2012) in that a challenger's dominance, or at least their self-view as the type of person who is dominant, may be one reason why they decide to challenge. Alternatively, participants reported challenging because what was alleged to have occurred in the challenged event was not consistent with whom they perceived themselves to be. In the case of the challenged other, participants reported challenging because aspects of the others' disposition led them to question the other's credibility. In the case of the third party, participants reported challenging to preserve their dispositional view of this individual. Of interest, this Internal Models of self and others category has parallels in the dispositional and situational attributions studied within social psychology.

Finally, several self-focused motives also became apparent in coding the dataset. Challenges coded under this category were reportedly driven by a desire to consolidate, preserve, protect, and/or enhance a sense of "I" and "who I am." As expected, challenges involving the self-concept and arguably dissonance were also apparent among the coding subcategories (e.g., Defending the self, Correcting views of me). There was substantial overlap in coding these two subcategories, possibly because protecting one's positive self-concept (Defending the self) and making a good impression on others (Correcting views of self) are closely related and attempts to disentangle the two are somewhat artificial. For this reason, these two challenges were cumulatively referred to as involving Self-protective motives and were treated as a singular index. Beyond self-protection, self-enhancement has also been advanced as a motive (see General Introduction). This desire to enhance oneself was possibly evident in the Seeking recognition subcategory, which is reminiscent of the self-enhancing nature of intentionally borrowing memories in order to

make oneself look better (Brown et al., 2015). Overall, most motives under the self-focused category were reminiscent of Pillemer's self function of autobiographical remembering insofar as helping maintain and consolidate a sense of self.

Although directive motives did not materialize as a separate category, some arguably directive motives were evident in the subcategory Managing anticipated outcomes to the self, which involved challenges with a view to problem solving and guiding future behaviour (e.g., "I challenged because I wanted to go on that rollercoaster with my dad"). Another subcategory with a similarly directive undertone was Passing on knowledge/information (under Prosocial motives category), which may lead to solving problems and/or motivates change (e.g., "I challenged because I wanted to teach my brother responsible financial habits"; e.g., Biondolillo & Pillemer, 2015).

How Are Challenges Involving Self-Discrepant autobiographical memories Different from Other Challenges?

Consistent with the second objective, challenges stemming from self-discrepant autobiographical memories, as was arguably the case for challenges coded under Self protective motives, were different from other challenges in ways that appeared indicative of dissonance.

First, challenges involving Self-protective motives were more likely to include negative emotional states. Based on Aronson and others' position that self-referent negative emotions produce self-threat (Aronson, 1969, 1992; McFarland & Alvaro, 2000; Pinto-Gouveia & Matos, 2011; Sedikides & Green, 2009), which in turn gives rise to dissonance, I argue that the proportionally greater presence of negative emotional states among Self-protective challenges as opposed to other types of challenges is indicative of

dissonance among Self-protective-coded challenges. In further support of this relationship between negative emotions and dissonance, Alicke and Sedikides (2009) posited that experiencing negative affect preferentially activated self-protection rather than self-enhancement, possibly because it signals threat to the self-concept.

Second, challenges involving Self-protective motives had higher ratings on the question of importance to convince the other person they were right compared with challenges involving Prosocial motives. This particular question was asked to ascertain the extent to which the challenge was a reaction to or an attempt at protecting something important to the self. That importance ratings in this question were significantly higher among Self-protective challenges appears to suggest that there was greater dissonance among Self-protective challenges than among Prosocial challenges. This finding is aligned with Festinger's (1957) view that the magnitude of dissonance is contingent upon the importance, value, and consequence of the elements involved, as well as Aronson's revision of cognitive dissonance theory (1969, 1992).

Third, challenges involving Self-protective motives also had significantly higher ratings on the importance of presenting oneself in a positive light relative to both the rest of the challenges as well as relative to Prosocial motives. This finding is consistent with Aronson's view that dissonance is most powerful and most upsetting when actions contradict one's positive self-concept as moral, competent, stable, and predictable (Aronson, 1969, 1992). When participants respond to this importance question with higher ratings, it arguably suggests that the response from the other individual may have threatened participants' positive presentation and also possibly threatened their positive self-concept.

Fourth, challenges involving Self-protective motives were accompanied by higher distress at disagreeing with the challenged party both at the time the challenge occurred and at present. Arguably, the presence of distress or at least the acknowledgment that it is occurring is indicative of dissonance and further supports the argument that the Self-protective grouping was in fact composed of self-discrepant autobiographical memories.

Regarding the hypothesized appraisals of veridicality, neither Belief in Accuracy nor Belief in Occurrence showed differential ratings when Self-protective vs. nonSelf-protective challenges were involved. Consistent with the hypothesized direction of this prediction, however, challenges involving Self-protective motives did have marginally higher ratings of Belief in Occurrence than nonSelf-protective challenges, but this disappeared when values were contrasted against Prosocial challenges. It would therefore appear that appraisals of veridicality and in particular, expected lower Belief in Accuracy and lower Belief in Occurrence ratings, did not materialize when Self-protective challenges were present. On the surface, these results appear to contradict D'Argembeau and Van der Linden's (2008) findings regarding shame-inducing autobiographical memories receiving lower ratings of "I believe the event in my memory really occurred in the way I remember it and that I have not imagined or fabricated anything that did not occur" than pride-inducing autobiographical memories. The item those researchers used, however, has been criticized because it tends to cross-load on various constructs, including belief in occurrence, accuracy, and recollection (Scoboria, Talarico, & Pascal, 2015). In contrast to D'Argembeau and Van der Linden (2008), the current investigation appears better positioned to assess belief in occurrence and belief in accuracy because it uses validated and multiple-item measures shown to capture each construct independently

(Scoboria, Talarico, & Pascal, 2015).

Finally, challenges involving Self-protective motives did not have higher ratings of event centrality and presumably importance than challenges involving nonSelf-protective motives. Furthermore, there were no differences in importance ratings when Self-protective and prosocial motives were contrasted against each other.

Post hoc analysis with a broader Self-focused motives index revealed that challenges coded under this category included a higher number of negative emotions than expected. Such challenges, however, did not demonstrate higher ratings of importance in convincing the other or in presenting a positive self-image. These challenges were nonetheless accompanied by higher distress at disagreeing with the challenged other when the challenge originally occurred and at present. Based on the pattern of these findings, it appears that the Self-protective index more so than the Self-focused index isolated a subgroup of challenges that involved threat to the self-concept and dissonance, namely self-discrepant autobiographical memories.

The Role of Narcissistic Features

In limited support of my original prediction regarding the disproportionate presence of narcissistic features among self-discrepant autobiographical memories, challenges involving Self-protective motives tended to have significantly higher ratings on one aspect of narcissism among women, Arrogant-Calculating, but not other aspects, like Assured-Dominant or Cold-Hearted. Similar findings did not emerge among the male participants, meaning that men identifying Self-protective challenges did not endorse more narcissistic traits than men providing nonSelf-protective challenges. Although not statistically significant, there was a trend among those identifying Self-protective

challenges to possess higher dominance scores.

Limitations and Future Directions

These findings are discussed in the context of certain limitations. First, the act of challenging another's recollection for a past event arguably stems from a subjective evaluative process. This evaluative process is likely dynamic in nature insofar as it may continue to evolve even after the challenging has taken place. It is therefore essential to point out that the motives identified in this investigation are a *snapshot* of this evaluative process and may have evolved or changed in some way since the challenge originally occurred. In other words, the motives reported by participants could be a reconstruction of the motives that originally led to the challenge. The motives presently reported by participants are also limited by their insightfulness into themselves and their motives, their' ability to articulate their motives, their willingness to share their motives in writing, and the nature of the cue they were presented with.

Another related limitation draws from the notion of double hermeneutics (Giddens, 1987). In the case of this investigation, concepts like denial or defenses have percolated through popular culture and may have become a lens through which participants interpret their experiences. The fact that the present study finds similar themes among challenges does not mean that the themes that emerge are completely independent from these folk psychology concepts that may have originally informed participants' self-interpretations.

Third, it is suspected that the cue used (i.e., "challenge") pulled for situations with a more negative connotation, such as doubt and or suspicion regarding the other's recall. It is possible that a different, less adversarial cue, such as "describe how you intervened

when someone was relating a past memory", may pull for more helpful and supportive situations, which might in turn lead to a greater variety and frequency of prosocial motives emerging. Glazewski's (2016) findings using "aided" rather than "challenged" provided some preliminary support for the argument that more prosocial themes might emerge if the cue carries a less adversarial connotation.

The use of this particular cue and the examples offered as part of that cue may have also contributed to the higher prevalence of certain codes over others. For example, the most prevalent code belonged to challenges driven by accuracy (63%), a motive that was indirectly reflected in the instructions to participants (i.e., "told them something about their memory was wrong"). Although the cue itself may have impacted the prevalence of certain motives, the *emergence* of this and other motives, rather their prevalence, was of greater importance to this study because it indicated that such motives were part of participants' experience and response to incompatible autobiographical memories. It is possible that cues worded differently may have shaped the reporting of more motives of a certain type, such as self-protective motives, but the aim of this study was to cast a wider net into incompatible memories and allow self-discrepant autobiographical memories to emerge in a more natural manner as a subset of incompatible autobiographical memories.

Fourth, a major limitation was the sample size used in the Interpersonal Adjective Scales analysis. Because of my decision to cast a wider net into why individuals challenge others' recollection, only a subgroup of challenges manifested dissonance and self-protective motives. When this subgroup was analyzed by gender in relation to Interpersonal Adjective Scales octants, sample size decreased further, thus limiting

statistical power. In particular, the gendered findings with respect to the Arrogant-Calculating octant of the Interpersonal Adjective Scales need to be interpreted with caution given the limited number of women who had identified self-protective motives as driving their challenges. Such results will need to be replicated in other studies before they are considered reliable.

Furthermore, because this study did not use a clinical sample, even the few highly narcissistic individuals that might have shown the pattern expected (i.e., narcissistic traits were expected to be disproportionally represented among Self-protective challenges) may have been too few to make a substantial difference in findings. Future studies might selectively recruit more narcissistic individuals through a prescreening stage, and then ascertain whether those individuals respond differently than non-narcissistic others to another's recollection.

Finally, as a way of confirming the coding of negative emotional states, it would have been helpful to ask participants to fill out a state measure, like the Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), upon describing the challenge. This could have also been used to index distress and arguably dissonance processes.

CHAPTER 3

Introduction to Study 2

Study 2 sought to explore how individuals experience and respond to their own recollection of an autobiographical memory that may be dissonant with their self–concept, arguably because it violates their self–concept as moral, competent, and/or stable and predictable (Aronson, 1969, 1992).

Study 2 takes an intrapersonal approach to answering how individuals experience and respond to self–discrepant autobiographical memories. Consistent with Campbell and Sedikides' (1999) work on activating self–threat (see General Introduction for more detail), this intrapersonal approach was chosen in order to provoke greater self–threat and more self–discrepant based responding than was evident in Study 1. According to dissonance theory, the dissonance is greater when the individuals themselves are responsible for the inconsistency (Draycott & Dabbs, 1998; Rodriguez & Strange, 2015). In order to activate this more acute level of dissonance, Study 2 focused exclusively on autobiographical memories for perpetration of intimate partner violence (IPV). IPV is here defined as psychological/emotional, physical or sexual violence, or threat of physical or sexual violence (Saltzman, Fanslow, McMahon, & Shelley (2002). Perpetrating IPV arguably creates greater dissonance and poses greater threat to an individual's current self–concept because it involves socially unacceptable and frequently illegal acts. The heightened discrepancy between one's recollection and one's self–concept should activate cognitive dissonance, which should in turn be reduced through dissonance reducing mechanisms like derogating past selves, minimizing the perceived importance of the past IPV event, and so on.

Study 2 is situated within the context of IPV, as opposed to sexual offending or other types of transgressions, because (a) IPV is comparatively more prevalent than sexual offending, (b) the IPV literature has extensively documented the presence of dissonance–reducing appraisals among IPV perpetrators (Henning & Holdford, 2006; Smith, 2007; Wood, 2004), and (c) the role of shame and its related impact on the self–concept has received some empirical attention (Dutton, van Ginkel, & Starzomski, 1995; Lawrence & Taft, 2013). This is not meant to be a comprehensive or representative review of the IPV literature but rather is intended to show that perpetrating IPV, for some, does induce shame and pose a threat to the self-concept.

The first part of the literature review outlines how self–threat is tied to IPV among men. The second part of the review focuses on the kinds of appraisals that have been studied in the male-perpetrated IPV literature. A third section is dedicated to rates of IPV and appraisals in nonclinical samples of both men and women. This is followed by the presentation of the study hypotheses and design, before finally turning to the results and discussion.

IPV and Self–Threat

Within the IPV literature, four critical arguments help clarify the emergence of appraisals and their relationship to self–threat: (a) violence is socially undesirable and/or unacceptable (Dutton & Hemphill, 1992; Edin & Nilsson, 2014; Sugarman & Hotaling, 1997); (b) violating social standards by engaging in an act of violence evokes feeling of shame (Dutton & Hemphill, 1992); (c) shame is self–threatening (Dutton et al., 1995; Tangney, 1991); and (d) in order to escape from the experienced shame, the perpetrator reappraises the violent act (e.g., by diminishing its severity, intensity, or reducing belief

that it genuinely occurred) with the purpose of defending the self from it and maintaining a positive self–concept (Smith, 2007; Wood, 2004). These arguments are evaluated in greater detail in the sections that follow.

Violence is socially unacceptable. Violating moral and legal standards by committing a violent physical, sexual, or emotional act is often deemed unacceptable by the perpetrators of such acts (Dutton & Hemphill, 1992). Evidence for this argument comes from studies reporting high rates of socially desirable responding (Dutton & Hemphill, 1992; Sugarman & Hotaling, 1997) and significant underreporting of physical, verbal, and psychological abuse among domestic offenders (Dutton & Hemphill, 1992).

Interestingly, although not statistically significant, the trend in Dutton and Hemphill's (1992) results suggests that elevations in socially desirable responding were related to lower reporting of psychological and verbal aggression. In contrast, socially desirable responding scores showed a weaker relationship to reports of physical aggression. This pattern appears to suggest that IPV perpetrators lied the most (to themselves and others) about psychological abuse, and the least about physical abuse. One could speculate that, perhaps, given that physical abuse is more likely to leave physical evidence (e.g., doctor's visits, bruise marks, injuries), it is more difficult to deny or minimize its existence to the self and/or to the victim. On the other hand, verbal and psychological abuse may be less visible and therefore easier to deny or minimize. Extending this speculation further, it may be easier to reduce the belief that the violent event actually occurred and/or doubt the accuracy of its recall when physical evidence confirming its existence is absent. It is therefore plausible that appraisals of veridicality may be most used in instances of verbal and psychological abuse, and least used in

instances of physical abuse.

Engaging in violent acts evokes shame. The high rates of socially desirable responding (Dutton & Hemphill, 1992; Sugarman & Hotaling, 1997), in conjunction with the elevated rates of denial and minimization among IPV perpetrators (e.g., Henning & Holdford, 2006), have been used to infer that perpetrators experience shame about their use of violence (Dutton & Hemphill, 1992; Smith, 2007; Winters, Clift, & Dutton, 2004). There is some basis for this inference as IPV perpetrators do in fact report feeling ashamed of their violence (e.g., Wood, 2004). I caution here, however, that not everyone who perpetrates IPV experiences shame.

Why would the IPV act evoke shame, rather than guilt? Tangney (1991) defined guilt as a negative evaluation regarding a specific behaviour involving harm to someone or something. In contrast, she defined shame as a global, negative, and painful evaluation involving the whole self. Her research has helped connect the two emotions to different behavioural predispositions; guilt is presumably associated with reparative actions, whereas shame is associated with a motive to hide or escape. Despite these differences, the two emotions overlap greatly and may both be activated in a given situation. Activation of shame or guilt, however, is also contingent upon individual differences and how the situation is construed by that individual (Tangney, 1992).

It is proposed that IPV acts evoke shame because of distal factors, such as childhood shaming experiences and considerations, which conceivably shape the appraisal of adult acts of domestic violence in terms of shame. To elaborate, childhood shaming experiences (e.g., being physically punished or scolded in the presence of others; random physical punishment; treated in a way as to feel ashamed) predicted more

frequent physical and psychological abuse perpetration in adult male IPV perpetrators (Dutton et al., 1995). There was also a robust positive relationship between early shaming experiences and borderline personality organization[4] in male IPV perpetrators, suggesting that early shame substantially contributed to the emergence of a personality organization marked by intense and unstable relationships, splitting, devaluation, chronic feelings of emptiness, fears of abandonment, and intense anger (Dutton & Starzomski, 1993; Dutton et al., 1995).

Additional personality considerations emerge out of Tangney's work with the trait of *shame–proneness*. Across several samples (e.g., college students, at–risk youth, inmates), Stuewig, Tangney, Heigel, Harty, and McCloskey (2010) found that shame–prone individuals exhibited an elevated tendency to externalize blame, which in turn corresponded to elevations in both physical and verbal aggression. Given the fragility of narcissists' egos, their unstable self–concept, and their reaction to perceived slights (APA, 2013), it is not surprising to find that pathological aspects of narcissism (e.g., exploitativeness) are related to elevations in shame–proneness (Gramzow & Tangney, 1992).

Taken together, it appears that male IPV perpetrators may be more vulnerable to experiencing shame as adults due to either early shaming experiences and/or personality features that sensitize them to shame and potentially promote the formation of a shame–based sense of self. Because of this sensitivity, they are expected to appraise IPV acts as shameful (Tangney, 1992). Moreover, personality styles that are more vulnerable to shame and/or shame–proneness, like narcissism, should theoretically activate greater

[4] This personality style differs from borderline personality disorder in that it becomes salient only in intimate relationships (Dutton & Starzomski, 1993).

shame. Therefore, one could speculate that narcissists may be more vulnerable to experiencing more intense shame than the average individual (Gramzow & Tangney, 1992).

Shame is self–threatening. The argument that shame is self–threatening is based on the evaluation of oneself as globally and painfully bad (Paivio & Pascual–Leone, 2010; Tangney, 1991), which is an affront to the positive self–concept that most individuals hold (Sedikides & Green, 2004). Shame, therefore, threatens a very basic assumption about individuals: that individuals are generally good and moral individuals. Tangney (1991) does not appear to differentiate between adaptive and maladaptive shame (cf. Paivio & Pascual–Leone, 2010), nor is there a suggestion that shame might exist along a continuum (cf. Lawrence & Taft, 2013). Her conceptualization of shame as an inherently toxic emotion, however, may be because she casts guilt as the more adaptive emotion that is essentially more prosocial in motivating reparative action (Tangney, 1991). Regardless of the exact definition and distinctions, there is an underlying consensus that experiencing (maladaptive) shame is so painful and threatening to one's sense of self that the individual seeks to avoid it or defend oneself against it (Paivio & Pascual–Leone, 2010; Tangney, 1991), and one such defense is externalization of responsibility, or blame (Stuewig et al., 2010). Other defenses have also been proposed and will be reviewed in the next section.

Evidence regarding the threatening nature of shame comes primarily from clinical and theoretical work, which claims that anger and/or aggression are used to shut down or avoid shame ("shame–rage spiral"; "humiliated fury"; Paivio & Pascual–Leone, 2010; Stuewig et al., 2010). In addition, as the relationship between shame and externalized

blame implies (Stuewig et al., 2010), individuals feel the need to defend against or somehow protect themselves from shame.

As mentioned in Chapter 1, a handful of studies conducted within the autobiographical memory literature further bolster the notion that shame is threatening. In those studies, shame–inducing autobiographical memories tend to be protected against by being appraised as less important and less coherent to the self than pride–inducing memories (D'Argembeau & Van der Linden, 2008). There has also been some speculation that reducing the belief that a past autobiographical event occurred to the self may in fact be an appraisal mechanisms activated to reduce or avoid shame (Scoboria et al., 2015).

Thus, there are converging findings and theorizing across various literatures that shame generally constitutes a threat to the self presumably due to the painful implication that the self is bad. Appraisals are therefore activated to protect the self from this threat. In light of this research, shame is taken to index self–threat in Study 2.

Appraisals help protect against self–threat. Accumulating research has examined excuses (admission that the act was bad/wrong but perpetrator does not accept responsibility for it; e.g., "It was a bad thing to do, but it was not my fault"), justifications (admission of responsibility for the act, but denial that the act was wrong or inappropriate; e.g., "I did it, and I had a right to do it"), and denials (no recognition of responsibility or wrongfulness of the act), as ways of coping with the shamefulness of the IPV act that some individuals experience while simultaneously protecting the positivity of the current self–concept (Dutton, 1995; Dutton & Hemphill, 1992; Enosh & Buchbinder, 2005; Mullaney, 2007; Wood, 2004).

Most of this work has emerged out of in–depth interviews with men, which have identified several overarching appraisal–related themes. For example, a major theme from Smith's work (2007) was the use of minimization as well as attempts at normalizing the abusive behaviour by referring to it as "just" an argument. Other themes included perceiving the IPV episode as self–defense, the latter reminiscent of the "victim position" some perpetrators adopt to portray their violent act as reactive (Edin & Nilsson, 2014). The in–depth interviews also underscored themes of entitlement (to obedience and respect), patriarchal views (with regards to a perceived right to be in control), and superiority (devaluing and demeaning the partner). Based on these themes, Smith (2007) concluded, as many others have also done, that the perception of threat and the manner with which IPV perpetrators defend themselves is partly attributable to personality characteristics. Specifically, she argued that male perpetrators favoring minimization might show features consistent with a dysphoric/borderline personality style, whereas male perpetrators evincing superiority and entitlement might show features more consistent with a narcissistic/antisocial style (see Tweed & Dutton, 1998; Holtzworth–Munroe & Stuart, 1994, for more on this typology). It is however noted that research attempting to link personality disorders or typologies to IPV has yielded inconsistent results (Ali, Dhingra, & McGarry, 2016).

Goodrum, Umberson, and Anderson (2001) used in–depth interviews to compare 33 male IPV perpetrators against 25 matched nonviolent men (i.e., no history of domestic violence). The male IPV perpetrators tended to deny their role in the violent acts by denying that they were batterers because they had "only abused one woman in their life" or "had never really beaten her." Another portion of those interviewed blamed their

partner for inciting the offense and at times accused the partner of controlling or playing mind games. In addition, they tended to deny or avoid the victim's physical and emotional injuries. According to Goodrum and colleagues (2001), avoidance may be more characteristic of the dysphoric/borderline type, whereas denial may be more characteristic of the narcissistic/antisocial type, who is traditionally the less relationship-oriented of the two types. Comparatively, nonviolent men had more regard for both their partner and their relationship. These men further evinced greater empathy towards their partners and viewed them as a positive influence. This comparison is informative in its implication that differences in self–threat may be crucial to understanding the nature and utility of appraisals. Although there might very well be other differences between the two groups, like childhood adversity, personality, substance abuse, or anger management problems (Dutton, 1995; Dutton & Starzomski, 1993), it is worth also considering that the differences in self–threat as experienced by the two groups may be part of the reason why one group prioritizes appraisals to protect the self whereas the other group prioritizes affiliation and relationship preservation.

Wood (2004) grouped appraisals into three categories: justifications, dissociations, and regrets. Justifications involved taking responsibility but explaining that the violence was appropriate, necessary, or within the perpetrator's right. Themes included under this category were "she disrespected me as a man," "man has a right to control/discipline his woman," and "she provoked me." Dissociations reflected ways in which male perpetrators attempted to dissociate or disconnect the self from what they perceived "real abusers" to be. For example, participants explained that they were not the abusive types because, unlike "real abusers," they did not enjoy hurting women. In

contrast to prior research, which has categorized childhood trauma, anger issues, or drug/alcohol abuse as "excuses," or classified statements such as "my violence was limited" as minimizations, Wood (2004) argues that these appraisals may be better understood from the perpetrator's perspective as attempts at separating the self from the violent act. That IPV perpetrators would be motivated to seek this kind of separation or distance from their violent act appears suggestive of their motivation to self–protect from the threatening implication that they might be a "real abuser." The final category includes regrets, which were replete with statements of shame and guilt (e.g., "I was ashamed. I felt less than a man when I did those things" (Wood, 2004). The relevance of Wood's work goes beyond its grouping of appraisals; the categories she proposes incorporate a traditional view of masculinity as dominance, which was tellingly endorsed by all participants. Once again then, personality appears crucial to understanding why appraisals emerge (e.g., in response to challenges to masculine ideals) and the form they take (e.g., dissociations or justifications).

A few studies have more explicitly connected appraisals to autobiographical memory through the use of autobiographical narratives. In a study by Baumeister et al. (1990), undergraduate participants (gender composition not reported) were asked to each provide a narrative of a time in which they had been angered (victim narratives) and an account of a time in which they had angered someone else (perpetrator narratives). Not surprisingly, perpetrators more so than victims were more likely to deny any lasting negative consequences stemming from their acts. Perpetrator narratives hinted at greater closure by referencing "happy endings" or apologies, and also portrayed their acts as isolated incidents, whereas victim narratives referred to long–lasting negative

consequences and an ongoing sense of loss. Regarding motives, perpetrators viewed their actions as motivated by impulsivity, uncontrollability, or caused by external or mitigating causes; some even portrayed the victim as partly responsible for their actions. The current study is relevant not only because of its use of autobiographical narratives to essentially replicate the various appraisals emerging out of the IPV literature, but also because it crucially emphasizes how different appraisals (e.g., casting the event as an isolated incident with no ties to the present in order to protect oneself) may be embedded in autobiographical narratives.

Dating Violence and Marital Violence

As stated earlier, the IPV literature reviewed here is not intended to reflect the full breadth of the IPV literature. Rather, the literature selected is drawn upon because IPV events arguably create conditions under which dissonance-reducing appraisals may emerge. Despite this stated purpose, it nonetheless is important to caution that the literature presented thus far has drawn primarily from work on marital violence and may not necessarily extend or apply to dating violence or to female perpetrators.

Some similarities have been noted between dating and marital violence, including the notion of a continuity of violence that starts during the dating period and extends to the marriage period (Shorey, Cornelius, & Bell, 2008). Other have argued, however, that while dating violence may be a precursor to marital violence in some cases, there are also other cases in which this continuity hypothesis is not supported (Follingstad, Bradley, Laughlin, & Burke, 1999). Other similarities noted between the types of aggression include, among others, poor communication skills, alcohol use, and jealousy (Follingstad, Wright, Lloyd, & Sebastian, 1999). There are also differences between the two types of

violence, including the greater economic investment and emotional attachment in marital relationships, and the relative lack of experience and awareness of what may constitute violence in dating relationships (Shorey et al., 2008).

IPV Rates

Similar to differences between dating and marital samples, rates of IPV often differ based on the type of sample (e.g., community samples of adults versus university student samples). Because the current study recruited participants from both the community and a university setting, rates from both types of studies are reviewed below.

Community samples. Lifetime prevalence rates of perpetrating psychological/emotional abuse are understood to be higher than lifetime prevalence rates for perpetrating physical violence. Rates vary between 74% (Straus & Sweet, 1992) and 75% in men (Stets, 1990), and between 75% (Straus & Sweet, 1992) and 80% in women (Stets, 1990). Other studies that have examined couples have found prevalence rates of psychological/emotional abuse closer to 97% (Taft et al., 2006).

In terms of physical violence, Desmarais and colleagues (Desmarais, Reeves, Nicholls, Telford, & Fiebert, 2012) provided pooled prevalence estimates for studies that used large population samples. They found that in the past year, male-perpetrated physical violence reached 18.3%, whereas female-perpetrated physical violence reached 25.8%. These numbers were comparable to the college and university samples (i.e., 20.9% and 27.6% respectively). The prevalence rates in studies using clinical samples, however, were predictably higher, with past-year prevalence rates of 34.1% for male-perpetrated physical violence and 49.5% for female-perpetrated physical violence.

Desmarais and colleagues also provided lifetime pooled estimates of physical

violence. They found that male-perpetrated physical violence in college and university samples reached 18.4%, whereas female-perpetrated physical violence reached 30.0%. The prevalence rates in studies using clinical samples were again predictably higher, with lifetime prevalence rate of 41.6% for male-perpetrated physical violence and 42.6% for female-perpetrated physical violence.

Undergraduate samples. Regarding emotional and psychological abuse, male–on–female lifetime perpetration, as measured by the Revised Conflict Tactics Scale, was reported by 82% of male undergraduates (Hines & Saudino, 2003). For minor forms of psychological dating violence, lifetime prevalence rates for male–on–female are around 85.7% (e.g., insulting or swearing at a partner); whereas for more severe forms, prevalence rates are around 30.2% (e.g., destroying something belonging to the partner; Cerone, Beach, & Arias, 2005. Based on the past 12 months, prevalence rates for male–on–female perpetration show that 59% of male undergraduate students report minor psychological/emotional violence (as rated on the Revised Conflict Tactics Scale) and 22% report more severe psychological/emotional violence (Scott & Straus, 2007).

Regarding physical violence, lifetime prevalence rate for male–on–female perpetration was reported by 29% of male undergraduates (Hines & Saudino, 2003). For minor forms of physical violence (e.g., pushing a partner), the lifetime perpetration rate ranges between 26% (Hines & Saudino, 2003) to 36% (Cercone et al., 2005;), whereas for more severe forms (e.g., beating up a partner), lifetime perpetration rate ranges between 7% (Cercone et al., 2005; Scott & Straus, 2007)) and 10.5% (Hines & Saudino, 2003), and 11% (Scott & Strauss, 2007).

Regarding sexual violence, male–on–female lifetime perpetration was reported by

15% (Scott & Straus, 2007) to 29% of male undergraduates (Hines & Saudino, 2003). Minor forms of male-on-female sexual coercion were reported by 15% of male undergraduates (Scott & Straus, 2007), whereas more severe forms of sexual coercion were reported by 7% of male undergraduates (Scott & Straus, 2007).

Regarding emotional or psychological abuse, lifetime perpetration of female–on–male was reported by 86% of female undergraduates (Hines & Saudino, 2003). For minor forms of emotional and psychological abuse, lifetime prevalence rates are around 89.3%; for more severe forms of emotional and psychological abuse, rates are around 26.7% (Cercone et al., 2005). Based on the past 12 months, prevalence rates for female–on–male perpetration show that 53% of female undergraduate students report minor psychological/emotional violence and 23% report more severe psychological/emotional violence (Scott & Straus, 2007).

Regarding physical violence, lifetime female-on-male perpetration was reported by 13.5% of female undergraduates (Hines & Saudino, 2003). For minor forms of physical violence, the lifetime perpetration rate ranges from 28% (Scott & Strauss, 2007), to 34% (Hines & Saudino, 2003) to 38.7% (Cercone et al., 2005), whereas for more severe forms, lifetime perpetration rate ranges between 7.5% (Hines & Saudino, 2003) to 15.1% (Cercone et al., 2005). Prevalence rates for the past 12 months were 28% of female undergraduates admitting to a minor physical IPV and 15% admitting to a more severe physical IPV (Scott & Straus, 2007).

Regarding sexual violence, female–on–male perpetration was reported by 13.5% of female undergraduates (Hines & Saudino, 2003). Comparable values were obtained by Scott and Straus (2007), who found a 20% prevalence rate for minor sexual coercive acts

and 11% prevalence rate for more severe sexual coercive acts.

Cumulatively, these prevalence rates suggest that male and female perpetration rates for psychological/emotional and physical IPV are relatively comparable, although the context in which the violence occurred, the motive for it, and the severity of injury are not accounted for by these data (Miller, 2011). In fact, even though a number of studies in this area have found women to be significantly more likely to perpetrate physical IPV than men (Archer, 2000; Desmarais et al., 2012; Miller, 2011), men are significantly more likely to have injured their partners (Archer, 2000). Regarding sexual coercion, the perpetration rates demonstrate that men are significantly more likely to engage in this act than women.

IPV Appraisals

Denial, minimization, and similar appraisals have received extensive empirical attention among clinical/forensic samples. Much more limited attention has been dedicated to these appraisals among nonclinical/community/student samples.

Miller (2011) argued that failure to admit to perpetration of IPV or identify oneself as a victim of IPV may be influenced by appraisals, such as denial or minimization. In support of this hypothesis, she found that the majority of undergraduate participants in her sample (a) failed to initially self–identify as perpetrators or victims despite later endorsing having committed and/or experienced IPV on a rating scale that labels specific acts as such (i.e., the Revised Conflict Tactics Scale; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), and (b) minimized abuse by perceiving it as acceptable, effective, appropriate, or necessary, which was significantly linked to abuse perpetration in both men and women. In other words, male and female undergraduate

perpetrators endorsed attitudes that minimized acts of IPV. The extent to which such attitudes were endorsed, however, differed between men and women. In fact, men were more likely than women to hold beliefs that abuse was an effective, acceptable, appropriate, and necessary way of resolving conflict in dating relationships.

Scott and Straus (2007) also examined appraisals in an undergraduate sample. They created scale items to assess blaming one's partner for relationship difficulties (e.g., "My partner exaggerates negative things I have done in our relationship)", minimizing/avoiding relationship difficulties ("After my partner and I fight, I try not to think about it"), and denial of personal contribution to relationship problems ("I have never said or done anything that hurt my partner."). After controlling for social desirability, the authors found that male and female perpetrators of psychological and physical violence tended to blame their partners for relationship difficulties. They also found that male perpetrators of physical assault and sexual coercion tended to minimize relationship difficulties. In terms of gender differences and consistent with Miller's (2011) findings, Scott and Straus showed that male students were more likely to deny the seriousness of problems in relationships than female students. Although this study is informative regarding the use of appraisal among undergraduate students, these appraisals refer to relationship difficulties in general rather than IPV.

Bryant and Spencer (2003) used the vignette-based Domestic Violence Blame Scale to assess attributions of blame to victims of domestic violence among a sample of university students. They found that male students were more likely to blame the victim for causing the domestic incident than female students. They also found that students who had perpetrated violence in dating relationships were more likely to blame the victim for

the domestic incident. The Bryant and Spencer study inches closer towards assessing IPV-related appraisals (i.e., victim-blaming) among undergraduates, but participants' reactions and ensuing appraisals may be limited by the vignette-based nature of the scale. Even though there are numerous studies that have explored IPV-related appraisals among domestic offenders and/or treatment-seekers, few studies to date have delved into IPV-related appraisals in undergraduate/community samples.

Objectives and Hypotheses

Building on the work of Campbell and Sedikides (1999), the primary objective of this study is to demonstrate that increasing self–threat heightens cognitive dissonance and appraisal use. To test this hypothesis, it was necessary to induce different levels of self–threat, and then observe how this manipulation impacted appraisals. Variations in self–threat were accomplished by exposing each participant to two counterbalanced conditions. In the high self–threat condition, participants were instructed to describe a past event of them engaging in IPV. In the low self–threat condition, they were instructed to describe a past event of them engaging in a kind, supportive, and/or understanding act in a relationship context. This manipulation was modeled after the shame– and pride–inducing conditions of D'Argembeau and Van der Linden (2008).

Three appraisals of importance were measured: (a) perceived closure from event, (b) perceived importance of event, and (c) derogation of past selves. It was expected that the high self–threat condition would activate (a) greater perceived closure, (b) lower perceived importance scores and (c) greater derogation of past selves, relative to the low self–threat condition.

Regarding appraisals of veridicality (i.e., accuracy and occurrence), consistent

with Scoboria et al. (2014), it was expected that the high self–threat condition would evoke more reduced or relinquished belief that the event genuinely occurred to the self. In other words, when participants were instructed to report on the likelihood that they personally experienced a past IPV event (for example), they were expected to produce lower ratings in the high self–threat condition relative to the low self–threat condition. If the results were consistent with this hypothesis, it would suggest that participants might be attempting to go beyond putting the threatening event at arms' length to denying its occurrence. It also is possible that participants demonstrate lower accuracy ratings under conditions of high self–threat. This latter hypothesis was inspired by D'Argembeau and Van der Linden (2008), who found higher ratings of "I believe the event in my memory really occurred in the way I remember it and that I have not imagined or fabricated anything that did not occur" in pride–inducing relative to shame–inducing memories, suggesting that the more threatening memories may also be defended against by reducing belief in occurrence and/or accuracy. Otherwise stated, when participants were instructed to report on whether they had any doubts about the accuracy of the past event (for example), they were expected to produce lower ratings in the high self–threat condition relative to the low self–threat condition. If confirmed, the results would imply that participants have more doubts about the extent to which their current recollection corresponds to what actually happened when cued to recall a past threatening event.

The second objective of Study 2 was to investigate how personality variables affected the intensity of appraisals. Of particular interest here were individuals scoring high on the Assured–Dominant scale of the Interpersonal Adjective Scales and those scoring high on shame–proneness. Both these personality styles were expected to be

accompanied by (a) greater perceived closure, (b) lower perceived importance, (c) greater derogation of past selves, (d) lower belief in occurrence scores, and (e) lower belief in accuracy scores.

Study 2 hypotheses are summarized as follows:

1. Relative to exposure to the low self–threat condition, exposure to the high self–threat condition would produce: (a) lower scores on perceived importance, (b) greater derogation of past selves, (c) higher scores on perceived closure, (d) lower scores of belief in occurrence, and (e) lower scores of belief in accuracy.
2. In the high self–threat condition, higher shame–proneness would predict (a) lower scores on perceived importance, (b) greater derogation of past selves, (c) higher scores on perceived closure, (d) lower scores of belief in occurrence, and (e) lower scores of belief in accuracy.
3. In the high self–threat condition, higher Assured–Dominance would predict (a) higher scores on perceived closure, (b) lower scores on perceived importance, (c) greater derogation of past selves, (d) lower scores of belief in occurrence, and (e) lower scores of belief in accuracy.

Study 2 Method

Participants

The first wave of recruitment was carried out online through the Psychology Participant Pool at the University of Windsor and yielded 60 male and 59 female participants. A second wave of recruitment was carried out online through Amazon's Mechanical Turk, and yielded 62 men and 58 women. The dataset originally consisted of 239 participants (122 men, 117 women). Of those, 12 were excluded because they had

not provided a high–threat account, three were excluded because their account suggested that they had been victims rather than perpetrators, and three were excluded because they had responded appropriately to the situation (e.g., asked to leave the situation, there was a discussion but no shouting or yelling was involved). Of note, 16 of the 18 excluded cases involved participants from the student sample.

The remaining 221 participants passed both validity checks; a simple math question and a spelling question. Their median time–to–completion was 48 minutes and 2 seconds, with the fastest taking close to 15 minutes to complete the survey. No cases were excluded based on time–to–completion because of a slow and steady increase in times that was suggestive of normal within–subject variance.

The overall sample was composed of 111 men and 110 women, and had a mean age of 27.22 (*Mdn* = 25, *SD* = 8.59, range 18– 62). The majority of participants self–identified as White (*n* = 161, 72.9%), followed by Multiracial (*n* = 23, 10.0%), Black (*n* = 14, 6.3%), East Asian (*n* = 9, 4.1%), South Asian (*n* = 5, 2.3%), Hispanic/Latino (*n* = 4, 1.8%), Middle Eastern (*n* = 4, 1.8%), and Pacific Islander (*n* = 1, 0.5%). The highest level of education completed was Professional degree (*n* = 1, 5%) or Doctorate degree (*n* = 1, 5%), followed by Master's degree (*n* = 16, 7.2%), Bachelor's degree (*n* = 60, 27.1%), Community college (*n* = 33, 14.9%) and high school or equivalent (*n* = 110, 49.8%).

In order to protect participant anonymity, geographic location tracking was deactivated on Fluid surveys. Prior studies using Mechanical Turk in Dr. Scoboria's lab, however, have indicated that the majority of participants come from North America. Participants whose Mechanical Turk account was affiliated with India were excluded

from this study because of the large proportion of these individuals not comprehending similar tasks in prior projects conducted in Dr. Scoboria's lab.

When comparing students to MTurk participants, statistically significant differences emerged in age, Mann–Whitney U $z = –11.65$, $p < .001$, with students being on average about 10 years younger than MTurk participants.

Measures (see Appendix G for a complete list of measures for Study 2)

Positive and Negative Affect Schedule (PANAS: Watson, Clark, & Tellegen, 1988). The PANAS is a 20–item self–report instrument widely used to assess two dominant dimensions of emotional experience: Positive Affect and Negative Affect. The 20 items reflect 10 positive and 10 negative mood states. Participants were instructed to rate the extent to which they experience each mood state on a 5–point Likert–type scale (1 = *very slightly or not at all*; 5 = *very much*). Researchers can choose the temporal reference they want participants to use. For the present study, the instructions directed participants to report the extent to which they felt a certain way "right now (that is, at the present moment)" (Watson et al., 1988). A Positive Affect score was computed by averaging across the 10 items that make up this dimension, with higher scores indicative of higher levels of positive affect. Similarly, a Negative Affect score was computed by averaging across the 10 items that make up this dimension, with higher scores indicative of higher levels of negative affect. Both the Positive Affect and Negative Affect scales have demonstrated high internal consistency, alpha = .89 and alpha = .85 respectively (Watson et al., 1988). In this study, the alpha for the Positive Affect scale ranged from .89 (high self-threat) to .91 (low self-threat). The alpha for the Negative Affect scale ranged from .91 (high self-threat) to .93 (low self-threat).

In the present investigation, the PANAS was used as a manipulation check administered after a target event had been described. Specifically, the high self–threat condition was expected to produce a higher Negative Affect score and a higher "ashamed" score than the low self–threat condition. Conversely, the low self–threat condition was expected to produce a higher Positive Affect score and a higher "proud" score than the high self–threat condition.

Centrality of Event Scale (Berntsen & Rubin, 2006). The Centrality of Event Scale is a 20–item self–report instrument that measures the extent to which a past event is appraised as central to a person's life story and identity. Participants are asked to rate on a 5–point Likert scale (1 = *totally disagree*; 5 = *totally agree*) statements about the subjective impact of a past event (e.g., "This event has colored the way I think and feel about other experiences"). The Total Centrality score is obtained by averaging across all 20 items, with higher scores indicative of greater importance attributions. The scale has demonstrated good internal consistency, alpha = .94. In the current study, the Centrality of Event Scale was used to gauge the degree to which participants appraise the target event as important to their identity and life story. Under both high self-threat and low self-threat condition, the alpha for the 20 Centrality of Event Scale items was .95.

Measures of belief in occurrence and belief in accuracy. The three items used in Scoboria, Jackson, et al., (2014) were also used here to assess belief in the occurrence of an event (i.e., autobiographical belief that the event truly occurred to the self). Two of the times are scored on a 7–point scale, whereas the third item is scored on an 8–point scale. The three items are averaged (Scoboria, Jackson, et al., 2014), with higher scores indicative of stronger autobiographical belief. In the current study, the Cronbach's alpha

for belief in occurrence was between .77 (high self-threat) and .78 (low self-threat).

Belief in accuracy, which broadly refers to attributions made about the degree to which the contents of a current mental representation correspond to the details that in fact occurred in the past, were captured by using three items from Scoboria et al. (2014). These items assess confidence in the accuracy of the memory, proportion of memory that is accurate, and doubts as to the accuracy of the memory, on 7–point scales. The items are averaged, and higher scores are indicative of greater confidence in the accuracy of one's own memory. In the current study, the Cronbach's alpha for belief in accuracy ranged between .81 (high self-threat) and .85 (low self-threat). Measures of belief in accuracy and belief in occurrence were used to capture participant's appraisals of the veridicality of target events.

Personal Attributes Rating Scale (McFarland & Alvaro, 2000). This scale consists of 27 personal characteristics compiled by McFarland and Alvaro (2000; see the General Introduction for a brief review of this study). Participants are asked to rate their current and pre–event selves on each personal characteristic on a 9–point Likert type scale (1 = *not at all*; 9 = *extremely*). Items are averaged separately for the current and pre–event selves to obtain two overall scores, with higher scores indicative of more positive ratings of personal characteristics. McFarland and Alvaro reported good internal consistency for the two overall indices (alpha = .91 for current self; alpha = .89 for pre–event self). This measure was used to index the extent to which participants devalue their past selves. Derogation of past selves emerges when the average pre–event self score is lower than the average current self score. In the current study, alpha was .96 (current self and pre-event self) under the high self-threat condition and .95 (current self) and .94 (pre-

event self) respectively under the low self-threat condition.

Sense of Closure Scale (**Beike, Markman, & Karadogan, 2009**). This is a 6–item self–report scale that measures perceived psychological distance or closure. Participants are asked to respond to each scale item on a 7–point Likert type scale (1 = *not at all*; 7 = *very much*). The six items, including two that are reverse-scored, are averaged to produce a single score of perceived closure. Higher scores are indicative of greater perceived psychological closure. The total score has shown adequate internal consistency (alpha = .88; Beike, Adams, & Naufel, 2010.). The scale was used to index participants' perceived psychological closure regarding the target event. In the current study, alpha was .87 in the high self-threat condition and .74 in the low self-threat condition. After exploring inter-item correlations, it became apparent that item 6 ("I just wish I could figure out why this event happened") did not relate in predictable ways to the other scale items. If excluded, alpha values climbed to .90 in the high self-threat condition and .77 in the low self-threat condition. Because the nature of meaning making can be conceptually distinct from perceived psychological distance and closure (although there is likely overlap), item 6 was dropped, and the mean of Sense of Closure was calculated based on the five items that held better together. This 5-item Sense of Closure was referenced throughout this manuscript as Sense of Closure Scale-5 to differentiate it from the original scale that the participants completed.

Test of Self–Conscious Affect–3 (Tangney, Dearing, Wagner, & Gramzow, 2000). The Test of Self-Conscious Affect–3 is a well–known and widely used self–report instrument that uses brief scenarios to capture dispositional tendencies towards experiencing shame and/or guilt. It consists of 15 scenarios (10 negative, 5 positive), with

each scenario being followed by a set of statements rated on a 5–point Likert type scale (1 = *not likely*; 5 = *very likely*). A shorter 11–scenario version of the Test of Self-Conscious Affect–3 has also been validated and was used for this study.

Participants are instructed to read each scenario and imagine themselves in it. They are thereafter asked to indicate how likely they are to act in each of the ways described. For example, one of the scenarios is: "You are driving down the road, and you hit a small animal." Participants are then asked to rate the following statements: "You would think the animal shouldn't have been on the road" (scored as externalization); "You would think: I'm terrible" (scored as shame); "You'd feel: "Well, it was an accident" (scored as detached); "You'd feel bad you hadn't been more alert driving down on the road (scored as guilt)." Answers are summed across scenarios to yield indices of Shame–Proneness, Guilt–Proneness, Externalization of blame, and Detachment/Unconcern. The Test of Self-Conscious Affect–3 subscales have demonstrated acceptable internal consistency (.71 for the shame subscale in Kivisto, Kivisto, Moore, & Rhatigan, 2011; .73 for the shame subscale in the current study). Only trait shame–proneness was used in the current investigation, with higher scores indicative of higher levels of shame.

Physical Aggression and Psychological Aggression Scales (Kwong, Bartholomew, Henderson, & Trinke, 2003). The Physical Aggression Scale is a 14–item self–report instrument modeled after the widely used Revised Conflict Tactics Scales. Participants are asked to report whether each of the 14 items have happened to them, and if so, to indicate its frequency in the past 12 months (1 = *1 incident*, 2 = *2 incidents*, 3 = *3–5 incidents*, 4 = *6–10 incidents*, 5 = *11–20 incidents*, 6 = *more than 20*

incidents). According to Kwong et al. (2003), the scale can be scored dichotomously in terms of ever perpetrated violence and currently perpetrating violence. It is also possible to compute two continuous scores; one is a variety score computed by summing the total number of different categories endorsed. For example, if a participant reported slapping their partner three times and pushing them five times, they would receive a variety score of two because they endorsed two different acts. The other is a weighted frequency score based on summing the 1–through–6 ratings across all items. The alpha for the Physical Aggression Scale was .94. Authors suggest that variety scores tend to perform better statistically than weighted frequency scores.

The Psychological Aggression Scale is a 13–item self–report instrument based on the Revised Conflict Tactics Scale (Straus et al., 1996) as well as the Psychological Maltreatment of Women Inventory (Tolman, 1999). The instructions and scoring methodology for this scale are analogous to the ones used for the Physical Aggression Scale. The alpha for this Psychological Aggression Scale was .89. Both scales were used in this study to assess self–reported rates of physical and psychological aggression.

Interpersonal Adjective Scales (Wiggins, 1995). The Interpersonal Adjective Scales is a self–report measure that assesses interpersonal traits based on the circumplex model of personality, which posits that interpersonal traits can be located along two principal orthogonal dimensions: Dominance (which ranges from submissive to dominant and controlling) and Nurturance (which ranges from cold and hostile to warm and friendly). Participants are instructed to rate a list of 64 adjectives (e.g., “timid”) on an 8–point Likert scale (1 = *extremely unlikely*; 8 = *extremely likely*) based on how accurately each adjective describes them. There are eight adjectives that contribute to each of the

eight octants: Assured–Dominant, Arrogant–Calculating, Cold–Hearted, Aloof–Introverted, Unassured–Submissive, Unassuming–Ingenuous, Warm–Agreeable, and Gregarious–Extraverted. Octant scores for each participant are computed by averaging across the eight adjective scores contributing to that particular octant. A Dominance score and a Nurturance score can also be computed for each participant based on their octant *z* scores and weights specified in the scoring manual (Wiggins, 1995). The Interpersonal Adjective Scales has demonstrated adequate psychometric properties (Wiggins, 1995). In the present study, the Interpersonal Adjective Scales and in particular the Assured–Dominant, Arrogant–Calculating, and Cold–Hearted octants were used to gauge narcissistic traits (Miller et al., 2012; Wiggins, 1995). A diagram of the interpersonal circumplex is included in Appendix B to aid in interpretation.

Procedure

Participant pool recruitment. Participants were screened for eligibility through the Psychology Participant Pool website by answering the following question: "With respect to your current or past partner, have you ever threatened, attempted, or completed any of the following: shouted, insulted, name–called, threw something at them, pushed or shoved them, slapped or grabbed them, kicked, punched, or insisted on sex or forced sex" (see Appendix F). This wording was chosen to reflect the definition of IPV as psychological/emotional abuse, physical or sexual violence, or threat of physical or sexual violence used by Saltzman, Fanslow, McMahon, and Shelley (2002). Those responding affirmatively to this screener were deemed eligible for participation. Only eligible participants saw the study advertisement on the Participant Pool website. Those interested in the study description clicked on an URL link, which directed them to the

Letter of Information on the Fluid Surveys site. Participants provided consent by continuing on in the online survey.

Amazon Mechanical Turk recruitment. The study was advertised on Amazon Mechanical Turk, which invited individuals who could think of a specific time in which they acted in a kind, supportive, and/or understanding way towards a past or present romantic partner or date AND a specific time in which they engaged in any of the following with a past or present romantic partner or date: shouted, insulted, name–called, threw something at them, pushed or shoved them, slapped or grabbed them, kicked, punched, or insisted on sex or forced sex. Those interested accessed a link that directed them to Turkitron, a tool that screens Turk workers for eligibility for studies and directs eligible workers to survey links. For the current study, eligible workers were directed to the landing page of the survey and presented with the Letter of Information. They provided consent by continuing on in the online survey. Workers deemed ineligible were informed that they do not meet the criteria for the study and instructed to return to Turk to remove themselves from the task.

Procedure following initial recruitment. Eligible participants were randomly and automatically assigned to start with either the low self–threat condition or the high self–threat condition. The order of presentation of the two conditions was counterbalanced. In the high self–threat condition, participants were instructed to "Select a time that you expressed, enacted, perpetrated, inflicted or threatened to do any of the following to your partner/girlfriend/boyfriend/wife/husband/date: shouted, insulted, name–called, threw something at them, pushed or shoved them, slapped or grabbed them, kicked, punched, or insisted on sex or forced sex. Please describe in as much detail as

you can this event, including (a) what you said/did, (b) why you did what you did, (c) how you felt at the time, and (d) how you saw yourself at the time." In the low self–threat condition, participants were instructed to "Select a time that you acted in a kind, supportive, and/or understanding way in the context of an intimate relationship (e.g., surprised the other with a gift or a dinner, purchased flowers). Please describe in as much detail as you can this event, including: (a) what you said/did, (b) why you did what you did, (c) how you felt at the time, and (d) how you saw yourself at the time."

Although modeled after the pride– and shame–inducing conditions of D'Argembeau and Van der Linden (2008), the prompts did not specifically reference "shame" because doing so might prime shame and potentially trigger defensive responses. Participants were instead instructed to select a past event involving IPV–related behaviours. To make the prompts as parallel as possible, "pride" was also not explicitly referenced; it was instead replaced with instructions that asked about supportive and kind behaviours within a relationship context. The wording of the low self–threat prompt was inspired by Ross and Wilson (2002), who refer to a "kind act" when directing participants to write about an event that made them feel "quite proud (e.g., a special achievement or kind act)" (p. 798). Asking for specific details to be included in the narratives, as well as the wording itself, were taken from Wood (2004).

After describing the first target event (either the low self–threat or the high self–threat event), participants were instructed to complete the PANAS as a manipulation check, followed by the Centrality of Event Scale, measures of belief in accuracy, and belief in occurrence, the Personal Attributes Rating Scale, and the Sense of Closure Scale-5 (see Appendix H for the exact order of measures). At this point in the survey,

participants were presented with the prompt for the second target event, after which they again completed the PANAS, Centrality of Event Scale, measures of Belief in Accuracy, and Belief in Occurrence, the Personal Attributes Rating Scale, the Sense of Closure Scale-5, and demographic information. Participants completed a positive mood induction task right after the high self–threat event. The mood induction consisted of asking participants to describe a positive memory that they believe truly occurred. After being exposed to both conditions, participants completed the Test of Self-Conscious Affect–3, the Psychological and Physical Aggression Scales, and the Interpersonal Adjective Scales.

At the end of the survey, participants from the Participant Pool provided their name and UWindsor email, which was used to award them course credit. At the end of the survey, participants from Amazon's Mechanical Turk provided their Mechanical Turk ID in order to receive compensation ($4.00). After completing this page, participants were thanked for their participation and provided with a list of resources in case the disclosure surrounding the high self–threat event was upsetting or distressful for them.

This investigation was set up as a repeated measures design because neither D'Argembeau and Van der Linden (2008), nor the few other studies that have examined positively and negatively–valenced memories (e.g., Berntsen, Rubin, & Siegler, 2011) or self–consistent and self–discrepant memories (e.g., Mutluturk & Tekcan, 2015) within–subjects have reported any carryover effects. In addition, the survey was administered online because this method allows for larger sample sizes to be collected more efficiently. Furthermore, prior research has indicated that rates of disclosure regarding sensitive topics are higher when online methods are used (Joinson, 2001).

Although anonymity could not be guaranteed in this investigation, the online method did offer visual anonymity, meaning that the source of the information could not be *physically* detected. This component of online data collection has been proposed as an important consideration in facilitating self–disclosure (Joinson, 2001). Given that this investigation asked for instances of IPV to be described in some detail, it was especially important for participants to feel comfortable enough to disclose acts that may not only be shame–inducing for them but also potentially illegal. This level of disclosure could arguably be better achieved through online rather than in–person methods. There are certainly costs to implementing an online survey, including a limited ability to monitor participants' environment and/or level of engagement. In light of the relatively sensitive nature of this investigation, however, the advantages appeared to outweigh the disadvantages of conducting the survey online. In addition, manipulation checks were embedded throughout the survey (e.g., simple math questions) and survey completion times were checked to ensure completion quality.

In order to ensure as sincere a disclosure of IPV acts as possible, participants were assured of the confidentiality of their results at the informed consent stage, and notified that there was no legal or ethical duty to report on any admission to violent act(s) perpetrated within an intimate partner or dating relationship. Further, they were cautioned against including any identifying information in their narratives. Participants' responses were safeguarded at every stage of research, from data collection to its use, dissemination, and retention. The security of the data itself was ensured through several security protocols, including storing the data on secure servers and back–up drives located in Canada. Although student participant name and email was initially requested to

ensure compensation for participation, this information was discarded as soon as the quality of completion was evaluated and the compensation was awarded. Turk participants were largely (but not completely) anonymous to the researchers. The only partly identifying information collected were participants' Turk IDs (i.e., a string of letters and numbers), which cannot be tracked to real names/identities by researchers using the Turk service.

At the consent stage and throughout the online survey, participants had the right to refuse to answer questions or withdraw from the study. Moreover, the principal investigator's email was made available in case participants wish to contact her with questions regarding disclosure (or otherwise). At the post–study stage, participants were provided with a list of resources in case the disclosure surrounding the high self–threat event was upsetting or distressful for them. Importantly, past research suggests that participating in dating violence research, despite some mild negative reaction reported by the more frequent male perpetrators of psychological and physical IPV, is beneficial to both male and female perpetrators, who report gaining greater insight into themselves and their relationships (Shorey, Cornelius, & Bell, 2011). This study received clearance from the University of Windsor Research Ethics Board.

Study 2 Results

Data Analysis Plan

All analyses were conducting using SPSS 21. Prior to any statistical analyses, data were checked against corresponding statistical assumptions; only violations and corrections are reported in the appropriate sections below. Whenever possible, bootstrapping with 5000 samples was used to calculate statistics of interest. In light of the

relatively novel and exploratory nature of this study, the alpha level was set at .05.

Missing Data

A missing values analysis revealed a relatively low amount of missing data (i.e., 2.7% or lower per variable) and the items missing appeared to be distributed randomly (Little's MCAR test $\chi^2_{(49569)} = 113.32$, $p = 1.00$). Mean Belief in Occurrence, Mean Belief in Accuracy, and Mean Centrality of Event Scale were computed with the data available; no replacement values were used because these are average–based rather than summative indices. In the case of summative indices (i.e., PANAS, Test of Self-Conscious Affect–3), missing values were replaced using the series mean (i.e., the mean of that variable across the dataset). This was deemed appropriate given the low amount of data missing (Tabachnik & Fidell, 2001). As a check, analyses were run using either series means or pairwise deletion; the resulting statistics were very similar but the distribution of scores in the lower end was superior when using the series mean method. This method of replacing missing data was therefore retained and used in the analyses presented below.

Missing values on the Interpersonal Adjective Scales were handled based on the recommendations from the manual (Wiggins, 1995), which are based on normed data. Specifically, a participant profile was deemed valid if at least six of the eight octant adjectives were present and fewer than five items were missing in the entire Interpersonal Adjective Scales. Based on these criteria, two additional cases were excluded from the total of 221 whenever Interpersonal Adjective Scales variables were used in the analyses.

A series of Mann-Whitney *U* tests comparing the cases retained ($n = 221$) versus the cases excluded from the analyses ($n = 20$) revealed some predictable significant differences only in the high self-threat condition, including Positive and Negative Affect

Scale – Negative Affect, Personal Attributes Rating Scale, Belief in Accuracy, Belief in Occurrence, Psychological Aggression, and Physical Aggression. Analyses were conducted both with and without the excluded cases and the finding remained comparable. Only the analyses with the excluded cases are presented below.

Manipulation Check

To check whether the high self–threat and low self–threat manipulation was successful, the PANAS administered immediately after the high self–threat condition was compared to the PANAS administered immediately after the low self–threat condition. As expected, the high self–threat condition produced significantly higher PANAS–Negative Affect scores than the low self–threat condition, mean difference = 5.45 [95% CI 4.46, 6.43], t (220) = 11.17, bootstrapped $p < .001$. The high self–threat condition also produced lower PANAS–Positive Affect scores than the low self–threat condition, mean difference = –4.35 [–5.32, –3.40], t (220) = –8.80, bootstrapped $p < .001$.

As an additional manipulation check, the PANAS–shame and PANAS–pride items were also consulted across the two conditions. PANAS–shame was significantly higher in the high self–threat condition relative to the low self–threat condition, mean difference = 0.95 [0.78; 1.11], t (220) = 11.48, bootstrapped $p < .001$. In contrast, PANAS–pride was significantly lower in the high self–threat condition relative to the low self–threat condition, mean difference = –1.07 [–1.26; –0.89], t (220) = –11.42, bootstrapped $p < .001$.

To check whether gender and/or participant recruitment source was related to PANAS ratings, a mixed–design ANOVA [condition (within–factor, high self–threat or low self–threat) x gender (between–factor, male or female) x recruitment source

(between–factor, student or MTurk)] was conducted separately for PANAS–Negative Affect and PANAS–Positive Affect. For PANAS–Negative Affect, there was a significant main effect for recruitment source (higher ratings in undergraduates, $F = 4.50$, $p = .035$), and a significant main effect for condition (higher ratings in the high self–threat condition, $F = 121.64$, $p < .001$). For PANAS–Positive Affect, there was a significant condition x recruitment source interaction ($F = 6.87$, $p = .009$) and a significant main effect for condition (higher ratings in low self–threat condition, $F = 75.11$, $p < .001$). Overall, scores differed in predictable ways across the high self–threat and low self–threat conditions. PANAS–Negative Affect scores were significantly higher among undergraduates across conditions. PANAS–Positive Affect scores were significantly higher among MTurk participants in the low self–threat condition; PANAS–Positive Affect ratings were comparable across participants in the high self–threat condition.

Order Effects

A series of *t*-tests were run to ascertain whether the order in which the conditions were presented had any effect on the variables of interest. The only significant mean differences appeared on the PANAS – Negative Affect (high self-threat condition) and on the Centrality of Event Scale (high self-threat condition). Regarding the PANAS – Negative Affect, there were significantly higher negative affect ratings in the aftermath of the high self-threat condition ($t = –2.69$, $df = 219$, $p = 0.12$) when the high self-threat condition was presented second ($M = 21.53$, $SD = 9.51$) than when it was presented first ($M = 18.44$, $SD = 7.48$). Regarding the Centrality of Event Scale, there were significantly higher scores in the aftermath of the high self-threat condition ($t = –2.29$, $df = 219$, $p =$

.024) when the high self-threat condition was presented second (M = 2.70, SD = 0.94) than when it was presented first (M = 2.41, SD = 0.93).

Age

Age was investigated as to whether it should be used as a control variable in the analyses presented below. Mean age was 23.51 (SD = 6.35, Mdn = 22) at the time of the high self–threat event and 24.31 (SD = 7.35, Mdn = 22) at the time of the low self–threat. A paired t test revealed that high self–threat events were dated as originating from an objectively earlier time period than low self–threat events, t (217) = –2.60, p bootstrapped = .013. Neither age at the time of the high self–threat event nor age at the time of the low self–threat event were significantly related to any appraisals (i.e., Sense of Closure-5, Personal Attributes Rating Scale), suggesting limited need for age to be controlled.

A series of Pearson r correlations were used to explore whether current participant age was related to any key variables. Older age was significantly related to higher centrality ratings (Centrality of Event Scale) in the high self–threat condition (r = .21, p = .002), lower externalization scores (r = –.15, p = .026), and lower psychological aggression frequency (r = –.15, p = .027) and variety (r = –.14, p = .037) scores.

Rates of Physical and Psychological Aggression

Table 1 presents rates of self–reported engagement in physical and psychological aggression for men and women. Approximately 30.6% of men and 46.4% of women reported engaging in at least one kind of physical aggression. Approximately 91.9% of men and 97.3% of women reported engaging in at least one kind of psychological aggression. Relative to men, women reported engaging in a greater variety of physical and psychological aggression. Women also reported significantly greater weighted

frequency of engaging in either form of aggression.

Table 1

Rates of Self–Reported Physical and Psychological Aggression by Sex

	Men (n = 111)		Women (n = 110)		
	M (SD)	*Mdn*	*M (SD)*	*Mdn*	*t/z*
Physical aggression variety score	1.07 (2.52)	0.00	1.55 (2.71)	0.00	–2.33*[a]
Physical aggression weighted frequency score	16.65 (8.41)	14.00	17.37 (8.67)	14.00	–2.26*[a]
Psychological aggression variety score	4.85 (2.85)	5.00	5.79 (2.78)	6.00	–2.49*
Psychological aggression weighted frequency score	24.82 (11.05)	22.00	28.73 (12.75)	26.00	–2.44*

Note. [a] Mann–Whitney U test was used instead of a *t* test to check for gender differences.
*$p < .05$

Please refer to Table 2 for rates of endorsement of at least one incident of physical and psychological aggression. The Excel-based program ESCI was used to estimate confidence intervals around the proportion difference between men and women (Cumming, 2012). Women reported threatening to hit, hurt, or throw something at a partner significantly more so than men. Women also reported pushing or shoving, slapping, and punching a partner significantly more so than men. Men reported twisting a partner's arm or hair and grabbing a partner or holding a partner down in anger significantly more so than women.

Table 2

Rates of Endorsement Across Scale Items

Psychological Aggression Items	*Men (n = 111)*		*Women (n = 110)*		*Prop. difference [95% CI]*
	n	*%*	*n*	*%*	
1. Shouted or yelled at a partner	88	79.28	95	86.36	.07 [–.03; .17]
2. Ignored, shut out, or given a partner the silent treatment	85	76.58	91	82.73	.06 [–.05; .17]
3. Called a partner hurtful names	69	62.16	80	73.39	.11 [–.01; .23]
4. Criticized or put down a partner in front of others	37	33.64	47	42.73	.09 [–.04; .22]
5. Limited a partner's contact with others such as family or friends	18	16.22	27	24.55	.08 [–.02; .19]
6. Controlled a partner's behavior or activities in any way	37	33.33	37	33.64	.00 [–.12; .13]
7. Acted jealous or suspicious of a partner's other relationships	57	51.35	69	62.73	.11 [–.02; .24]
8. Insulted or sworn at a partner	79	71.82	89	80.91	.09 [–.02; .20]
9. Intentionally destroyed something belonging to a partner	16	14.41	21	19.27	.05 [–.05; .15]
10. Threatened to hit, hurt, or throw something at a partner	11	9.91	30	27.27	.17 [.07; .27]
11. Thrown, smashed, hit, or kicked something in a partner's presence	26	23.64	31	28.18	.05 [–.07; .16]
12. Threatened to hurt a partner if they left the relationship	5	4.63	5	4.55	.00 [–.06; .06]
13. Threatened to hurt yourself if a partner left the relationship	10	9.09	15	13.64	.05 [–.04; .13]
Physical Aggression Items	*n*	*%*	*n*	*%*	
1. Pushed or shoved a partner	20	18.02	37	33.64	.16 [.04; .27]
2. Slapped a partner	11	10.00	27	24.55	.15 [.05; .24]
3. Thrown something at a partner that could hurt	8	7.27	16	14.55	.07 [–.01; .16]
4. Twisted a partner's arm or hair	12	10.81	4	3.64	–.07 [–.15; –.002]
5. Used a knife or gun on a partner	2	1.82	3	2.73	.01 [–.04; .06]
6. Punched a partner	9	8.11	20	18.18	.10 [.01; .19]
7. Hit a partner with something that could hurt	10	9.01	12	11.01	.02 [–.06; .10]
8. Choked a partner	4	3.64	8	7.34	.04 [–.03; .11]
9. Slammed a partner against a wall	8	7.34	7	6.36	–.01 [–.08; .06]
10. Beaten up a partner	2	1.83	6	5.50	.04 [–.02; .10]
11. Grabbed a partner or held a partner down in anger	17	15.45	5	4.55	–.11 [–.19; –.03]
12. Burned or scalded a partner on purpose	5	4.50	5	4.59	.001 [–.06; .06]
13. Kicked a partner	7	6.36	10	9.09	.03 [–.05; .10]
14. Scratched or bitten a partner during a conflict	4	3.60	9	8.18	.05 [–.02; .12]

Note. Percentages are based on available data. *N* ranged from 108 to 111 for men, and 109 to 110 for women.

A series of Gender x Recruitment source ANOVAs were conducted to ascertain whether recruitment source, gender, or a combination of the two was relevant to the

physical and psychological aggression rates reported. For psychological aggression variety scores, there was a significant main effect for gender ($F = 6.48$, $p = .012$) and a significant main effect for recruitment source ($F = 7.10$, $p = .008$), but no interaction ($F = 2.34$, $p = .127$). For psychological aggression weighted frequency scores, there was a significant main effect for gender ($F = 6.22$, $p = .013$) and a significant main effect for recruitment source ($F = 12.69$, $p < .001$), but no interaction ($F = 2.41$, $p = .122$). As was the case for physical aggression scores, the results suggest that women reported engaging in significantly greater variety and significantly higher weighted frequency of psychological aggression than men. The findings also suggest students reported more psychological aggression than MTurk participants.

Given the positively skewed distribution of the two aggression scores, gender and recruitment source differences were examined through Mann–Whitney U tests. Women reported higher rates of engaging in physical aggression ($z_{\text{variety score}} = –2.33$, $p = .020$; $z_{\text{weighted frequency score}} = –2.26$, $p = .023$). Rates of engaging in physical aggression did not differ significantly between recruitment sources ($z_{\text{variety score}} = –0.81$, $p = .420$; $z_{\text{weighted frequency score}} = –0.76$, $p = 0.447$).

Descriptives

Descriptive statistics for the variables of interest are presented in Table 3 for the overall sample, as well as men and women separately. A series of *t* tests or Mann–Whitney U tests (in case the Levene's test was significant) were run to check whether ratings differed significantly between men and women. Significant gender differences were observed on the Centrality of Event Scale (low self–threat condition), Sense of Closure Scale-5 (high self-threat and low self-threat conditions), Test of Self-Conscious

Affect–3 shame–proneness, Assured–Dominant, Arrogant–Calculating, and Cold–Hearted.

Given the recruitment source differences reported earlier, descriptive statistics are also presented by recruitment source (see Table 3). Relative to students, MTurk participants gave significantly higher ratings on Centrality (both high self–threat and low self–threat conditions), higher ratings on Personal Attributes Rating Scale (low self–threat condition), and lower ratings on the Assured–Dominant octant.

Table 3

Descriptives of Variables of Interest

	Overall (N = 221)				*Men (n = 111)*	*Women (n = 110)*	*Gender diff.*	*MTurk (n = 118)*	*Student (n = 103)*	*Source diff.*
	M (SD)	*Mdn*	*Skew*	*Kurt.*	*M (SD)*	*M (SD)*	*t/z*	*M (SD)*	*M (SD)*	*t/z*
High self threat										
Centrality of Event Scale	2.56 (0.94)	2.50	0.41	–0.37	2.52 (0.95)	2.60 (0.94)	–0.63	2.76 (1.00)	2.32 (0.81)	–3.41**[a]
Personal Attributes Rating Scale (current – pre-IPV)	1.58 (1.70)	1.22	0.91	0.67	1.62 (1.68)	1.55 (1.73)	0.31	1.73 (1.81)	1.42 (1.55)	–0.80[a]
Current-self	7.01 (1.14)	7.11								
Pre-IPV self	5.42 (1.71)	5.52								
Sense of Closure Scale-5	5.03 (1.65)	5.40	-0.59	-0.59	5.30 (1.48)	4.75 (1.77)	–2.27*[a]	5.11 (1.62)	4.93 (1.69)	0.78
Belief in Occurrence	7.02 (0.73)	7.33	–2.91	8.36	7.02 (0.71)	7.02 (0.75)	0.04	6.97 (0.81)	7.08 (0.62)	–0.28[a]
Belief in Accuracy	6.21 (1.05)	6.67	–1.43	1.55	6.16 (1.05)	6.27 (1.05)	–0.75	6.18 (1.12)	6.25 (0.97)	–0.47
Low self threat										
Centrality of Event Scale	2.54 (0.91)	2.47	0.53	–0.21	2.70 (0.98)	2.38 (0.82)	–2.38*[a]	2.68 (0.98)	2.39 (0.82)	–2.23*[a]
Personal Attributes Rating Scale (current – pre-IPV)	0.19 (0.93)	0.04	1.13	5.54	0.31 (1.03)	0.07 (0.79)	1.95	0.33 (0.99)	0.02 (0.82)	2.57*
Current-self	6.98 (1.13)	7.00								
Pre-IPV self	6.79 (1.16)	6.74								
Sense of Closure Scale-5	4.90 (1.43)	5.00	-0.50	-0.20	5.12 (1.27)	4.68 (1.56)	–2.09*[a]	4.98 (1.37)	4.80 (1.50)	0.94
Belief in Occurrence	7.03 (0.81)	7.33	–3.19	9.93	7.01 (0.82)	7.05 (0.81)	–0.35	6.97 (0.88)	7.10 (0.72)	–0.97[a]
Belief in Accuracy	6.45 (0.92)	7.00	–2.12	4.46	6.41 (0.93)	6.49 (0.91)	–0.67	6.43 (0.97)	6.48 (0.85)	–0.45
Test of Self-Conscious Affect - shame	34.90 (7.21)	36.00	–0.47	0.11	33.33 (6.84)	36.49 (7.26)	–3.33*	34.63 (7.17)	35.21 (7.29)	–0.60
Assured Dominant	4.48 (1.32)	4.50	0.07	–0.22	4.72 (1.25)	4.25 (1.34)	2.68*	4.28 (1.39)	4.71 (1.19)	–2.46*
Arrogant Calculating	3.24 (1.46)	3.00	0.51	–0.27	3.60 (1.43)	2.87 (1.39)	3.89**	3.13 (1.48)	3.36 (1.42)	–1.18
Cold Hearted	2.59 (2.13)	2.13	1.13	0.97	2.88 (1.51)	2.30 (1.23)	3.09*[a]	2.72 (1.46)	2.45 (1.34)	1.38

Note. [a] Because Levene's test was statistically significant, the non–parametric Mann–Whitney U was run instead.
*$p < .05$. **$p < .001$.

Main Analyses

Hypothesis 1: Relative to exposure to the low self–threat condition, exposure to the high self–threat condition was expected to produce: (a) lower Centrality of Event Scale scores, (b) higher Personal Attributes Rating Scale scores, (c) higher Sense of Closure Scale scores, (d) lower Belief in Occurrence scores, and (e) lower Belief in Accuracy scores.

Prior to running the paired *t* tests, difference scores were checked for gender differences and recruitment source differences. The only significant finding involved male and female difference scores on Centrality. Because of the gender differences in Sense of Closure Scale-5 scores, results for men and women are also presented separately. Finally, given the leptokurtic distribution of Belief in Accuracy and Belief in Occurrence, difference scores for only these two variables were subjected to a nonparametric paired test, Wilcoxon Signed Ranks.

As expected, when exposed to the high self–threat condition (i.e., recalling perpetration of an IPV event), participants reported greater derogation of past selves, $t(220) = 11.58$, $p < .001$, $d = 1.01$, large effect, and lower Belief in Accuracy, $z\ (220) = –3.96$, $p < .001$, $d = –0.24$, small effect, than when exposed to the low self–threat condition (see Table 4). Contrary to the hypothesis, women but not men reported higher Centrality scores when exposed to the high self–threat condition than when exposed to the low self–threat condition, $t\ (109) = 2.34$, $p = .022$, $d = –0.19$, small effect. Also contrary to the hypothesis, the high self-threat condition was not accompanied by lower Belief in Occurrence or higher Sense of Closure Scale-5 scores.

Table 4

Appraisal Comparisons Across Conditions

	High self–threat	*Low self–threat*	*Bootstrapped*			*Bootstrapped*	
	M (SD)	*M (SD)*	*M diff.*	*95% CI*	*t/z*	*p*	*Cohen's d*
Centrality of Event Scale	2.56 (0.94)	2.54 (0.91)	0.01	[–0.12, 0.15]	0.17	.865	0.02
Men	2.52 (0.95)	2.70 (0.98)	–0.19	[–0.40, 0.02]	–1.72	.090	–0.19
Women	2.60 (0.94)	2.38 (0.82)	0.21	[0.04, 0.39]	2.34*	.022	0.25
Personal Attributes Rating Scale	1.58 (1.70)	0.19 (0.93)	1.40	[1.16, 1.64]	11.58**	< .001	1.01
Sense of Closure Scale-5	5.03 (1.65)	4.90 (1.43)	0.13	[–0.13, 0.38]	0.98	.327	0.08
Men	5.30 (1.48)	5.12 (1.27)	0.19	[–0.16; 0.54]	1.06	.285	0.13
Women	4.75 (1.77)	4.68 (1.56)	0.07	[–0.29; 0.45]	0.36	.716	0.04
Belief in Occurrence	7.02 (0.73)	7.03 (0.81)	–0.01	[–0.11, 0.09]	–1.00[a]	.319	0.00
Belief in Accuracy	6.21 (1.05)	6.45 (0.92)	–0.24	[–0.37, –0.11]	–3.96**[a]	< .001	–0.24

Note. [a] Mann–Whitney U z scores. Bootstrapping was only used when conducting parametric statistics.
*$p < .05$. **$p < .001$.

Hypothesis 2: In the high self–threat condition, higher shame–proneness was expected to predict (a) lower Centrality of Event Scale scores, (b) higher Personal Attributes Rating Scale scores, (c) higher Sense of Closure scores, (d) lower Belief in Occurrence scores, and (e) lower Belief in Accuracy scores.

Results of this analysis are presented in Table 5. Because of significant gender difference on Test of Self-Conscious Affect-3, Shame-Proneness (see Table 3), correlations were conducted separately for men and women. Given the leptokurtic distribution of Belief in Occurrence and Belief in Accuracy, Spearman *rho* correlations were calculated whenever these two variables were involved.

Within the high self–threat condition, only Personal Attributes Rating Scale scores were significantly related to Shame-Proneness among women ($r = .19$, $p = .042$). In other words, as expected, under conditions of high self–threat, higher Shame–Proneness predicted a significant small–to–medium increase in derogation of pre-IPV-self among women, but not men. This derogation was primarily attributable to significantly lower pre–IPV Personal Attributes Rating Scale scores ($r = –.25$, $p = .008$, small–to–medium effect). Contrary to the hypothesis, Shame-Proneness was not related to Centrality, Sense of Closure, Belief in Accuracy or Belief in Occurrence in either gender.

Table 5

Correlations between Test of Self-Conscious Affect–3 and Appraisals

High self–threat condition scores	*Shame–proneness*	*Externalization*
Men (*n* = 111)		
Centrality of Event Scale	.08	
Personal Attributes Rating Scale (current – pre-IPV)	–.01	
Current-self	–.13	
Pre-IPV self	–.08	
Sense of Closure Scale-5	–.14	
Belief in Occurrence	.09[a]	
Belief in Accuracy	–.06[a]	
Women (*n* = 110)		
Centrality of Event Scale	–.04	
Personal Attributes Rating Scale (current – pre-IPV)	.19*	
Current-self	–.10	
Pre-IPV self	–.25**	
Sense of Closure Scale-5	–.07	
Belief in Occurrence	.05[a]	
Belief in Accuracy	.04[a]	
Overall (*N* = 221)		
Centrality of Event Scale	.03	.13*
Personal Attributes Rating Scale (current – pre-IPV)	.09	–.18**
Current-self	–.11	–.15*
Pre-IPV self	–.16*	.08
Sense of Closure Scale-5	–.14	.03
Belief in Occurrence	.07[a]	–.34**[a]
Belief in Accuracy	.01[a]	–.19**[a]

Note. [a] Spearman rho correlations. All other correlations are Pearson *r*.
*$p < .05$. **$p < .001$.

Given that Tangney and colleagues (Stuewig et al., 2010) found that shame–prone individuals tended to externalize blame, exploratory analyses were also conducted with the Test of Self-Conscious Affect–3 Externalization subscale. Because there were no significant gender differences on Externalization ($t = 1.45$, $p = .149$), male and female scores were analyzed together. Contrary to expectation, higher Externalization scores

were accompanied by higher Centrality scores (r = .13, p = .05; small effect) and lower Personal Attributes Rating Scale scores (r = –.18, p = .007; small effect). Consistent with the shame-proneness prediction, however, Externalization scores were accompanied by lower Belief in Occurrence scores (r_s = –.34, medium effect, p < .001) and lower Belief in Accuracy scores (r_s = –.19, p = .004, small effect).

Hypothesis 3: In the high self–threat condition, higher Assured–Dominance was expected to predict (a) lower Centrality of Event Scale scores, (b) higher Personal Attributes Rating Scale scores, (c) higher Sense of Closure scores, (d) lower Belief in Occurrence scores, and (e) lower Belief in Accuracy scores. Refer to Appendix B for a diagram of the interpersonal circumplex to aid with the interpretation.

Three octant scores corresponding to aspects of narcissism were consulted for these analyses: Assured–Dominant, Arrogant–Calculating, and Cold–Hearted (Miller et al., 2012). Because of significant gender differences on Interpersonal Adjective Scales octant scores, and previous research suggesting that men score significantly higher than women on Assured-Dominant, Arrogant-Calculating, and Cold-hearted (Wiggins, 1995), correlations were run separately for men and women (see Table 6). Given the positive skew in the distribution of Cold–Hearted scores, all correlations involving the Cold–Hearted octant were calculated using Spearman *rho*. All the other correlations were calculated using Pearson *r*.

Contrary to the hypothesis, among men with higher Assured–Dominant scores, there were higher Centrality scores (r = .29, p = .002, medium effect) and higher Belief in Accuracy scores (r_s = .23, p = .018, small–to–medium effect). Consistent with the hypothesis, among women with higher Assured–Dominant scores there were lower

Personal Attributes Rating Scale scores (r = –.21, p = .026, small–to–medium effect). Follow–up exploratory analyses revealed that among men and women with higher Assured–Dominant scores there were higher Personal Attributes Rating Scale–now as well as higher Personal Attributes Rating Scale–pre-IPV scores (see Table 6), which was consistent with the original prediction.

Among men with higher Arrogant–Calculating scores there were no significant relationships with measured appraisals. Among women with higher Arrogant–Calculating scores there were higher Centrality scores (r = .21, p = .03, small-to-medium effect), which was contrary to the hypothesis. Consistent with the original prediction, however, those women with higher Arrogant-Calculating scores had lower Personal Attributes Rating Scale scores (r = –.21, p = .03, small–to–medium effect), lower Belief in Occurrence scores (r_s = –.24, p = .012, small–to–medium effect), and lower Belief in Accuracy scores (r_s = –.23, p = .016 , small–to–medium effect).

Among men with higher Cold–Hearted scores there were no significant relationships with measured appraisals. Among women with higher Cold–Hearted scores there were lower Personal Attributes Rating Scale scores (r_s = –.34, p < .001, medium effect), lower Belief in Occurrence (r_s = –.32, p = .001, medium effect), and lower Belief in Accuracy scores (r_s = –.23, p = .014, small–to–medium effect), all of which were consistent with the original prediction.

The results from the Arrogant–Calculating and Cold–Hearted octant scores were only partially supportive of the original prediction. Given the unexpected findings, exploratory analyses examined whether higher scoring Arrogant–Calculating and Cold–Hearted participants were prone to shame and whether they experienced shame after

recalling the IPV event. As suspected, Test of Self-Conscious Affect–3 Shame–Proneness was not significantly related to Arrogant–Calculating scores (r = –.10 in both men and women) or Cold–Hearted scores (r_s = .05 in men, r_s = –.18 in women). The PANAS–shame item administered after exposure to the IPV event was similarly not significantly related to Arrogant–Calculating (r = .01 in men, r = .11 in women) or Cold–Hearted scores (r_s = .14 in men, r_s = .07 in women).

Table 6

Correlations between Interpersonal Adjective Scales Octant Scores and Appraisals

High Self–Threat Condition	*PA*	*BC*	*DE*	*NO*	*LM*	*JK*	*HI*	*FG*	*DOM*	*LOV*
Men (n = 109)										
Centrality of Event Scale	.29**	.17	.17[a]	–.07	–.04	–.03	–.11	.16	.11	–.15
Personal Attributes Rating Scale (current – pre-IPV)	.02	–.17	–.10[a]	.04	.00	–.21*	–.26**	–.19*	.16	.07
Current-self	.38**	–.04	–.22*[a]	.44**	.38**	–.02	–.37**	–.35**	.44**	.35**
Pre-IPV self	.23*	.16	–.08[a]	.25**	.24*	.20*	.02	–.03	.13	.16
Sense of Closure Scale-5	.04	.03	–.06[a]	.02	–.06	–.27*	–.16	–.05	.14	–.08
Belief in Occurrence	.13[a]	–.09[a]	–.07[a]	.07[a]	.13[a]	.06[a]	–.11	–.04 [a]	.07[a]	.11[a]
Belief in Accuracy	.23*[a]	–.06[a]	–.06[a]	.15[a]	.13[a]	.02[a]	–.14	–.10 [a]	.16[a]	.11[a]
Women (n = 110)										
Centrality of Event Scale	.03	.21*	.13[a]	.10	.06	–.09	.06	.02	.08	–.06
Personal Attributes Rating Scale (current – pre-IPV)	–.21*	–.26**	–.34**[a]	.03	.27**	.14	.05	–.13	–.12	.29**
Current-self	.20*	–.26**	–.37**[a]	.54**	.56**	.32**	–.20*	–.41**	.25**	.58**
Pre-IPV self	.34**	.08	.06[a]	.34**	.11	.07	–.19	–.15	.29**	.10
Sense of Closure Scale-5	–.03	–.18	–.10[a]	.07	.10	.27**	.06	–.03	–.09	.16
Belief in Occurrence	–.08[a]	–.24*[a]	–.32**[a]	.05[a]	.23*[a]	.22*[a]	–.02[a]	–.14[a]	–.06[a]	.27**[a]
Belief in Accuracy	–.17[a]	–.23*[a]	–.23*[a]	.06[a]	.20*[a]	.13[a]	–.03[a]	–.11[a]	–.06[a]	.18[a]
Overall (N = 221)										
Centrality of Event Scale	.15*	.17*	.14*[a]	.02	.01	–.05	–.03	.08	.09	–.11
Personal Attributes Rating Scale (current – pre-IPV)	–.10	–.20**	–.22**[a]	.03	.12	–.03	–.10	–.16*	.01	.18**
Current-self	.28**	–.14*	–.28**[a]	.49**	.45**	.15*	–.28**	–.37**	.34**	.46**
Pre-IPV self	.28**	.11	.01[a]	.30**	.18**	.13	–.09	–.09	.21**	.13
Sense of Closure Scale-5	.03	–.04	.05[a]	.01	.00	.00	–.04	–.01	.02	.04
Belief in Occurrence	.02[a]	–.16*[a]	–.20**[a]	.07[a]	.19**[a]	.14*[a]	–.06[a]	–.10[a]	.01[a]	.20**[a]
Belief in Accuracy	.02[a]	–.16*[a]	–.16*[a]	.11[a]	.18** [a]	.09[a]	–.09[a]	–.12[a]	.05[a]	.15*[a]

Note. PA = Assured Dominant; BC = Arrogant Calculating; DE = Cold Hearted; NO = Gregarious Extraverted; LM = Warm Agreeable; JK = Unassuming Ingenuous; HI = Unassured Submissive; FG = Aloof Introverted; Personal Attributes Rating Scale = Personal Attributes Rating Scale;

[a] Spearman rho correlations. All other correlations are Pearson *r*.

*p < .05. **p < .001.

Post-hoc Analysis

Dominance, affiliation vs. appraisals. As a follow-up to the octant results presented above, Dominance and Nurturance dimensions were also explored in relation to appraisals (see Table 6). Pearson *r* correlations revealed that, when exposed to the high self–threat condition, participants scoring higher on Dominance did not show any significant relationships with appraisals, although men did tend to perceive themselves more positively at the time the IPV occurred ($r = .44$, $p < .001$, moderate-to-large effect) than at present ($r = .13$, $p = .185$, small effect). When exposed to the high self–threat condition, women with higher Nurturance scores showed greater derogation of past selves ($r = .29$, $p = .002$, medium effect) and higher Belief in Occurrence scores ($r_s = .27$, $p = .004$, small–to–medium effect). A similar trend was observed with higher Belief in Accuracy scores, ($r_s = .18$, $p = .06$, small-to-medium-effect).

Remaining Interpersonal Adjective Scales octants vs. appraisals. The remaining five Interpersonal Adjective Scales octants were also explored in relation to appraisals (see Table 6). In light of previous findings that men score significantly higher than women on Aloof-Introverted, whereas women score significantly higher than men on Unassured-Submissive, Unassuming-Ingenuous, Warm-Agreeable, and Gregarious-Extraverted (Wiggins, 1995), men and women were examined separately in the current study. Among men and women with higher Gregarious – Extraverted scores there were higher Personal Attributes Rating Scale ratings both pre-IPV and at present. Although the Personal Attributes Rating Scale ratings were in the expected direction, derogation of past selves did not emerge, arguably because the gap between the two Personal Attributes Rating Scale ratings was insufficient to reach statistical significance.

Among women with higher Warm – Agreeable scores there was higher derogation of past-self after exposure to the high self–threat event (r = .27, p = .004, small–to–medium effect), higher Belief in Occurrence scores (r_s = .23, p = .015, small–to–medium effect), and higher Belief in Accuracy scores (r_s = .20, p = .035, small–to–medium effect). Among men with higher Warm-Agreeable scores there was a similar trend regarding their Personal Attributes Rating Scale, Belief in Accuracy, and Belief in Occurrence scores, but results did not reach statistical significance.

Among men with higher Unassuming – Ingenuous scores there was significantly less derogation of past selves (r = –.21, p = .03, small–to–medium effect) and less Sense of Closure (r = –.27, p = .004, small–to–medium effect). Although among women with higher Unassuming-Ingenuous scores there was a similar pattern of derogating past selves, the result was not significant. These women also had higher Sense of Closure Scale-5 scores (r = .26, p = .005, medium effect) and higher Belief in Occurrence scores (r_s = 22, p = .02, small-to-medium effect).

Among men, but not women, with higher Unassuming-Submissive scores there was greater derogation of current rather than pre-IPV self when exposed to the IPV event (r = –.26, p = .007, small-to-medium effect). Among men with higher Aloof – Introverted scores there was less derogation of past selves (r = –.19, p = .046, small–to–medium effect), and a similar trend was observed among women with higher Aloof-Introverted scores as well.

Correlations between Interpersonal Adjective Scales octants and aggression scores

When exploring Interpersonal Adjective Scales Octant scores in relation to self–reported physical and psychological aggression scores, a predictable pattern emerged (see

Table 7). Men and women with higher Cold–Hearted scores had significantly higher psychological and physical aggression variety and frequency scores, all effects in the small–to–medium range. There were also a number of significant and positive correlations among men and women with higher Arrogant–Calculating scores and elevated psychological aggression scores, all effects in the small–to–medium range. In contrast, among men and women with higher Gregarious–Extravert, Warm–Agreeable, and Unassured–Submissive scores there was a tendency towards a negative albeit not statistically significant relationship with aggression scores. Predictably, among women with higher Unassuming–Ingenuous scores there was a negative relationship with psychological aggression, all effects in the small–to–medium range. Moreover, among men with higher Aloof–Introverted scores there were significantly higher physical and psychological aggression scores reported, all effects in the small–to–medium range. Overall, more Dominant women tended to engage in greater variety and frequency of psychological aggression, although the values were all in the small range and did not reach statistical significance. More Affiliative men and women, on the other hand, tended to engage in significantly less variety and frequency of psychological and physical aggression.

Table 7

Correlations between Interpersonal Adjective Scales Octants and Aggression Scores

Variables	PA	BC	DE	NO	LM	JK	HI	FG	DOM	LOV
					Men (n = 109)					
Psychological Aggression										
Variety	.11	.19*	.18[a]	–.13	–.14	–.03	.07	.22*	–.03	–.22*
Frequency	.18	.24*	.19*[a]	–.16	–.12	–.06	.07	.25**	–.01	–.24*
Physical Aggression										
Variety	.12[a]	.19[a]	.29**[a]	–.15[a]	–.17[a]	–.11[a]	.04[a]	.26**[a]	–.01[a]	–.32**[a]
Frequency	.13[a]	.15[a]	.28**[a]	–.15[a]	–.16[a]	–.08[a]	.02[a]	.26**[a]	–.01[a]	–.31**[a]
					Women (n = 110)					
Psychological Aggression										
Variety	.20*	.24*	.27**[a]	–.06	–.12	–.29**	–.05	.17	.12	–.26**
Frequency	.25**	.26**	.21*[a]	–.06	–.12	–.26**	–.07	.16	.15	–.27**
Physical Aggression										
Variety	.14[a]	.17[a]	.25**[a]	.01[a]	–.15[a]	–.14[a]	–.13[a]	.10[a]	.10[a]	–.20*[a]
Frequency	.13[a]	.19*[a]	.26**[a]	–.01[a]	–.16[a]	–.15[a]	–.10[a]	.12[a]	.07[a]	–.21*[a]

Note. PA = Assured Dominant; BC = Arrogant Calculating; DE = Cold Hearted; NO = Gregarious Extraverted; LM = Warm Agreeable; JK = Unassuming Ingenuous; HI = Unassured Submissive; FG = Aloof Introverted; DOM = Dominance; LOV = Nurturance. [a] Spearman rho correlations. All other correlations are Pearson *r*. *$p < .05$. **$p < .001$.

Correlations between Interpersonal Adjective Scales octants and PANAS scores. Correlations between Interpersonal Adjective Scales octants and PANAS scores are presented in Table 8. Men with higher Assured–Dominant scores produced higher Positive Affect ratings after both the high self–threat and the low self–threat condition (effects in the medium-to-large range), but despite a somewhat similar trend, the results for women were not significant. Men with higher Arrogant–Calculating scores similarly produced higher Positive Affect ratings after both the high self–threat and the low self–threat condition, both effects in the small-to-medium range. They also produced higher Negative Affect ratings (small-to-medium effect) after the high self–threat condition. Among women with higher Arrogant–Calculating scores there were higher Negative Affect ratings (medium-to-high effects) after both the high self–threat and the low self–threat condition. Among men and women with higher Cold–Hearted scores there were

higher Negative Affect ratings after both conditions, all effects in the medium or small-to-medium range. Among men and women with higher Gregarious–Extraverted scores there were higher Positive Affect ratings after both conditions (medium or small-to-medium range). A similar pattern was observed among men and women with higher Warm Agreeable scores, who produced higher Positive Affect scores after both conditions, small-to-medium range effects. Among women (but not men) with higher Unassuming–Ingenuous scores, there were significantly lower Negative Affect ratings after both conditions, small-to-medium effects. Among men with higher Unassured–Submissive scores there were significantly higher Negative Affect scores after both conditions (medium effects). Among men with higher Aloof–Introverted scores there were significantly higher Negative Affect scores after both conditions (small-to-medium effects). Among women with higher Aloof-Introverted scores, however, there were significantly lower Positive Affect ratings after both conditions (small-to-medium effects).

Men scoring higher in Dominance produced higher Positive Affect ratings and lower Negative Affect ratings than their lower scoring peers, all effects in the small-to-medium range. Women scoring higher on Dominance tended to give higher Positive Affect and higher Negative Affect ratings, but this reached statistical significance only in the case of Positive Affect, low self-threat condition. Men scoring higher on Nurturance tended to produce lower Negative Affect ratings, although this small-to-medium effect only reached significance in the high self-threat condition. Women scoring higher on Nurturance produced significantly lower Negative Affect ratings and significantly higher Positive Affect ratings after both conditions, all effects closer to the medium range.

Table 8

Correlations between Interpersonal Adjective Scales Octants and PANAS Scores

	PA	BC	DE	NO	LM	JK	HI	FG	DOM	LOV
					PANAS (Men)					
Negative Affect – high threat	.01	.22*	.30**[a]	–.16	–.10	.09	.34**	.34**	–.21*	–.24*
Positive Affect – high threat	.34**	.27**	.10[a]	.35**	.25*	–.05	–.05	–.09	.31**	.09
Negative Affect – low threat	–.12	.17	.21*[a]	–.05	–.03	.16	.37**	.23*	–.23*	–.13
Positive Affect – low threat	.43**	.21*	.00[a]	.32**	.26**	–.08	–.16	–.11	.37**	.12
Shame – high threat	–.04	.01	.14[a]	–.17	–.09	.08	.18	.19*	–.19	–.12
Shame – low threat	–.02	.18	.30**[a]	–.06	–.07	.16	.30**	.23*	–.17	–.17
					PANAS (Women)					
Negative Affect – high threat	.14	.39**	.28**[a]	–.01	–.03	–.22*	.10	.17	.10	–.27**
Positive Affect – high threat	.06	–.09	–.07[a]	.24*	.17	–.02	–.15	–.23*	.17	.21*
Negative Affect – low threat	.14	.44**	.30**[a]	–.07	–.22*	–.27**	.03	.13	.13	–.34**
Positive Affect – low threat	.18	–.10	–.09[a]	.37**	.32**	.07	–.19*	–.26**	.24*	.28**
Shame – high threat	–.06	.11	.07[a]	.00	.10	–.07	.16	.09	–.05	–.05
Shame – low threat	.06	.31**	.18[a]	–.14	–.19*	–.26**	–.02	.09	.08	–.25**

Note. PA = Assured Dominant; BC = Arrogant Calculating; DE = Cold Hearted; NO = Gregarious Extraverted; LM = Warm Agreeable; JK = Unassuming Ingenuous; HI = Unassured Submissive; FG = Aloof Introverted; DOM = Dominance; LOV = Nurturance; [a] Spearman rho correlations. All other correlations are Pearson *r*.
*$p < .05$. **$p < .001$.

Study 2 Discussion

This study sought to elucidate how individuals experience and respond to their own recollection of an autobiographical memory that may be dissonant with their self-concept. Two variables that arguably modulate the experience and expression of dissonance-reducing appraisals, self-threat and narcissism, were the primary focus of this study.

To test the varying effects of self-threat on appraisals, a manipulation was introduced whereby participants were instructed in a counterbalanced order to describe a past event of them engaging in IPV and a past event of them engaging in a kind and supportive act within a relationship context. The manipulation, modeled after the shame- and pride-inducing conditions of D'Argembeau and Van der Linden (2008), appeared effective at evoking high self-threat and low self-threat, respectively. The high self-threat condition elicited significantly higher negative affect and more shame, as well as significantly lower positive affect and less pride, than the low self-threat condition. The current finding that recalling IPV events provokes shame is consistent with prior findings (i.e., Dutton & Hemphill, 1992; Smith, 2007; Winters, Clift, & Dutton, 2004) and lends support to the notion that shame in the aftermath of IPV may be experienced by nonclinical and nonforensic samples, men and women alike.

No significant concerns were noted with respected to the order the conditions were presented in. It is believed that the positive mood induction that followed the high self-threat condition helped alleviate any discomfort and/or assisted with returning participants to baseline while also helping limit any carryover effects.

The results of this investigation are discussed below in three separate sections, each section corresponding to one of the study hypotheses.

Self-Threat and Appraisals Findings

Consistent with Campbell and Sedikides' (1999) meta-analysis, it was expected that increasing self-threat would heighten cognitive dissonance and ensuing appraisal use. In line with this prediction, after recalling an IPV event (high self-threat), participants derogated their pre-IPV selves to a greater extent and expressed greater doubts about the accuracy of the event significantly more so than after recalling a kind relationship event (low self-threat).

Derogation of pre-IPV-self, which was consistent with McFarland and Alvaro's (2000) findings, showed a large effect size. Use of this strategy was reflected in the significantly greater current-self vs. pre-event-self gap under the high self-threat condition than under the low self-threat condition. In other words, when recalling an IPV event that they themselves perpetrated, participants viewed their pre-IPV self as less kind, less tolerant, less open-minded, less wise, etc., than their current-selves. Participants did not, however, engage in derogation of their past-self when recalling a kind relationship event, meaning that they viewed their pre-event self and current-self in comparable terms (i.e., just as kind, just as tolerant, just as wise now as before).

Belief in accuracy, but not belief in occurrence, was also significantly lower in the aftermath of recalling an IPV event, as compared to when participants recalled a kind relationship event. This is to some extent in line with D'Argembeau and Van der Linden's (2008) findings of lower participant ratings of "I believe the event in my memory really occurred in the way I remember it and that I have not imagined or

fabricated anything that did not occur" in shame–inducing relative to pride–inducing memories. Of note, however, this particular rating item has been criticized because it taps on several constructs, including belief in accuracy and belief in occurrence (Scoboria, Talarico, & Pascal, 2015). In contrast, the current investigation uses multiple validated items that uniquely tap on belief in accuracy independent from belief in occurrence.

As was the case with derogation of past-self, it appears that subjectively lower accuracy ratings may also serve a protective function in defending the self from threatening and dissonance-inducing memories. I emphasize here that ratings of Belief in Accuracy are not the same as actual, objective accuracy of the recall, which cannot be appraised here. The lower ratings of Belief in Accuracy in the aftermath of recalling an IPV event represent a subjective sense that the details associated with the event are being recalled less accurately.

Contrary to prior findings (e.g., Beike & Crone, 2008), perceived psychological distance or closure was not significantly different between the two conditions, suggesting that recalling an arguably high self-threatening event, such as an instance of IPV, did not evoke greater desire for psychological distance than recalling a low self-threatening event, such as an act of kindness in the context of a relationship. Although counter to the original prediction, the trend was in the expected direction given that higher psychological distance scores were observed in the high self-threat as opposed to the low self-threat condition. Examination of individual item scores (see Appendix I) also suggested that participants rated the high self-threat event as appearing significantly more distant to them than the low self-threat event on three of the five scale items. They,

however, admitted to having significantly less closure and more "unfinished business" from the high self-threat event than the low self-threat event.

One possible explanation for these results may be that the low self-threat event was not comparable in complexity to the high self-threat event, and participants may have rated the low self-threat as more closed than expected because it was more straightforward in nature. Another possible explanation could be that the high self-threat event carried greater importance or was in some way more central to understanding the self than the low self-threat event, and despite wanting to feel like it was more subjectively distant, participants may have still recognized that it was "unfinished business" for them. There is some support for this explanation of apparent approach and avoidance motivation in the form of a moderate negative relationship between closure scores and event centrality scores, which is discussed in greater detail below.

Contrary to the original hypothesis, women but not men rated the importance of the IPV event as higher than the importance of the nonIPV event. It would therefore appear that women but not men perceived the IPV event as having greater importance to their identity and life story despite reports of lower confidence in the accuracy of their own memory for the IPV event, and attempts at viewing their past selves as worse than their present selves. This stance may reflect competing interests in acknowledging the importance of an event to one's identity and the change it has brought while also acknowledging a desire to reappraise it in ways that do not undermine the self. Examination of individual Centrality of Event Scale items did in fact lend some support to this idea; for example, both men and women rated the item "this event tells a lot about who I am" significantly lower in the IPV condition than in the nonIPV condition. Both

men and women, however, rated the item "if this event had not happened to me, I would be a different person today" significantly higher in the IPV condition than in the nonIPV condition.

Another possible explanation is that gender schemas have traditionally included aggression as part of the male schema but not female schema. According to social role theory, men are socialized to view toughness and aggression as part of their repertoire of responses, whereas women are socialized to inhibit aggression as part of their repertoire of responses (Eagly, 1997). It is therefore possible that women view the IPV they themselves perpetrate as more salient because it runs counter to the stereotypical gender role. Some support for this contention comes from Miller (2011), who found that male undergraduates were more likely than female undergraduates to view abuse as a necessary, acceptable, effective, and acceptable way of resolving conflict in dating relationships.

Research into posttraumatic stress disorder from an autobiographical memory perspective has highlighted somewhat of a similar dialectical position in individuals who construe a stressful/traumatic event as central to their identity. For example, Boals and Schuettler (2011) found that event centrality correlated moderately and positively with posttraumatic stress disorder symptoms, suggesting that construing a traumatic event as central to one's identity helped maintain debilitating posttraumatic stress disorder symptoms. Event centrality was also the strongest predictor of posttraumatic growth, suggesting that construing a traumatic event as central to one's identity also helped individuals grow from their trauma. It would therefore appear that construing a

stressful/traumatic event as central to one's identity could be both debilitating in maintaining posttraumatic stress disorder symptoms and conducive to growth.

Shame-Proneness Findings

As expected, when asked to recall an IPV event they themselves perpetrated, highly shame-prone women demonstrated greater derogation of past selves. In fact, the higher their shame-proneness, the lower their preIPV-self ratings were. This finding lends support to the contention that, under conditions of high self-threat (as was the case for IPV), those prone to experiencing shame also experienced greater dissonance, to which they responded to by derogating their past selves.

Whereas gender differences in experiencing and responding to self-discrepant autobiographical memories were either not found or not reported in prior research, the current investigation did find that women experienced dissonance differently from men. Specifically, women had higher ratings of shame-proneness than men. It is possible that women more so than men experienced shame because perpetration of IPV is traditionally more aligned with masculine gender roles (Eagly, 1992; Miller, 2011). It is also possible that women more so than men reported higher shame-proneness because they are socialized to be more open and expressive with their emotional reactions and more likely to express internalizing emotions like shame relative to men (Chaplin & Aldao, 2013). Finally, as some have argued, it is also possible that women experience more shame than men (Chaplin & Aldao, 2013).

Because shame-prone individuals tend to externalize blame (Stuewig et al., 2010), dispositional externalization was also explored in relation to appraisals. Unlike shame-proneness, an increased disposition towards externalization was accompanied by a

significant derogation of current-self. In fact, the higher the tendency to externalize, the lower current-self ratings were (i.e., viewed current-self as less wise, less tolerant). It is possible that externalizers project blame onto others precisely because their current self-concept and possibly self-esteem is substantially negatively affected by events such as IPV that cast them in a negative light. Along those lines, externalizers may be more sensitive to perceptions of self-threat and could respond to this through criticism of the current self. In fact, derogating past-self rather than current-self would appear to be the more adaptive of the two strategies because it preserves the present self-concept more so than an admission of current self as less tolerant, less wise, etc. would.

Dispositional externalization was also accompanied by higher importance attributed to the IPV event, yet also greater desire to gain psychological distance from it, lower belief that the IPV event truly occurred, and lower belief in the accuracy of the IPV event. As noted earlier and consistent with these findings, it is conceivable for individuals to construe a stressful/traumatic event as central to their identity yet also want to reappraise it in a manner that does not undermine their current self-concept.

Circumplex Findings

Contrary to the original prediction, men with higher Assured-Dominant scores construed the IPV event as more central to their identity. Among male with Higher Assured-Dominant scores, somewhat surprisingly, there was also greater belief in the accuracy of the IPV event. Among women with higher Assured-Dominant scores there was a different pattern in increasingly derogating current-selves more so than preIPV-selves. This derogation of current rather than preIPV-self differs from the shame-proneness results reported above, possibly because the nature of narcissism captured by

Interpersonal Adjective Scales is the more adaptive and less pathological kind (Pincus et al. 2009). In fact, the adjectives that load on the Assured-Dominant octant include items like self-confidence, self-assuredness, firmness, and assertiveness that arguably capture the more adaptive aspects of narcissism.

Among women with higher Arrogant-Calculating and Cold-Hearted scores there was similarly a derogation of current-selves but not preIPV-selves. These women also showed a reverse relationship with belief in occurrence and belief in accuracy; the more Arrogant-Calculating and the more Cold-Hearted they were, the lower their belief in accuracy and occurrence. The trend was in a similar direction for men but did not reach statistical significance. Exploratory analysis found that higher scoring Arrogant-Calculating and higher-scoring Cold-Hearted participants did not appear to experience shame, nor did they appear to possess shame-proneness. Because of this, they may not feel a need to criticize past selves to protect current view of self.

Participants with higher Cold-Hearted and Arrogant-Calculating scores also reported perpetrating more frequent and a greater variety of psychological and physical aggression. Perhaps not surprisingly, antisocial personality disorder maps primarily on the Arrogant-Calculating octant (Pincus & Wiggins, 1990) and the adjectives that comprise the Cold-Hearted octant reflect the callous and cruel traits (e.g., ruthless, cruel, cold-hearted) commonly encountered in psychopathy. Consequently, the notion that these individuals with higher Arrogant-Calculating and Cold-Hearted scores may not experience shame appears to fit. Their decision to criticize their current-self might reflect a calculated move and/or knowledge that they are supposed to articulate remorse for what they have done, but this remorse, as is the case for psychopathy, may be superficial.

The reported lower belief in accuracy and lower belief in occurrence among women with higher Cold-Hearted scores and higher Arrogant-Calculating scores is perhaps best understood when contrasted against the higher belief in accuracy and higher belief in occurrence among women with higher Warm-Agreeable and Unassuming-Ingenuous scores. Whereas a higher self-reported belief in accuracy and occurrence appears to have an affiliative purpose, perhaps of demonstrating greater openness to understanding the impact of the IPV and how it affected the other, a lower self-reported belief in accuracy and occurrence appears to highlight a general lack of concern for the other. It is also possible that lower belief in accuracy and belief in occurrence may reflect a motivated effort to devalue the event. Another related possible explanation is that lower belief in occurrence could reflect denial, and in fact, as Goodrum and colleagues (2001) posited, denial is more characteristic of narcissistic/antisocial individuals because of their lack of empathy. Monitoring belief in accuracy and belief in occurrence may be a useful indirect way of tracking attempts at devaluing or denial.

Exploratory analyses to elucidate other relationships between Interpersonal Adjective Scales octants and appraisals revealed some expected trends. The relationship between Warm-Agreeable, Gregarious-Extraverted, and derogation of preIPV-self was more in line with the original prediction, although it only reached statistical significance among women with higher Warm-Agreeable scores. As noted earlier, among women with higher Warm-Agreeable scores there was higher belief in occurrence and higher belief in accuracy when confronted with an IPV event. The comparable pattern between Warm-Agreeable and Gregarious-Extraverted becomes more evident when consulting the

overlapping adjectives composing each octant, including friendly, neighborly (Gregarious Extraverted octant), and kind, tenderhearted (Warm-Agreeable).

Among men with higher Unassuming-Ingenuous scores, there was greater derogation of current-self rather than preIPV-self, whereas among women with higher Unassuming-Ingenuous scores, there was an increased belief in occurrence. Cumulatively, these findings appear consistent with the deferential and obliging nature of individuals with higher Unassuming-Ingenuous scores. Consistent with the overarching patterns emerging so far, it would appear that heightened belief in occurrence may be serving a more affiliative purpose in pleasing others, and the derogation of current rather than preIPV-event self may be indicative of self-doubt, low self-esteem, and martyrdom to please the other. A similar tendency to derogate current-self rather than preIPV-self was also observed among men with higher Unassured-Submissive scores and men with high Aloof-Introverted scores. This appears consistent with the evolving interpretation that criticizing the current-self rather that the preIPV-self may be a sign of low self-esteem and self-doubt.

The exploratory analyses carried out with the Dominance and Nurturance dimensions can help summarize some of the findings presented. It would appear that the more affiliative individuals are, the more likely they are to respond to a self-threatening event with higher belief in accuracy and higher belief in occurrence, perhaps reflecting their affiliative nature and relationship needs. Such individuals also appear to derogate their past-selves more so than their current-selves when confronted with an IPV event, maybe in an attempt to show that they are worthy of the relationship now because they have changed (i.e., they are no longer as unwise, as intolerant, as they used to be). Even

so, the criticism of preIPV-self appears to be relatively mild and in keeping with current positive self-view. Criticism of preIPV-self rather than current-self also appears more pronounced among the more dominant individuals, although this too was relatively mild and in keeping with current positive self-view. Based on how Interpersonal Adjective Scales octants related to derogation of self, it would seem that criticism of preIPV-self rather than current-self is the more adaptive strategy in preserving self-esteem.

Sample Considerations

As part of the current investigation, about 91.9% of men and 97.3% of women reported engaging in at least one kind of psychological aggression in the past 12 months. In the past 12 months, roughly 30.6% of men and 46.4% of women reported engaging in at least one kind of physical aggression. These rates are somewhat higher than those reported by Scott and Straus (2007) because this was a sample originally prescreened to have committed at least one act of IPV.

Consistent with prior findings (Archer, 2000; Desmarais et al., 2012; Miller, 2011) women reported a greater frequency and a greater variety of physical and psychological aggression than men. In terms of psychological aggression, significantly more women than men reported threatening to hit, hurt, or throw something at a partner. In terms of physical aggression, significantly more women than men reported pushing or shoving, slapping, and punching a partner. Significantly more men than women, however, reported twisting a partner's arm or hair, grabbing a partner, or holding a partner down in anger. I caution that the psychological and physical aggression scales used did not ask participants about the extent of the injuries their partner endured as a result of their aggression. Whereas apparently more women than men endorsed pushing,

shoving, slapping or punching their partner, the force behind this act and/or the motivation for it (e.g., using IPV to control vs. using IPV to express anger/hurt and/or in self-defense) may be quite different between men and women (i.e., Cousins & Gangestad 2007; Follingstad et al., 1991). Along those same lines, the scale does not ask about reciprocal abuse and whether women employed IPV as a reaction to their partner's behaviour and/or in self-defense (Miller, 2011). Yet another consideration given the endorsement rates observed is that women may be more forthcoming than men in their perpetration of IPV, although it is likely that both genders underreported true perpetration rates (Miller, 2011).

Limitations and Future Directions

The findings from the current investigation should be interpreted in the context of several limitations. First, the undergraduate sample in particular was younger than the MTurk sample and therefore had less opportunity to experience interpersonal relationships and conflicts. It is possible that being older and having more exposure to relationships, as the MTurk sample arguably did, might lead to more severe instances of IPV, and/or more entrenched patterns of appraising IPV in such a way as to deny or minimize it. In line with this argument, some studies have found that prior experience of abuse in dating relationships predicts future perpetration (Miller, 1999). Studies have also found that the likelihood of experiencing and perpetrating abuse tends to increase as relationship duration increases (Miller, 1999). In short, the results of the current investigation are limited by the youth and relative inexperience of the student sample. Future studies could collect a larger number of community participants and student

participants to compare and contrast the various ways in which the two groups might differ on appraisals of IPV.

Another limitation involves the nature of an undergraduate sample as consisting of a certain level of socioeconomic status, intellectual functioning, etc., which could have influenced what these students had learned and witnessed about domestic violence while growing up, how they enacted their aggression, and how they appraised it. As an example of the potential differences between the IPV experiences of the student and MTurk samples, a qualitative read of the accounts appeared to suggest that the MTurk accounts consisted of more severe IPV events. In order to explore any potential differences, future studies might want to collect additional information about socioeconomic status and witnessing of violence while growing up in order to compare community and university samples.

Yet another piece of information that limited the current study was not collecting information on the type of relationship that the IPV was perpetrated in. As noted earlier, research has shown some differences between marital violence and dating violence (Shorey et al., 2008). It appears that one of those differences was reflected in the current study as well, given that relatively more severe instances of IPV were reported by the MTurk sample than the undergraduate sample.

Another related limitation is participants' self-selection to participate in this study. Even though the eligibility screen was crafted without using words like "abuse" or "violence" and reflected a range of mild to more severe violent behaviours, it could still have warded off the more severe perpetrators of IPV or at least the ones that were more ashamed and/or unwilling to discuss their actions. This self-selection arguably biases the

results obtained in that the accounts provided and appraisals used may be less severe and/or less extreme than expected. This kind of self-selection may have also complicated the kind of personality styles originally expected to experience higher self-threat. For example, individuals with more narcissistic features may be more unwilling to endure IPV-based shame and/or discomfort to participate in a study of this nature. As observed during the recruitment process of this study, men were also less likely than women to acknowledge having perpetrated or threatened to perpetrate any kind of IPV. This might reflect a gendered unwillingness to endure discomfort or perhaps a fear of re-experiencing past events because they are simply more severe than those perpetrated by women. On the other hand, participants who elected to participate in this study may have committed instances of IPV or nominate instances of IPV that are more resolved and/or less severe than others. Conducting this kind of study with clinical or correctional samples where collateral information is available (file review, police reports, etc.) might help minimize some of these concerns.

Second, there are a number of limitations with the measures and instructions used. The self-report nature of the data means that the results reported here may be contingent on, among other things, participant insight, willingness to disclose details of the event and feelings of shame, personality features, and social desirability. For example, participants may have rated the IPV event as more important than they truly think it is because they might believe that denying or minimizing its importance would be a socially undesirable thing to do. As another example, participants with more narcissistic features, despite being expected to experience more shame, may be more likely to deny or not report this very emotion.

The effect of threat on appraisal use could have been diluted by the manner in which the IPV event was recounted. Stated differently, the very manner in which participants describe the IPV event could help them appraise it differently, perhaps without needing to rely on the appraisal mechanisms administered as part of this investigation. Although all participants received the same instructions, some may have used the "why" question to justify what happened, thus arguably decreasing the need to perceive the event as less important when rating it on the Centrality of Event Scale. It may be interesting in the future to provide differing instructions, one perhaps focused on details and another focused on meaning making, to ascertain any differences in emotion activation and/or use of measured appraisals.

Another aspect of appraisal use is that once participants have engaged in one dissonance-reducing mechanism, such as criticizing their past selves, they may not need to engage in another mechanism to the same extent. Otherwise stated, it could be that dissonance is alleviated after the first or second mechanism, after which the other mechanisms no longer have an effect. Essentially, the order in which the mechanisms were measured could have resulted in less observable effects for those mechanisms measured second, third, or fourth. Counterbalancing the order in which dissonance-reducing mechanisms are measured might help tease apart the utility of each mechanism independent of, or over and above, another mechanism.

Another measure-based limitation was the Belief in Occurrence scale, which had over 75% of its scores at ceiling level and therefore left little room for variability to be explained by other factors. The ratings of Belief in Occurrence were particularly elevated because the events that participants chose to discuss were strongly believed events. This

is consistent with prior work, which has found that cues often result in the retrieval of events that are strongly believed to have occurred (Scoboria & Talarico, 2013). In contrast, Scoboria, Talarico and Pascal (2015) attempted to cue for uncertain events, which resulted in the retrieval of events that were comparatively less strongly believed (Scoboria, Talarico, et al., 2015). This approach, as well as analog studies conducted in the lab, may be two potential avenues for managing high levels of belief in occurrence.

Finally, findings from the Centrality of Events and Sense of Closure-5 scales indicated the need to parse out competing motives to make meaning and acknowledge how a high self-threatening event may have impacted the self while at the same time view the self-threatening event as not defining the self. In many ways, this distinction is reminiscent of the guilt vs. shame constructs proposed by Tangney (1991) in that guilt presumably does not involve the entire person as "bad" but rather encourages reparative action.

Third, because of its novel and exploratory nature, the investigation relied on numerous comparisons to examine data patterns. This approach in turn increased the rate of Type I error. Future studies will need to target and replicate specific aspects of this study before any further conclusions are drawn.

Finally, this investigation measured only certain types of appraisals and therefore can only report on their use to reduce dissonance. Other types of appraisals may be more widely used or used more effectively, and future investigations could construct checklists based on a qualitative exploration of the current dataset, or build other scales to measure appraisal use. In order to assess the effectiveness of appraisals, a measure of state self-

esteem may also be included after participants have been directed to engage with a dissonance-reducing appraisal.

Future studies could explore the nature of the IPV event described in this sample (physical or psychological) and then determine whether the type and extent of the appraisal used is related to type of IPV. This line of work may help clarify the trend observed in Dutton and Hemphill (1992) of IPV perpetrators lying more to themselves and others about psychological abuse, arguably because it is less objectively visible, than about physical abuse. For example, those committing an act of psychological abuse may show lowered belief that the IPV event occurred and/or report greater doubt about the accuracy of their recall than those committing an act of physical abuse.

Future studies may also wish to look at the differential impact of shame versus guilt on appraisal use. Tangney (1991) defined shame as a global, negative, and painful evaluation of the self that was associated with a behavioural urge to hide or escape, whereas she defined guilt as a more adaptive emotion arising in response to a particular behaviour and associated with reparative action. It is possible that arousal of shame more so than guilt is associated with greater appraisal use, perhaps because of the more global and painful nature of shame. Another potential exploration also tied to Tangney's work on shame is the presence of early shaming experiences. Future studies might consider asking about early shaming experiences in addition to memories of committing IPV to explore whether such experiences affect appraisal use.

Another future project might consider the use of a clinical sample comprised of higher rates of narcissism. In the current study, it is likely that few participants

demonstrated the kind of pathological narcissism (i.e. Pincus et al. 2009) that would correlate with certain appraisal use.

CHAPTER 4

General Discussion

The overarching goal of this dissertation was to explore how individuals experience and respond to autobiographical memories that contradict their self-concept as morally good, competent, and/or consistent, stable, and predictable (Aronson et al., 1995). A secondary goal was to explore two potential determinants of the experience and response to self-discrepant autobiographical memories: self-threat and narcissistic features.

Dissonance itself cannot be directly observed (Aronson, 1969, 1992; Festinger, 1957); rather, it can be deduced from asking participants about it and from the emergence of dissonance-reducing mechanisms. Consistent with this, participants in Study 1 were instructed to select a time in which they challenged another's recollection of a past event and then asked to describe why they challenged. Participants identified self-protective motives, among other motives, as underpinning their challenge, which were presumably indicative of dissonance. In Study 2, participants were instructed to recall two events of varying self-threat and after each event, were instructed to use rating scales meant to capture select dissonance reduction processes. Participants demonstrated more attempts at dissonance reduction after the high self-threat event than after the low self-threat event. This selective use of appraisals also suggested the presence of cognitive dissonance. Building on the theoretical and empirical basis laid out by Festinger (1957), Aronson (1969, 1992), and Conway and Pleydell-Pearce (2000), this dissertation lends further support to the notion that cognitive dissonance processes underlie the experience of self-discrepant autobiographical memories and the ensuing responses.

The Experience of Self-Discrepant Autobiographical Memories & Self-Threat

Building on Festinger and Aronson's cognitive dissonance theories and consistent with the self-memory-system framework (Conway & Pleydell-Pearce, 2000), dissonance in the current investigation resulted from a conflict between autobiographical memory retrieval of a past behaviour and the current, presumably positive self-concept (Study 1 and Study 2). The dissonant element, meaning the autobiographical memory as recounted by someone else (Study 1) or as recalled by the self (Study 2), contained information that an individual acted or was implied to have acted in a way that made that individual feel and/or be perceived by the other(s) as incompetent, immoral, ashamed, or guilty. As shown in Study 1 and Study 2, and consistent with the meta-analytic findings of Campbell and Sedikides (1999), the more self-threatening the retrieved autobiographical memory was, the sharper the dissonance experienced. Several proxies of dissonance lend support to this assertion including the intensity of negative emotions and in particular, shame, experienced after recalling an instance of perpetrating IPV (Study 2), the disproportionate presence of negative emotions among the self-protective challenges (Study 1), and the self-reported higher levels of distress at disagreeing with the other among the self-protective challenges (Study 1). These findings are consistent with prior conceptualizations of negative self-referent emotion as threatening (Aronson, 1992; McFarland & Alvaro, 2000) and/or signaling threat to the self because of their negative implications (Campbell & Sedikides, 1999; Pinter et al., 2011; Sedikides & Green, 2000, 2004, 2009). There is also some support for the notion that this kind of threat, where negative emotions are involved, may preferentially activate self-protective motives, rather than self-enhancement motives (Alicke & Sedikides, 2009).

In addition to negative emotions, other proxies of dissonance also emerged. Namely, among the self-protective challenges, there was higher self-reported motivation to present a positive self-image (Study 1) and higher self-reported need to convince the other that one is right (Study 1). The self-reported desire to present a positive self-image to others and convince the other that one is right may not on the surface appear synonymous with preserving a positive self-concept. As a result, one may wonder why either item is being cast as a dissonance proxy. According to Swann's self-verification theory (2012), however, individuals value symmetry between how they view themselves and how they present themselves to others, and will seek out opportunities to re-affirm their perception of themselves in social contexts. Following this line of reasoning, presenting a positive self-image does become more synonymous with maintaining a positive self-concept, and consequently, threatening either might arguably result in dissonance. This very symmetry between individuals' self-view and how others view them was to some extent evident in the overlap between Defending the self and Correcting views of me subcategories developed in Study 1. Taken together, the findings from these dissonance proxies strengthen the argument that dissonance can arise when a retrieved autobiographical memory comes into conflict with one's current self-concept.

The Response to Self-Discrepant Autobiographical Memories

Across both studies, and consistent with prior theorizing, dissonance appeared to have been reduced and/or resolved through dissonance-reducing mechanisms, or appraisals. This dissonance-reduction involved confronting the source of incompatible feedback (Study 1), reappraising aspects of the dissonant autobiographical memory (Study 1 and Study 2), or reappraising aspects of the self (Study 2).

In Study 1, and consistent with Swann's work (Swann, 2012; Swann & Ely, 1984; Swann & Read, 1981), dissonance appeared to have been reduced by challenging the person providing the dissonant feedback with a view to correcting their mistaken impression (Correcting views of me subcategory) and/or protecting the self (Defending the self subcategory). In fact, when participants were themselves asked why they challenged, a number of them identified challenging precisely because they wanted to correct the other's mistaken impression of them and/or because they wanted to defend themselves. The use of social transactions to reduce dissonance has parallels in Scoboria's (2016) model. The model describes the social and cognitive processes implicated when an individual's believed memory is challenged by disconfirmatory social feedback. According to this model, two types of dissonance arise when this occurs: intrapersonal dissonance and interpersonal dissonance. Of relevance to this discussion, Scoboria posits that the decision to defend one's memory and arguably challenge the source of disconfirmatory social feedback is one way in which interpersonal dissonance can be reduced.

In addition to interpersonal challenges, dissonance reduction was also carried out through intrapersonal appraisals, which resemble the solutions proposed by Festinger (1957), Aronson (1969, 1992) and Conway (Conway, 2005; Conway & Pleydell-Pearce, 2000). Changing the dissonant element (Aronson, 1992; Festinger, 1957) or otherwise modifying/distorting the threatening autobiographical memories (Conway & Pleydell-Pearce, 2000) was apparent in the use of appraisals of veridicality. For example, participants changed the dissonant autobiographical memory by rating their confidence in its accuracy as lower when they experienced the autobiographical memory as conflicting

with their current self-concept (Study 2). A note here that ratings of Belief in Accuracy are not the same as objective accuracy, which cannot be appraised in this investigation. Rather than focus on objective accuracy, this investigation was more concerned with perceptions of accuracy, including correct interpretation of events from various perspectives, correct details of events as seen by the self and/or others, etc.

Unlike belief in accuracy, belief in occurrence did not appear to have been as extensively used to reduce dissonance. This may be because reducing belief in occurrence involves a more extreme form of appraisal that is comparatively more removed from reality than belief in accuracy. One could also argue that changes of belief in occurrence involve an absolute rejection of self-threatening information and therefore, resemble denial. The continuum of ego defenses advanced by Vaillant (1994, 2011) is relevant here in that self-reported lower belief in occurrence may be a more psychotic or immature defense, whereas self-report lower belief in accuracy may be a more neurotic defense comparable to rationalization.

Changing the dissonant element to reduce dissonance was also apparent in the criticism of past-self rather than current-self (Study 2). Specifically, when faced with self-discrepant information, participants revised their view of their past-selves in such a way as to enhance their current selves (McFarland & Alvaro, 2000; Ross & Wilson, 2003). McFarland and Alvaro (2000) argue that this particular mechanism may reduce dissonance by creating an illusion of improvement and growth from the self-threatening event, which is reminiscent of the literature on post-traumatic growth. Recast in this manner, devaluing one's past-self rather than one's current-self, is better aligned with the

notion of increasing the number of consonant elements rather than changing the dissonant element.

In the current investigation, this derogation of "old me" in favour of "current me" was examined in relation to the level of threat experienced; the high self-threat condition produced more derogation and therefore greater illusory improvement than the low self-threat condition. These findings add to prior research into other factors that contribute to derogation of past self, including subjective temporal distance (the further away an individual *feels* from past self, the more unfavorably this past self is regarded; Ross & Wilson, 2003) and more recently implicit theories of change (individuals who believed that attributes were malleable were more critical of subjectively distant past selves than individuals who believed that attributes were stable; Ward & Wilson, 2015).

As a dissonance-reducing appraisal, changing the importance of the dissonant element was a little less clear in the current investigation. Whereas in Study 1, ratings of event centrality and arguably importance did not appear to have been used as a way of reducing dissonance, in Study 2, female participants produced higher event centrality/importance ratings in response to self-discrepant autobiographical memories. These results, however, cloud the more complex patterns observed when the centrality/importance items were fleshed out. Namely, the rating of several individual scale items suggested that participants did in fact perceive the self-discrepant autobiographical memory as less central to themselves in certain areas, which is consistent with the lowering of event importance as a dissonance-reducing mechanism. For example, when exposed to self-discrepant autobiographical memory, there were significantly lower ratings of "this event tells a lot about who I am" and lower ratings of

"I often see connections and similarities between this event and my current relationships with other people". On the other hand, and contrary to expectations, there were items with significantly higher importance ratings following exposure to a highly self-threatening autobiographical memory, such as "this event has become a reference point for the way I understand myself" and "If this event had not happened to me, I would be a different person today." Taken together, it would appear that reducing the importance of the dissonant autobiographical memory as a way of reducing dissonance is not straightforward; rather, it seems that individuals try to strike a balance between approaching the event to make meaning and acknowledge its impact on one's development, yet also regarding the event as not defining or central to who they are. There are similarities between this and the way traumatic events are avoided yet regarded to some extent as central to one's identity (Boals & Schuettler, 2011). Beyond that, what these situations appear to highlight is that dissonance processes may not comprehensively explain our responses to self-discrepant autobiographical memories.

Personality

As most authors reviewed in this investigation have acknowledged, personality plays a role in how dissonance is experienced and how it is responded to. In Study 1, the female participants who identified self-protective motives as driving their challenge tended to have higher Arrogant-Calculating scores than their peers who did not identify any self-protective motives as driving their challenge. A similar trend, involving higher Cold-Hearted scores among women, was also observed. Both results appear to suggest that the more narcissistic women experienced greater self-threat than the less narcissistic women, which echoes prior research on the acute experience of self-threat among

narcissists (Pincus & Lukowitsky, 2010; Rhodewalt & Eddings, 2002). Furthermore, consistent with Miller et al. (2012)'s mapping of grandiose narcissism between the Assured-Dominant and the Arrogant-Calculating octant and his mapping of vulnerable narcissism on the Cold-Hearted octant, one can arguably conclude that both narcissistic phenotypes were more sensitive to self-threat than others and challenged to protect themselves. The notion that narcissistic individuals may experience self-threat more acutely than their peers was also supported by the finding that more shame-prone women became more critical of their past-selves than their current-selves when faced with a self-discrepant autobiographical memory (Study 2). More narcissistic women, as indicated by Arrogant-Calculating and Cold-Hearted octant scores, also responded to self-discrepant autobiographical memories by reporting lower belief in accuracy and lower belief in occurrence (Study 2).

Beyond narcissism, the two orthogonal dimensions of dominance and nurturance were also explored. Surprisingly, more nurturing individuals tended to show higher belief in accuracy and higher belief in occurrence in response to presumed dissonance (Study 2). In other words, instead of defending themselves by reporting lower belief in accuracy and/or occurrence as originally theorized, they actually reported higher belief. This response may be specific to the interpersonal nature of the high self-threat event (i.e., an instance of intimate partner violence) and the value that affiliative individuals place on their relationship given that they have perpetrated an act of IPV in the past. Over and above the IPV event, however, more nurturing individuals are probably more attuned to the other and to the relationship needs. Because of this attunement and likely trust within the relationship, such individuals may be less defensive and more open to acknowledging

their role in the IPV. It is possible that more nurturing individuals use belief in accuracy and belief in occurrence as a way of acknowledging their responsibility and empathizing with the other, while also ensuring that the relationship is maintained and that they are presenting themselves as currently worthy of the relationship (because they have matured, become more tolerant since the IPV). In fact, belief in accuracy and belief in occurrence have been proposed to be sensitive to social input in Scoboria's (2016) model. Along those lines, they have also been previously discussed as changing in order to avoid conflict or enhance the quality of the relationship (Scoboria, Jackson, et al., 2014).

More nurturing and more dominant individuals also appeared to criticize their past-self more so than their current-self to reduce dissonance (Study 2). If high levels of self-esteem result from achieving love (nurturance) and status (dominance) and self-esteem measures do in fact cluster around the Assured-Dominant and Gregarious-Extraverted octants (Zeigler-Hill, 2010), then those scoring higher on nurturance and higher on dominance would have higher self-esteem. Extrapolating from the present findings, it would appear that devaluing a past rather than current self when faced with a self-discrepant autobiographical memory may help not just reduce dissonance but also maintain self-esteem. If true, this would mean that deriding past rather than present self when reminded of a past self-threatening event may be encouraged in clinical or therapeutic context in order to build self-esteem.

Limitations and Future Directions

A number of limitations apply to both studies summarized here. First, the inclusion of a state-measure such as the PANAS after each appraisal measure would have been helpful in understanding whether the purportedly dissonance-reducing mechanism

helped mitigate uncomfortable or negative feelings. Another alternative or addition would be to use a state measure of self-esteem, like the one employed by Beike and Landoll (2000), to gauge variations in self-esteem as a result of exposure to various levels of threat.

Second, this study looked only at certain appraisals. Examining alternate appraisals, such as a feeling of subjective distance between past and present self (Ross & Wilson, 2002; Wilson & Ross, 2003), or coding the appraisals emerging naturally from participant accounts, may be another useful strategy to help flesh out appraisal selection and their use in response to dissonance. Other ways of reducing dissonance in a social context have also been proposed, such as ignoring, forgetting, or avoiding the source of dissonance information. These alternate ways of socially managing dissonant feedback might be the focus of future studies.

Third, a limitation across both studies was the use of a nonclinical sample of narcissism. Carrying out a comparable study with a clinical sample of narcissists, which are regarded as aggressive, hostile, manipulative, deceptive, dominant, and antagonistic but also more sensitive to inconsistent feedback with the self-concept (Morf & Rhodewalt, 2001; Pincus et al., 2009) may show a more pronounced pattern of using appraisals when exposed to varying levels of self-threat. By the same token, the current sample's use of appraisals was likely not as severe or as may be expected in a clinical population.

Another issue related to narcissism was the use of the Interpersonal Adjective Scales, which, although being an empirically validated measure for capturing various aspects of personality and more adaptive narcissism, can be an inadequate measure for

capturing more pathological aspects of narcissism (Pincus et al., 2009). Other scales for assessing the more pathological aspects of narcissism, including grandiose and vulnerable narcissism, have been validated, such as the Pathological Narcissism Inventory (Pincus et al., 2009). Inclusion of such scales in future investigations should help clarify the contribution of pathological narcissism to the experience and response to self-discrepant autobiographical memories.

Finally, this investigation assumed based on prior theory that individuals possessed a positive self-concept and were motivated to preserve or protect that positive self-concept. Clinical samples, however, may have a more negative or fragile self-concept, as is the case for narcissism. Exploring the motives and use of appraisals with these possibly more severe instances of self-threat (Baumeister, Smart, & Boden, 1996) may be a fruitful future endeavor.

Based on the literature reviewed, this investigation focused primarily on self-protection. As part of the coding frame, both self-enhancement (as part of Seeking recognition subcategory) and self-consistency (as part of Internal models of self and others category) also emerged as motives for challenging, suggesting that they might be relevant to the manner in which self-discrepant autobiographical memories are experienced and responded to. As outlined in the introduction, there is ample research into coherence between one's current self-concept and one's autobiographical memories (Conway & Pleydell-Pearce, 2000), and the value of coherence is also highlighted in Aronson's argument that we strive to maintain a consistent, stable, and predictable sense of self.

Implications

The findings from this investigation have implications for the utility of cognitive dissonance processes in understanding the experience of self-discrepant autobiographical memories and the ensuing dissonance-reducing responses. As theorized by the self-memory-system (Conway & Pleydell-Pearce, 2000), the series of findings presented in this dissertation support the argument that autobiographical memories and the current self-concept work together to maintain a coherent sense of self and this coherence appears to be at least partially maintained through dissonance-reducing processes.

The findings from this investigation also have clinical implications in informing interventions wherein self-discrepant autobiographical memories are central to or exacerbate a client's clinical presentation. For example, self-discrepant autobiographical memories are presumably relevant to the treatment of certain moral injuries—perpetrating acts that contradict deeply held moral beliefs. The present findings may inform treatment approaches in this area, perhaps by encouraging perceptions of growth (McFarland & Alvaro, 2000; Ross & Wilson, 2003) from a pre-event self that was less tolerant or less wise to a current-self that is more tolerant and wiser. One way to encourage this perception of growth may be to borrow from Ross and Wilson's (2015) manipulation of subjective distance by asking participants to discuss their past selves as they were "all the way back…" (versus "in the recent past…"). Yet another approach to promoting this perception of growth may be to foster a transition of some kind that serves to more clearly separate the past self from the present self, whether that is a life event (new job, new relationship, etc.) or a simpler physical change (new haircut, etc.; Ross & Wilson, 2003).

The current study appears to suggest that derogating one's past-self but not current-self may be the healthier route because it encourages growth in self-esteem and discourages the development of a global shame-based sense of self. Inherent in this argument, however, is the assumption that once an individual has criticized their past-self, they will maintain coherence with this new, more tolerant and wiser current-self. If this same individual commits a self-discrepant act again in the future, highlighting the discrepancy between this discrepant act and the more tolerant and wiser self may help motivate change and re-establish consistency (Aronson, 1999; Biondolillo & Pillemer, 2015). This approach is reminiscent of motivational interviewing techniques that draw attention to the discrepancy between the maladaptive behaviour and an individual's values and goals in order to motivate change (Miller & Rollnick, 2002).

The notion of a "new" and improved self in the aftermath of a self-discrepant act may be easier to achieve and maintain for individuals with a positive self-concept in a nonclinical sample, but may pose problems for individuals with a more negative self-concept. Further research into negative self-concept and/or tendency towards self-devaluation would help elucidate this issue.

Another way in which this investigation can inform treatment is by recognizing the quasi-dialectical stance in wanting to approach and understand the meaning of a self-discrepant autobiographical memory but also wanting to avoid viewing such autobiographical memories as defining the self. In this way, this investigation adds to the growing literature on how posttraumatic stress disorder may become intertwined with one's autobiographical memories and one's current self-concept.

This line of work also has implications for treatment in the forensic/correctional domain. Because appraisals (or dissonance-reducing mechanisms) alleviate or even eliminate the impact of an act and/or its implications on the self (Lord & Willimot, 2004; Snyder & Higgins, 1988), they are generally considered valuable to coping with stress, maintaining self-esteem, and preserving a positive self-concept (Beike & Landoll, 2000; Conway & Pleydell-Pearce, 2000; McFarland & Ross, 1982; Schlenker, Pontari, & Christopher, 2001; Wood & Conway, 2006). Yet, this seemingly protective role of appraisals is not extended to all contexts. For example, forensic treatment providers indiscriminately target appraisals ("rationalizations") as part of rehabilitative programming (Beech & Mann, 2002; Yates, 2009) despite findings of an inconsistent relationship between responsibility-taking and re-offending (Hanson & Bussiere, 1998; Hanson & Morton-Bourgon, 2005) and despite calls to better understand the meaning of appraisals to the self before urging offenders to abandon them (Schneider & Wright, 2004; Yates, 2009). The current study highlights the role of appraisals in maintaining a positive self-concept and may help inform changes in treatment targets in forensic/correctional settings. Some have proposed that denial or minimization of responsibility be regarded as a responsivity factor to help engage participants in treatment rather than a risk factor that needs targeting (Marshall, Marshall, O'Brian, & Serran, 2011). Marshall and colleagues have proposed and researched some techniques for use with individuals who have sexually offended, including offering face-saving excuses to deniers so that self-esteem is preserved while also encouraging greater understanding of the risk factors for offending (e.g., "what might the circumstances of your offense look like to another person?"), challenging in a firm but respectful manner that employs

motivational interviewing principles (Miller & Rollnick, 2002), and emphasizing the difference between a “bad act” and “a good person” in order to foster reparative action rather than shame (Marshall et al., 2011).

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Appendix A

Mechanical Turk

Turk has become a widely used source for conducting Internet based research in the field of Psychology. Turk is not specifically a research recruitment tool; it is a crowd-sourcing tool that users, including researchers, can access to complete any task that can be completed via Internet connection. It is a good tool for reaching diverse individuals, typically not available in traditional academic participant pools (in samples collected by Dr. Scoboria to date, gender ratios are about 49%, 49%, 1%; and self-identified race/ethnicity tend to parallel United States census data with some overrepresentation of Asians populations). Users post tasks to Turk, and Turk "workers" (e.g., potential participants) view available tasks and select the ones they wish to complete. Once a task is complete, the user verifies the work and pays the worker. Turk workers are identified in the system only by their Turk ID (a non-identifying string of letters and numbers), meaning that a worker's identifying information is not available to users.

Appendix B

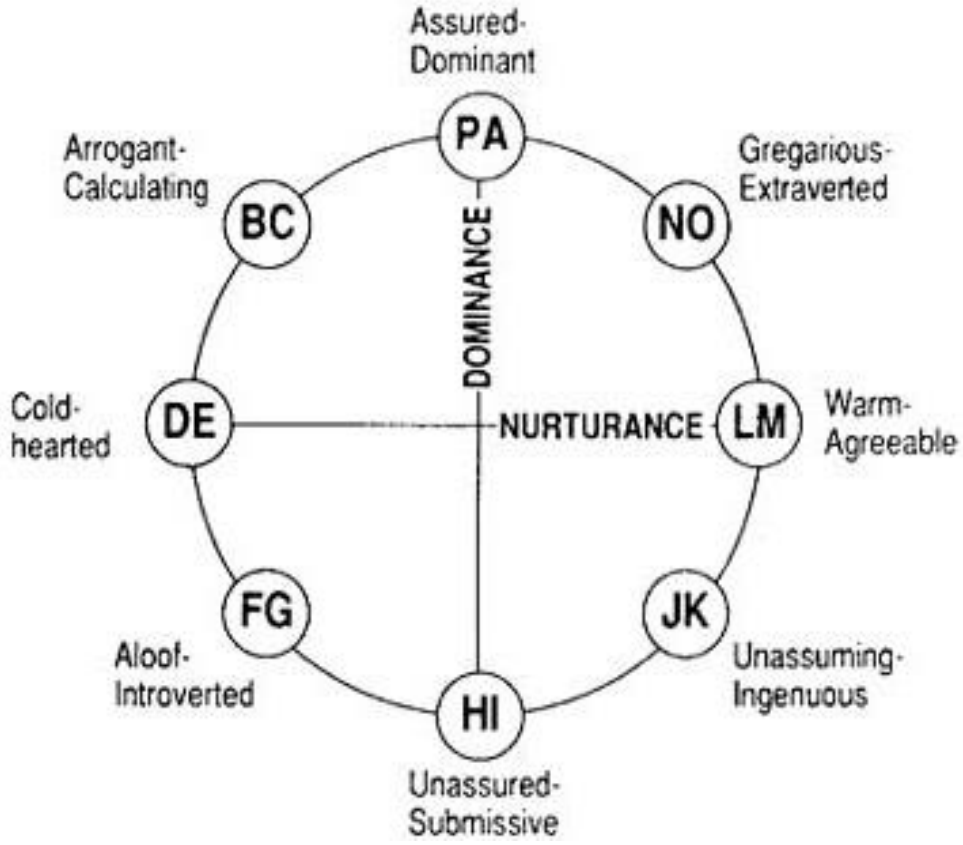

Figure 1. Diagram Illustrating the Interpersonal Circumplex (Trapnell & Wiggins, 1990)

Appendix C

Recruitment Advertisement Posted to Mechanical Turk site

Title: Challenging others' memories

This is a research study. The study is about times that you challenged somebody else's memory.

You are eligible for this research study if you have challenged another person's memory. For example, you may have told another person that something that they remember did not happen to them or happened to them in a different way than they remember it. The study examines times that people chose to initiate or start a challenge on another person's memory. In this study, you will be asked questions about a specific time that you challenged another person's memory.

Your participation will take no more than 30 minutes. You will earn $2.50 USD for your participation.

If you are uncomfortable with answering a question, you have the right to skip it. However, if you decide at any time that you will not complete the survey (i.e., complete less than 80% of the questions), please return to Mechanical Turk to withdraw from this survey. Please complete the survey without consulting with other people.

In order to be compensated, you must provide your Mechanical Turk ID at the end of the survey.

This HIT is set to be open for 2 hours after you sign up. This is to permit plenty of time for you to complete the survey and return to Turk to submit the HIT.

If you are interested in completing the study, please follow the link below. You will be directed to a page that will determine your eligibility. If you are not eligible for this study, you will receive a message indicating this and you should return to Turk and withdraw from the HIT.

To access the survey, please follow this link: https://fluidsurveys.uwindsor.ca/s/cm1/

This study has received clearance from the University of Windsor Research Ethics Board.

If you are interested in participating, the next page provides information about the study. Once you have read it, if you agree to participate you can continue to the study by clicking through.

Thank you,
Fiona Dyshniku
Dr. Alan Scoboria

Appendix D

Eligibility Screen on Fluid Surveys

Have you ever challenged another person's memory for a past event (e.g., disagreed with their memory, told them something about their memory was wrong)?

- ☐ **Yes**
- ☐ **No**

Appendix E
Testing Package – Study 1

Items marked with an asterisk (*) indicate the measures that will be used in Study 1.

PART I

*Select a time that you challenged another person's memory for a past event (e.g., disagreed with their memory, told them something about their memory was wrong). Select a time in which you initiated/started the challenge to the other person's memory.

Basic questions regarding the challenge

1. *Describe how you challenged this person's memory. What did you say or do to challenge the memory?
2. What was your (approximate) age when you challenged this memory? ____
3. *Describe why you challenged the other person's memory?
4. Describe what happened after you challenged the other person's memory?
5. Please describe the nature of your relationship with this person at that time (e.g., friend, parent, significant other, acquaintance).
    a. Who was the person?
    b. What was your relationship to the person?
    c. What was their age at the time?
    d. What was their gender?

Additional questions regarding the challenge

1. How much did you trust your knowledge about the event at the time you challenged the other person's memory? (1 = *I mistrusted my knowledge completely*; 10 = *I trusted my knowledge completely*)
2. How successful do you think you were at challenging the other's memory? (1 = *completely unsuccessful at challenging their memory*; 10 = *completely successful at challenging their memory*)
3. How forceful were you in delivering your challenge? (1 = *not at all forceful*; 10 = *very forceful*)
4. How often do you challenge this person's memory? (1 = very *rarely*; 10 = *very frequently*)
5. How often in general do you tend to challenge other people's memories? (1 = very *rarely*; 10 = *very frequently*)

***Here is a list of potential outcomes that may have occurred <u>following the challenge that you described above</u>. Please check which one applies, or check "other" if none of the outcomes seems to apply:**

a) The other person defended their memory and it looked like they genuinely continued to believe that the event occurred as they remembered it.

b) The other person defended their memory but it looked like their belief that the event occurred as they remembered it had been shaken.

c) The other person eventually agreed with you, but it looked like they genuinely continued to believe that the event had occurred as they remembered it.

d) The other person eventually agreed with you, and it looked like their belief that the event occurred as they remembered it had been shaken.
e) Other: None of these really capture what took place.

Please elaborate on the outcome that you just endorsed in the question above. We would like any more information that you can provide about what took place to lead to this outcome.

Additional questions regarding the nature of the relationship

1. At the time that you challenged the other's memory, in general how much did you trust him/her? (1 = *I did not trust them at all*; 10 = *I trusted them completely*)
2. How much did your past experiences with the person(s) whose memory you challenged influence your behaviour, such as what you said or did when you challenged them? (1 = *past experiences did not influence me at all*; 10 = *past experiences greatly influenced me*)
3. At the time, how much did it bother you that you disagreed with what the other person said or did? (1 = It did *not bother me at all*; 10 = it bothered me *very much*)
4. Currently, how much does it still bother you that you disagreed with what the other person said or did? (1 = *not at all*; 10 = *very much*)
5. At the time, how easy was it for you, in general, to disagree with the other person? (1 = it was *very hard to disagree with this person*; 10 = it was *very easy to disagree with this person*)
6. How important was it for you to avoid disagreeing with the other person? (1 = *not at all important*; 10 = *very important*)
7. How important was your relationship with the person whose memory you challenged at that time? (1 = *not at all important*; 10 = *very important*)
8. How close was your relationship with the person whose memory you challenged at that time? (1 = *not at all close;* 10 = *very close*)
9. How much did the other person participate in the exchange and/or respond to your challenge? (1 = the other person *did not at all participate in the disagreement; was very passive;* 10 = *the other person was very vocal and active in the disagreement*)
10. During the challenge, how motivated were you to maintain the relationship with the other person? (1 = *not at all motivated to maintain the relationship*; 10 = *very motivated to maintain the relationship*)
11. *During the challenge, how motivated were you to present a positive image of yourself? (1 = *not at all motivated to present a positive image of myself*; 10 = *very motivated to present a positive image of myself*)
12. During the challenge, how important was it for you to convince the other person that you were right? (1 = *not at all important*; 10 = *extremely very? important*)
13. After the challenge, what was the quality of the relationship with the person whose memory you challenged? (1 = *the relationship deteriorated substantially*; 10 = *the relationship improved substantially*)
14. Did you discuss the event with anybody other than the person whom you challenged at that time? If yes, who else did you discuss it with (what was your relationship with them?)

Communication Patterns Questionnaire (modified)

Please rate each item on a scale of 1 (= very unlikely) to 9 (= very likely**)**

	Very unlikely – Very Likely								
<u>During the challenge…</u>	1	2	3	4	5	6	7	8	9
1. Both you and the other person blamed, accused, and criticized each other	1	2	3	4	5	6	7	8	9
2. Both you and the other person expressed your feelings to each other	1	2	3	4	5	6	7	8	9
3. Both you and the other person threatened each other with negative consequences	1	2	3	4	5	6	7	8	9
4. Both you and the other person suggested possible solutions and compromises	1	2	3	4	5	6	7	8	9
5. You nagged and demanded while the other person withdrew, became silent, or refused to discuss the matter further	1	2	3	4	5	6	7	8	9
6. The other person nagged and demanded while you withdrew, became silent, or refused to discuss the matter further	1	2	3	4	5	6	7	8	9
7. You criticized while the other person defended himself/herself	1	2	3	4	5	6	7	8	9
8. The other person criticized while your defended yourself	1	2	3	4	5	6	7	8	9
9. You pressured the other person to take some action or stop some action, while the other resisted	1	2	3	4	5	6	7	8	9
10. The other person pressured you to take some actions or stop some action, while you resisted	1	2	3	4	5	6	7	8	9
11. You expressed feelings while the other person offered reasons and solutions	1	2	3	4	5	6	7	8	9
12. The other person expressed feelings while you offered reasons and solutions	1	2	3	4	5	6	7	8	9
13. You threatened negative consequences and the other person gave in or backed down	1	2	3	4	5	6	7	8	9
14. The other person threatened negative consequences and you gave in or backed down	1	2	3	4	5	6	7	8	9
15. You called the other person names, swore at him/her, or attacked his/her character	1	2	3	4	5	6	7	8	9
16. The other person called you names, swore at you, or attacked your character	1	2	3	4	5	6	7	8	9
17. You pushed, shoved, slapped, hit, or kicked the other person	1	2	3	4	5	6	7	8	9
18. The other person pushed, shoved, slapped, hit, or kicked you	1	2	3	4	5	6	7	8	9

***Interpersonal Adjective Scales**

Please rate how accurately each word describes you as a person. Judge how accurately each word describes you on the following scale.

1	2	3	4	5	6	7	8
extremely inaccurate	very inaccurate	quite inaccurate	slightly inaccurate	slightly accurate	quite accurate	very accurate	extremely accurate

For example, consider the word "**Introverted**". How accurately does that word describe you as a person? If you think this is a ***quite accurate*** description of you, you would select the number "**6**" in the space next to the word "Introverted". If you think this word is ***slightly inaccurate*** as a description of you, you would select the number "4". If it is ***very inaccurate*** you would select "2", and so on… It is very important that you do not skip any. If you are uncertain about the meaning of a word, please consult the definitions provided in the brackets.

1.	**Introverted** (feels more comfortable by oneself; is less interested in other people)	1	2	3	4	5	6	7	8
2.	**Assertive** (tends to be aggressive and outspoken with others)	1	2	3	4	5	6	7	8
3.	**Timid** (tends to be fearful or uncomfortable around others)	1	2	3	4	5	6	7	8
4.	**Unargumentative** (tends to avoid arguments or fights)	1	2	3	4	5	6	7	8
5.	**Boastful** (tends to brag)	1	2	3	4	5	6	7	8
6.	**Soft-hearted** (tends to be easy-going or gentle with others)	1	2	3	4	5	6	7	8
7.	**Ruthless** (pursues one's own interests regardless of the effect on others)	1	2	3	4	5	6	7	8
8.	**Kind** (thoughtful and caring for others)	1	2	3	4	5	6	7	8
9.	**Cheerful** (happy, usually in good spirits)	1	2	3	4	5	6	7	8
10.	**Unsparkling** (not lively or entertaining with others)	1	2	3	4	5	6	7	8
11.	**Tricky** (can be deceiving toward others in order to get something; able to fool others)	1	2	3	4	5	6	7	8
12.	**Unaggressive** (tends to be mild-mannered, not forceful around others)	1	2	3	4	5	6	7	8
13.	**Calculating** (tends to use or manipulate others to your own advantage)	1	2	3	4	5	6	7	8
14.	**Tender** (warm and loving with others)	1	2	3	4	5	6	7	8
15.	**Hard-hearted** (unconcerned and unfeeling toward others)	1	2	3	4	5	6	7	8
16.	**Unneighbourly** (unfriendly, aloof toward others, avoid contact with others)	1	2	3	4	5	6	7	8
17.	**Uncharitable** (dislike helping others; tends to judge others harshly)	1	2	3	4	5	6	7	8

18. **Uncunning** (not crafty or sly, tends to be straightforward with others)	1	2	3	4	5	6	7	8
19. **Extraverted** (like being with others; outgoing and lively around others)	1	2	3	4	5	6	7	8
20. **Cocky** (self-centred; conceited; thinks highly of one's own abilities)	1	2	3	4	5	6	7	8
21. **Dominant** (tends to lead others, like to command, take charge in a group)	1	2	3	4	5	6	7	8
22. **Antisocial** (dislike the company of others; behavior not affected by social rules)	1	2	3	4	5	6	7	8
23. **Perky** (lively, energetic around others)	1	2	3	4	5	6	7	8
24. **Forceful** (tends to take charge around others)	1	2	3	4	5	6	7	8
25. **Wily** (crafty, cagey, or tricky)	1	2	3	4	5	6	7	8
26. **Sly** (crafty, secretive, or cunning in dealing with others)	1	2	3	4	5	6	7	8
27. **Iron-hearted** (tends to be stern or harsh with others)	1	2	3	4	5	6	7	8
28. **Unbold** (not daring or courageous)	1	2	3	4	5	6	7	8
29. **Neighbourly** (friendly; likes to get involved with people around you)	1	2	3	4	5	6	7	8
30. **Shy** (lacking in self-confidence; tends to be uncomfortable around others)	1	2	3	4	5	6	7	8
31. **Undemanding** (doesn't demand or expect much from others)	1	2	3	4	5	6	7	8
32. **Meek** (timid, has trouble being assertive or standing up from others)	1	2	3	4	5	6	7	8
33. **Unwily** (not tricky or crafty)	1	2	3	4	5	6	7	8
34. **Self-assured** (confident, certain of oneself)	1	2	3	4	5	6	7	8
35. **Dissocial** (doesn't care for the company of others)	1	2	3	4	5	6	7	8
36. **Jovial** (cheerful; playful around others)	1	2	3	4	5	6	7	8
37. **Domineering** (tends to control or manipulate others)	1	2	3	4	5	6	7	8
38. **Tender-hearted** (easily feels love, pity or sorrow for others)	1	2	3	4	5	6	7	8
39. **Warmthless** (has no feeling of pleasure or affection for others)	1	2	3	4	5	6	7	8
40. **Unsly** (not tricky or cunning; tends to be genuine; sincere; trusting)	1	2	3	4	5	6	7	8
41. Enthusiastic (enjoys active involvement with others)	1	2	3	4	5	6	7	8
42. **Firm** (steadfast; does not give in easily; gets others to do things your way)	1	2	3	4	5	6	7	8
43. **Uncalculating** (doesn't try to manipulate others or maximize one's own gain)	1	2	3	4	5	6	7	8
44. **Accommodating** (obliging, tends to do favors for others)	1	2	3	4	5	6	7	8

45. **Uncheery** (not lively or jolly around others)	1	2	3	4	5	6	7	8
46. **Friendly** (open, accepting, warm around others)	1	2	3	4	5	6	7	8
47. **Cunning** (crafty, skillful at manipulating others, devious)	1	2	3	4	5	6	7	8
48. **Self-confident** (sure of oneself around others, devious)	1	2	3	4	5	6	7	8
49. **Unauthoritative** (doesn't try to influence others; goes with others' opinions)	1	2	3	4	5	6	7	8
50. **Uncrafty** (not tricky or sly when dealing with others)	1	2	3	4	5	6	7	8
51. **Unsympathetic** (not interested or concerned about others' feelings or problems)	1	2	3	4	5	6	7	8
52. **Charitable** (generous, like to help others)	1	2	3	4	5	6	7	8
53. **Coldhearted** (have little warmth or feelings for others; unfeeling; harsh)	1	2	3	4	5	6	7	8
54. **Distant** (tends to be cold toward others; tends to stay away from others)	1	2	3	4	5	6	7	8
55. **Forceless** (not forceful with others; timid or weak, find it hard to be assertive)	1	2	3	4	5	6	7	8
56. **Gentle-hearted** (warm or kind to others)	1	2	3	4	5	6	7	8
57. **Outgoing** (enjoy meeting other people)	1	2	3	4	5	6	7	8
58. **Sympathetic** (feel interested or sensitive to the feelings and problems of others)	1	2	3	4	5	6	7	8
59. **Boastless** (don't like to brag)	1	2	3	4	5	6	7	8
60. **Persistent** (doesn't give up even when others think you are wrong)	1	2	3	4	5	6	7	8
61. **Crafty** (can mislead or manipulate others for one's own purposes)	1	2	3	4	5	6	7	8
62. **Unsociable** (doesn't enjoy meeting people or being in the company of others)	1	2	3	4	5	6	7	8
63. **Cruel** (able to cause pain and suffering to others; unfeeling)	1	2	3	4	5	6	7	8
64. **Bashful** (tends to shy away from public attention)	1	2	3	4	5	6	7	8

PART II

- What was the source or sources of information that you used to challenge the memory?
- *Were you present when the original event (that you later challenged) occurred?

If yes…

- *Please describe in detail your memory for the event.

Please answer the following questions as you reflect specifically on your current memory for the original event.

***Recollection, belief in accuracy, and belief in occurrence**

1. How likely is it that you personally did in fact experience this event? (1 = *definitely did not happen*; 8 = *definitely happened*)
2. Do you have any doubts about the accuracy of your memory for this event? (1 = *a great deal of doubts;* 7 = *no doubts whatsoever*)
3. How strong is your memory for this event? (1 = *no memory*; 3 = *weak memory;* 5 = *moderate memory;* 7 = *strong memory*)
4. How confident are you that your memory for this event is accurate? (1 = *not at all confident*; 7 = *completely confident*)
5. Do you actually remember experiencing this event? (1 = *no memory of event at all*; 8 = *clear and complete memory for the event*)
6. How strong is your belief that this event actually occurred (whether or not you remember the event)? (1 = *no belief;* 3 = *weak belief;* 5 = *moderate belief;* 7 = *strong belief*)
7. What proportion of your memory for this event is accurate? (1 = *not at all accurate*; 7 = 100% *accurate*)
8. As you think about this event, can you actually remember it rather than just knowing that it occurred? (1 = *not at all*; 3 = *vaguely*; 5 = *distinctly*; 7 = *more than any event*)
9. It is true that this event occurred. (1 = *not at all true;* 7 = *completely true*)
10. How plausible is it that you personally could have experienced this event? (1 = *not at all plausible;* 8 = *extremely plausible*)

Items 1, 6, 9 assess Belief in Occurrence
Items 2, 4, 7, assess Belief in Accuracy
Items 3, 5, 8 assess Recollection
Item 10 is a stand-alone plausibility item.

Recollective phenomenology

1. When I think about this event its overall vividness is (1 = *vague*; 7 = *very vivid*)
2. When I think about this event it involves visual details. (1 = *not at all*, 7 = *very much*)
3. When I think about this event it involves sound. (1 = *not at all*, 7 = *very much*)
4. When I think about this event, the location where the event takes place is: (1 = *vague*, 7 = *clear/distinct*)
5. When I think about this event, the relative spatial arrangement of objects is: (1 = *vague*, 7 = *clear/distinct*)
6. When I think about this event, the relative spatial arrangement of people in my

memory is: (1 = *vague*, 7 = *clear/distinct*)
7. As I think about the event, I feel as though I am re-living it. (1 = *not at all*, 7 = *very much*)
8. While thinking about this event, I feel that I travel back to the time when it happened. (1 = *not at all*, 7 = *very much*)

Coherence & Connectedness

9. As I think about the event, it comes to me in words or in pictures as a coherent story or episode and not as isolated scenes, facts or thoughts: not at all, coherent story. (1 = *not at all*, 7 = *very much*)
10. As I think about the event, it is connected with other events. (1 = *not at all*, 7 = *very much*)

***Centrality of Event Scale – 7 items**

1. I feel that this event has become part of my identity. (1 = *totally disagree*; 5 = *totally agree*)
2. This event has become a reference point for the way I understand myself and the world. (1 = *totally disagree*; 5 = *totally agree*)
3. I feel that this event has become a central part of my life story. (1 = *totally disagree*; 5 = *totally agree*)
4. This event has colored the way I think and feel about other experiences. (1 = *totally disagree*; 5 = *totally agree*)
5. This event permanently changed my life. (1 = *totally disagree*; 5 = *totally agree*)
6. I often think about the effects this event will have on my future. (1 = *totally disagree*; 5 = *totally agree*)
7. This event was a turning point in my life. (1 = *totally disagree*; 5 = *totally agree*)

***PART III - Demographics**
Age:

Sex:

Ethnicity (please select):
__ Black/African/Caribbean
__ Chinese
__ Filipino
__ First Nations
__ Japanese
__ Latin American
__ Mixed
__ South Asian (e.g., East Indian, Pakistani, Sri Lankan)
__ Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian)
__ White
__ Other: _____

Highest level of education completed. If currently enrolled, please select the highest degree you have received:
__ No formal education
__ Elementary school
__ High school or equivalent (GED)
__ Community college
__ Bachelor's degree
__ Master's degree
__ Professional degree
__ Doctorate degree

Is English your first language?
Yes ○ No ○ If No, please indicate how long you've been speaking English for:

Please enter your Mechanical Turk ID in order to be compensated.

Appendix F

Screening Question for the Participant Pool – Study 2

With respect to your current or past partner/girlfriend/boyfriend/wife/husband, have you ever threatened, attempted, or completed any of the following: shouted, insulted, name-called, threw something at them, pushed or shoved them, slapped or grabbed them, kicked, punched, or insisted on sex or forced sex?

- ☐ **Yes**
- ☐ **No**

Appendix G
Testing Package – Study 2

Qualitative Questions

Version A: High Self-Threat condition presented first

Select a time that you have done any of the following to a past or present romantic partner or date: shouted, insulted, name-called, threw something at them, pushed or shoved them, slapped or grabbed them, kicked, punched, or insisted on sex or forced sex.

Please describe in as much detail as you can this event, including:

1. what you said/did
2. why you did what you did,
3. how you felt at the time
4. how you saw yourself at the time.

What was your (approximate) age when this occurred?

Version B: Low Self-Threat condition presented first

Select a time that you acted in a kind, supportive, and/or understanding way towards a past or present romantic partner or date (e.g., surprised the other with a gift or a dinner, purchased flowers).

Please describe in as much detail as you can this event, including:

1. what you said/did
2. why you did what you did,
3. how you felt at the time
4. how you saw yourself at the time.

What was your (approximate) age when this occurred?

The Positive and Negative Affect Schedule

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. Indicate to what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely

___	Interested	___	Irritable
___	Distressed	___	Alert
___	Excited	___	Ashamed
___	Upset	___	Inspired
___	Strong	___	Nervous
___	Guilty	___	Determined
___	Scared	___	Attentive
___	Hostile	___	Jittery
___	Enthusiastic	___	Active
___	Proud	___	Afraid

Centrality of Event Scale

Please think back upon _____ and answer the following questions in an honest and sincere way, by circling a number from 1 to 5.

	Totally Disagree				Totally Agree
1. This event has become a reference point for the way I understand new experiences.	1	2	3	4	5
2. I automatically see connections and similarities between this event and experiences in my present life.	1	2	3	4	5
3. I feel that this event has become part of my identity.	1	2	3	4	5
4. This event can be seen as a symbol or mark of important themes in my life.	1	2	3	4	5
5. This event is making my life different from the life of most other people.	1	2	3	4	5
6. This event has become a reference point for the way I understand myself and the world.	1	2	3	4	5
7. I believe that people who haven't experienced this type of event think differently than I do.	1	2	3	4	5
8. This event tells a lot about who I am.	1	2	3	4	5
9. I often see connections and similarities between this event and my current relationships with other people.	1	2	3	4	5
10. I feel that this event has become a central part of my life story.	1	2	3	4	5
11. I believe that people who haven't experienced this type of event, have a different way of looking upon themselves than I have.	1	2	3	4	5
12. This event has colored the way I think and feel about other experiences.	1	2	3	4	5
13. This event has become a reference point for the way I look upon my future.	1	2	3	4	5
14. If I were to weave a carpet of my life, this event would be in the middle with threads going out to many other experiences.	1	2	3	4	5
15. My life story can be divided into two main chapters: one is before and one is after this event happened.	1	2	3	4	5
16. This event permanently changed my life.	1	2	3	4	5
17. I often think about the effects this event will have on my future.	1	2	3	4	5
18. This event was a turning point in my life.	1	2	3	4	5
19. If this event had not happened to me, I would be a different person today.	1	2	3	4	5
20. When I reflect upon my future, I often think back to this event.	1	2	3	4	5

Please answer the following questions as you reflect specifically on your current memory for the original event.

Recollection, belief in accuracy, and belief in occurrence

1. How likely is it that you personally did in fact experience this event? (1 = *definitely did not happen*; 8 = *definitely happened*)
2. Do you have any doubts about the accuracy of your memory for this event? (1 = *a great deal of doubts;* 7 = *no doubts whatsoever*)
3. How strong is your memory for this event? (1 = *no memory*; 3 = *weak memory;* 5 = *moderate memory;* 7 = *strong memory*)
4. How confident are you that your memory for this event is accurate? (1 = *not at all confident*; 7 = *completely confident*)
5. Do you actually remember experiencing this event? (1 = *no memory of event at all*; 8 = *clear and complete memory for the event*)
6. How strong is your belief that this event actually occurred (whether or not you remember the event)? (1 = *no belief;* 3 = *weak belief;* 5 = *moderate belief;* 7 = *strong belief*)
7. What proportion of your memory for this event is accurate? (1 = *not at all accurate*; 7 = 100% *accurate*)
8. As you think about this event, can you actually remember it rather than just knowing that it occurred? (1 = *not at all*; 3 = *vaguely*; 5 = *distinctly*; 7 = *more than any event*)
9. It is true that this event occurred. (1 = *not at all true;* 7 = *completely true*)
10. How plausible is it that you personally could have experienced this event? (1 = *not at all plausible;* 8 = *extremely plausible*)

Recollective phenomenology

1. When I think about this event it the overall vividness is (1 = *vague*; 7 = *very vivid*)
2. When I think about this event it involves visual details. (1 = *not at all*, 7 = *very much*)
3. When I think about this event it involves sound. (1 = *not at all*, 7 = *very much*)
4. When I think about this event, the location where the event takes place is: (1 = *vague*, 7 = *clear/distinct*)
5. When I think about this event, the relative spatial arrangement of objects is: (1 = *vague*, 7 = *clear/distinct*)
6. When I think about this event, the relative spatial arrangement of people in my memory is: (1 = *vague*, 7 = *clear/distinct*)
7. As I think about the event, I feel as though I am re-living it. (1 = *not at all*, 7 = *very much*)
8. While thinking about this event, I feel that I travel back to the time when it happened. (1 = *not at all*, 7 = *very much*)
9. As I think about the event, it comes to me in words or in pictures as a coherent story or episode and not as isolated scenes, facts or thoughts: not at all, coherent story. (1 = *not at all*, 7 = *very much*)
10. As I think about the event, it is connected with other events. (1 = *not at all*, 7 = *very much*)

Personal Attributes Rating Scale

Rate the following adjectives on a scale from 1 (not at all) to 9 (extremely).

	YOUR STANDING OVER THE PAST YEAR									**YOUR STANDING <u>IMMEDIATELY PRIOR</u> TO THE EVENT**								
	Not at all								**Extremely**	**Not at all**								**Extremely**
1. Kind	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
2. Tolerant	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
3. Good-natured	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
4. Open-minded	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
5. Appreciative of others	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
6. Unselfish	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
7. Knowledgeable	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
8. Courageous	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
9. Experienced	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
10. Strong coping skills	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
11. Self-confident	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
12. Wise	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
13. Strong sense of inner strength	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
14. Ability to cope with change	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
15. Intelligent	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
16. Insightful about oneself	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
17. Insightful about other people	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
18. Strong desire to take better care of oneself	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
19. Appreciative of what I have	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
20. Good sense of my abilities and limitations	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
21. Good sense of priorities in life	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
22. Mature	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
23. Honest	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
24. Reliable	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9

25. Tidy	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
26. Happy about life	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
27. Healthy	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9

Sense of Closure Scale

	Not at all						Very much
1. I have complete closure on this event	1	2	3	4	5	6	7
2. The event seems like ancient history to me.	1	2	3	4	5	6	7
3. The event is a ‘closed book’ to me.	1	2	3	4	5	6	7
4. The event is “unfinished business” for me.	1	2	3	4	5	6	7
5. I have put the event behind me completely.	1	2	3	4	5	6	7
6. I just wish I could figure out why this event happened.*	1	2	3	4	5	6	7

Note. *Item 6 was dropped from the Sense of Closure Scale.

Test of Self-Conscious Affect, Version 3S

Below are situations that people are likely to encounter in day-to-day life, followed by several common reactions to those situations.

As you read each scenario, try to imagine yourself in that situation. Then indicate how likely you would be to react in each of the ways described. We ask you to rate all responses because people may feel or react more than one way to the same situation, or they may react different ways at different times.

For example:

A. You wake up early one Saturday morning. It is cold and rainy outside

	Not likely				Very likely
a. You would telephone a friend to catch up on news	**1**	2	3	4	5
b. You would take the extra time to read the paper.	1	2	3	4	**5**
c. You would feel disappointed that it's raining	1	2	**3**	4	5
d. You would wonder why you woke up so early	1	2	3	**4**	5

In the above example, I've rated all of the answers by circling a number. I circled "1" for answer (a) because I wouldn't want to wake up a friend very early on a Saturday morning— so it's not at all likely that I would do that. I circled a "5" for answer (b) because I almost always read the paper if I have time in the morning (very likely). I circled a "3" for answer (c) because for me it's about half and half. Sometimes I would be disappointed about the rain and sometimes I wouldn't—it would depend on what I had planned. And I circled a "4" for answer (d) because I would probably wonder why I had awakened so early.

Please do not skip any items—rate all responses

1. You make plans to meet a friend for lunch. At five o'clock, you realize you have stood your friend up.

	Not Likely				Very Likely
a. You would think, "I'm inconsiderate."	1	2	3	4	5
b. You would think: "Well, my friend will understand."	1	2	3	4	5
c. You'd think you should make it up to your friend as soon as possible	1	2	3	4	5
d. You would think, "My boss distracted me just before lunch."	1	2	3	4	5

2. You break something at work and then hide it.

	Not Likely				Very Likely
a. You would think, "This is making me anxious. I need to either fix it or get someone else to."	1	2	3	4	5
b. You would think about quitting.	1	2	3	4	5

c. You would think, “A lot of things aren’t made very well these days.”	1	2	3	4	5
d. You would think: "It was only an accident."	1	2	3	4	5

3. At work, you wait until the last minute to plan a project, and it turns out badly.

	Not Likely				Very Likely
a. You would feel incompetent.	1	2	3	4	5
b. You would think, “There are never enough hours in the day.”	1	2	3	4	5
c. You would feel, “I deserve to be reprimanded for mismanaging the project.”	1	2	3	4	5
d. You would think: "What's done is done."	1	2	3	4	5

4. You make a mistake at work and find out a co-worker is blamed for the error.

	Not Likely				Very Likely
a. You would think the company did not like the co-worker.	1	2	3	4	5
b. You would think: "Life is not fair."	1	2	3	4	5
c. You would keep quiet and avoid the co-worker.	1	2	3	4	5
d. You would feel unhappy and eager to correct the situation	1	2	3	4	5

5. While playing around, you throw a ball, and it hits your friend in the face.

	Not Likely				Very Likely
a. You would feel inadequate that you can’t even throw a ball	1	2	3	4	5
b. You would think maybe your friend needs more practice at catching.	1	2	3	4	5
c. You would think: "It was just an accident."	1	2	3	4	5
c. You would apologize and make sure your friend feels better.	1	2	3	4	5

6. You are driving down the road, and you hit a small animal.

	Not Likely				Very Likely
a. You would think the animal shouldn’t have been on the road.	1	2	3	4	5
b. You would think, “I’m terrible.”	1	2	3	4	5
c. You would feel: "Well, it was an accident."	1	2	3	4	5
d.. You’d feel bad you hadn’t been more alert [while] driving down the road	1	2	3	4	5

7. You walk out of an exam thinking you did extremely well; then you find out you

did poorly.

	Not Likely				Very Likely
a. You would think: "Well, it's just a test."	1	2	3	4	5
a. You would think, “The instructor doesn’t like me.”	1	2	3	4	5
b. You would think, “I should have studied harder.”	1	2	3	4	5
c. You would feel stupid.	1	2	3	4	5

8. While out with a group of friends, you make fun of a friend who’s not there.

	Not Likely				Very Likely
a. You would think: "It was all in fun; it's harmless."	1	2	3	4	5
a. You would feel small . . . like a rat.	1	2	3	4	5
b. You would think that perhaps that friend should have been there to defend himself/herself.	1	2	3	4	5
c. You would apologize and talk about that person’s good points.	1	2	3	4	5

9. You make a big mistake on an important project at work. People were depending on you, and your boss criticizes you.

	Not Likely				Very Likely
a. You would think your boss should have been more clear about what was expected of you.	1	2	3	4	5
b. You would feel as though you want to hide.	1	2	3	4	5
c. You would think, “I should have recognized the problem and done a better job.”	1	2	3	4	5
d. You would think: "Well, nobody's perfect."	1	2	3	4	5

10. You are taking care of your friend’s dog while she is on vacation and the dog runs away.

	Not Likely				Very Likely
a. You would think, “I am irresponsible and incompetent.”	1	2	3	4	5
b. You would think your friend must not take very good care of her dog or it wouldn’t have run away.	1	2	3	4	5
c. You would vow to be more careful next time.	1	2	3	4	5
d. You would think your friend could just get a new dog.	1	2	3	4	5

11. You attend your co-worker’s housewarming party, and you spill red wine on a new cream-colored carpet, but you think no one notices.

	Not Likely				Very Likely
a. You think your co-worker should have expected some	1	2	3	4	5

accidents at such a big party.					
b. You would stay late to help clean up the stain after the party.	1	2	3	4	5
c. You would wish you were anywhere but at the party.	1	2	3	4	5
d. You would wonder why your co-worker chose to serve red wine with the new light carpet.	1	2	3	4	5

Psychological Aggression Scale

Have you ever:	**Circle your answer**
1. Shouted or yelled at a partner	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
2. Ignored, shut out, or given a partner the silent treatment?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
3. Called a partner hurtful names?	**Yes No**
(If yes) In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
4. Criticized or put down a partner in front of others?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
5. Limited a partner's contact with others such as family or friends?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
6. Controlled a partner's behavior or activities in any way?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents

	5 = 11-20 incidents 6 = More than 20 times incidents
7. Acted jealous or suspicious of a partner's other relationships? (If yes): In the past 12 months, how often have you done this?	**Yes No** 1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
8. Insulted or sworn at a partner? (If yes): In the past 12 months, how often have you done this?	**Yes No** 1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
9. Intentionally destroyed something belonging to a partner? (If yes): In the past 12 months, how often have you done this?	**Yes No** 1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
10. Threatened to hit, hurt, or throw something at a partner? (If yes): In the past 12 months, how often have you done this?	**Yes No** 1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
11. Thrown, smashed, hit, or kicked something in a partner's presence? (If yes): In the past 12 months, how often have you done this?	**Yes No** 1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
12. Threatened to hurt a partner if they left the relationship? (If yes): In the past 12 months, how often have you done this?	**Yes No** 1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents

13. Threatened to hurt yourself if a partner left the relationship?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents

Physical Aggression Scale

Have you ever:	**Circle your answer**
1. Pushed or shoved a partner?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
2. Slapped a partner?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
3. Thrown something at a partner that could hurt?	**Yes No**
(If yes) In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
4. Twisted a partner's arm or hair?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
5. Used a knife or gun on a partner?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
6. Punched a partner?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents

7. Hit a partner with something that could hurt?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
8. Choked a partner?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
9. Slammed a partner against a wall?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
10. Beaten up a partner?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
11. Grabbed a partner or held a partner down in anger?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
12. Burned or scalded a partner on purpose?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
13. Kicked a partner?	**Yes No**
(If yes): In the past 12 months, how often have you done this?	1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents

	4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents
14. Scratched or bitten a partner during a conflict? (If yes): In the past 12 months, how often have you done this?	**Yes No** 1 = 1 incident 2 = 2 incidents 3 = 3-5 incidents 4 = 6-10 incidents 5 = 11-20 incidents 6 = More than 20 times incidents

Interpersonal Adjective Scales

Please rate how accurately each word describes you as a person. Judge how accurately each word describes you on the following scale.

1	2	3	4	5	6	7	8
extremely inaccurate	very inaccurate	quite inaccurate	slightly inaccurate	slightly accurate	quite accurate	very accurate	extremely accurate

For example, consider the word "**Introverted**". How accurately does that word describe you as a person? If you think this is a ***quite accurate*** description of you, you would select the number "**6**" in the space next to the word "Introverted". If you think this word is ***slightly inaccurate*** as a description of you, you would select the number "4". If it is ***very inaccurate*** you would select "2", and so on… It is very important that you do not skip any. If you are uncertain about the meaning of a word, please consult the definitions provided in the brackets.

1.	**Introverted** (feels more comfortable by oneself; is less interested in other people)	1	2	3	4	5	6	7	8
2.	**Assertive** (tends to be aggressive and outspoken with others)	1	2	3	4	5	6	7	8
3.	**Timid** (tends to be fearful or uncomfortable around others)	1	2	3	4	5	6	7	8
4.	**Unargumentative** (tends to avoid arguments or fights)	1	2	3	4	5	6	7	8
5.	**Boastful** (tends to brag)	1	2	3	4	5	6	7	8
6.	**Soft-hearted** (tends to be easy-going or gentle with others)	1	2	3	4	5	6	7	8
7.	**Ruthless** (pursues one's own interests regardless of the effect on others)	1	2	3	4	5	6	7	8
8.	**Kind** (thoughtful and caring for others)	1	2	3	4	5	6	7	8
9.	**Cheerful** (happy, usually in good spirits)	1	2	3	4	5	6	7	8
10.	**Unsparkling** (not lively or entertaining with others)	1	2	3	4	5	6	7	8
11.	**Tricky** (can be deceiving toward others in order to get something; able to fool others)	1	2	3	4	5	6	7	8
12.	**Unaggressive** (tends to be mild-mannered, not forceful around others)	1	2	3	4	5	6	7	8
13.	**Calculating** (tends to use or manipulate others to your own advantage)	1	2	3	4	5	6	7	8
14.	**Tender** (warm and loving with others)	1	2	3	4	5	6	7	8
15.	**Hard-hearted** (unconcerned and unfeeling toward others)	1	2	3	4	5	6	7	8
16.	**Unneighbourly** (unfriendly, aloof toward others, avoid contact with others)	1	2	3	4	5	6	7	8
17.	**Uncharitable** (dislike helping others; tends to	1	2	3	4	5	6	7	8

judge others harshly)

18.	**Uncunning** (not crafty or sly, tends to be straightforward with others)	1	2	3	4	5	6	7	8
19.	**Extraverted** (like being with others; outgoing and lively around others)	1	2	3	4	5	6	7	8
20.	**Cocky** (self-centred; conceited; thinks highly of one's own abilities)	1	2	3	4	5	6	7	8
21.	**Dominant** (tends to lead others, like to command, take charge in a group)	1	2	3	4	5	6	7	8
22.	**Antisocial** (dislike the company of others; behavior not affected by social rules)	1	2	3	4	5	6	7	8
23.	**Perky** (lively, energetic around others)	1	2	3	4	5	6	7	8
24.	**Forceful** (tends to take charge around others)	1	2	3	4	5	6	7	8
25.	**Wily** (crafty, cagey, or tricky)	1	2	3	4	5	6	7	8
26.	**Sly** (crafty, secretive, or cunning in dealing with others)	1	2	3	4	5	6	7	8
27.	**Iron-hearted** (tends to be stern or harsh with others)	1	2	3	4	5	6	7	8
28.	**Unbold** (not daring or courageous)	1	2	3	4	5	6	7	8
29.	**Neighbourly** (friendly; likes to get involved with people around you)	1	2	3	4	5	6	7	8
30.	**Shy** (lacking in self-confidence; tends to be uncomfortable around others)	1	2	3	4	5	6	7	8
31.	**Undemanding** (doesn't demand or expect much from others)	1	2	3	4	5	6	7	8
32.	**Meek** (timid, has trouble being assertive or standing up from others)	1	2	3	4	5	6	7	8
33.	**Unwily** (not tricky or crafty)	1	2	3	4	5	6	7	8
34.	**Self-assured** (confident, certain of oneself)	1	2	3	4	5	6	7	8
35.	**Dissocial** (doesn't care for the company of others)	1	2	3	4	5	6	7	8
36.	**Jovial** (cheerful; playful around others)	1	2	3	4	5	6	7	8
37.	**Domineering** (tends to control or manipulate others)	1	2	3	4	5	6	7	8
38.	**Tender-hearted** (easily feels love, pity or sorrow for others)	1	2	3	4	5	6	7	8
39.	**Warmthless** (has no feeling of pleasure or affection for others)	1	2	3	4	5	6	7	8
40.	**Unsly** (not tricky or cunning; tends to be genuine; sincere; trusting)	1	2	3	4	5	6	7	8
41.	**Enthusiastic** (enjoys active involvement with others)	1	2	3	4	5	6	7	8
42.	**Firm** (steadfast; does not give in easily; gets others to do things your way)	1	2	3	4	5	6	7	8
43.	**Uncalculating** (doesn't try to manipulate others or maximize one's own gain)	1	2	3	4	5	6	7	8

44.	**Accommodating** (obliging, tends to do favors for others)	1	2	3	4	5	6	7	8
45.	**Uncheery** (not lively or jolly around others)	1	2	3	4	5	6	7	8
46.	**Friendly** (open, accepting, warm around others)	1	2	3	4	5	6	7	8
47.	**Cunning** (crafty, skillful at manipulating others, devious)	1	2	3	4	5	6	7	8
48.	**Self-confident** (sure of oneself around others, devious)	1	2	3	4	5	6	7	8
49.	**Unauthoritative** (doesn't try to influence others; goes with others' opinions)	1	2	3	4	5	6	7	8
50.	**Uncrafty** (not tricky or sly when dealing with others)	1	2	3	4	5	6	7	8
51.	**Unsympathetic** (not interested or concerned about others' feelings or problems)	1	2	3	4	5	6	7	8
52.	**Charitable** (generous, like to help others)	1	2	3	4	5	6	7	8
53.	**Coldhearted** (have little warmth or feelings for others; unfeeling; harsh)	1	2	3	4	5	6	7	8
54.	**Distant** (tends to be cold toward others; tends to stay away from others)	1	2	3	4	5	6	7	8
55.	**Forceless** (not forceful with others; timid or weak, find it hard to be assertive)	1	2	3	4	5	6	7	8
56.	**Gentle-hearted** (warm or kind to others)	1	2	3	4	5	6	7	8
57.	**Outgoing** (enjoy meeting other people)	1	2	3	4	5	6	7	8
58.	**Sympathetic** (feel interested or sensitive to the feelings and problems of others)	1	2	3	4	5	6	7	8
59.	**Boastless** (don't like to brag)	1	2	3	4	5	6	7	8
60.	**Persistent** (doesn't give up even when others think you are wrong)	1	2	3	4	5	6	7	8
61.	**Crafty** (can mislead or manipulate others for one's own purposes)	1	2	3	4	5	6	7	8
62.	**Unsociable** (doesn't enjoy meeting people or being in the company of others)	1	2	3	4	5	6	7	8
63.	**Cruel** (able to cause pain and suffering to others; unfeeling)	1	2	3	4	5	6	7	8
64.	**Bashful** (tends to shy away from public attention)	1	2	3	4	5	6	7	8

Positive Mood Induction

Please select a positive memory that you still believe truly occurred. Please answer the following questions as you reflect on this believed memory.

Please briefly describe the event:

What was your (approximate) age when this event took place?

Please answer the following questions as you reflect specifically on your current memory for the original event.

Recollection, belief in accuracy, and belief in occurrence

11. How likely is it that you personally did in fact experience this event? (1 = *definitely did not happen*; 8 = *definitely happened*)
12. Do you have any doubts about the accuracy of your memory for this event? (1 = *a great deal of doubts;* 7 = *no doubts whatsoever*)
13. How strong is your memory for this event? (1 = *no memory*; 3 = *weak memory;* 5 = *moderate memory;* 7 = *strong memory*)
14. How confident are you that your memory for this event is accurate? (1 = *not at all confident*; 7 = *completely confident*)
15. Do you actually remember experiencing this event? (1 = *no memory of event at all*; 8 = *clear and complete memory for the event*)
16. How strong is your belief that this event actually occurred (whether or not you remember the event)? (1 = *no belief;* 3 = *weak belief;* 5 = *moderate belief;* 7 = *strong belief*)
17. What proportion of your memory for this event is accurate? (1 = *not at all accurate*; 7 = 100% *accurate*)
18. As you think about this event, can you actually remember it rather than just knowing that it occurred? (1 = *not at all*; 3 = *vaguely*; 5 = *distinctly*; 7 = *more than any event*)
19. It is true that this event occurred. (1 = *not at all true;* 7 = *completely true*)
20. How plausible is it that you personally could have experienced this event? (1 = *not at all plausible;* 8 = *extremely plausible*)

Recollective phenomenology

11. When I think about this event it the overall vividness is (1 = *vague*; 7 = *very vivid*)
12. When I think about this event it involves visual details. (1 = *not at all*, 7 = *very much*)
13. When I think about this event it involves sound. (1 = *not at all*, 7 = *very much*)
14. When I think about this event, the location where the event takes place is: (1 = *vague*, 7 = *clear/distinct*)
15. When I think about this event, the relative spatial arrangement of objects is: (1 = *vague*, 7 = *clear/distinct*)
16. When I think about this event, the relative spatial arrangement of people in my memory is: (1 = *vague*, 7 = *clear/distinct*)
17. As I think about the event, I feel as though I am re-living it. (1 = *not at all*, 7 = *very*

much)

18. While thinking about this event, I feel that I travel back to the time when it happened. (1 = *not at all*, 7 = *very much*)
19. As I think about the event, it comes to me in words or in pictures as a coherent story or episode and not as isolated scenes, facts or thoughts: not at all, coherent story. (1 = *not at all*, 7 = *very much*)
20. As I think about the event, it is connected with other events. (1 = *not at all*, 7 = *very much*)

Demographics

Age:

Sex:

Ethnicity (please select):
__ Black/African/Caribbean
__ Chinese
__ Filipino
__ First Nations
__ Japanese
__ Latin American
__ Mixed
__ South Asian (e.g., East Indian, Pakistani, Sri Lankan)
__ Southeast Asian (e.g., Vietnamese, Cambodian, Malaysian)
__ White
__ Other: _____

Highest level of education completed. If currently enrolled, please select the highest degree you have received:
__ No formal education
__ Elementary school
__ High school or equivalent (GED)
__ Community college
__ Bachelor's degree
__ Master's degree
__ Professional degree
__ Doctorate degree

Is English your first language?
Yes ○ No ○ If No, please indicate how long you've been speaking English for:

Please enter your UWindsor name and email address in order to receive participant pool credit for your participation: _____

Appendix H
Order of Measures – Study 2

Version A

1. Letter of Information
2. High self-threat prompt
    a. Positive and Negative Affect Schedule
    b. Appraisals:
        i. Centrality of Event Scale
        ii. Measures of belief in accuracy, occurrence, recollection.
        iii. Recollective phenomenology
        iv. Personal Attributes Rating Scale
        v. Sense of Closure Scale
3. Low self-threat prompt
    a. Positive and Negative Affect Schedule
    b. Appraisals:
        i. Centrality of Event Scale
        ii. Measures of belief in accuracy, occurrence, recollection.
        iii. Recollective phenomenology
        iv. Personal Attributes Rating Scale
        v. Sense of Closure Scale
4. Other variables:
    a. Test of Self Conscious Affect – Version 3 (short version)
    b. Psychological Aggression scale; Physical Aggression Scale
    c. Interpersonal Adjective Scales
5. Positive mood induction
    a. Measures of belief in accuracy, occurrence, recollection.
    b. Recollective phenomenology
6. Demographics
7. Resource sheet

Version B

1. Letter of Information
2. Low self-threat prompt
    a. Positive and Negative Affect Schedule
    b. Appraisals:
        i. Centrality of Event Scale
        ii. Measures of belief in accuracy, occurrence, recollection.
        iii. Recollective phenomenology
        iv. Personal Attributes Rating Scale
        v. Sense of Closure Scale
3. High self-threat prompt
    a. Positive and Negative Affect Schedule
    b. Appraisals:
        i. Centrality of Event Scale
        ii. Measures of belief in accuracy, occurrence, recollection.
        iii. Recollective phenomenology
        iv. Personal Attributes Rating Scale
        v. Sense of Closure Scale
4. Other variables:
    a. Test of Self Conscious Affect – Version 3 (short version)
    b. Psychological Aggression scale; Physical Aggression Scale
    c. Interpersonal Adjective Scales
5. Positive mood induction
    a. Measures of belief in accuracy, occurrence, recollection.
    b. Recollective phenomenology
6. Demographics
7. Resource sheet

Appendix I
Item-by-item Analyses

Table 1

Item-by-item Analysis of Sense of Closure Scale-5 Items

		Men					Women				
					High vs. low self-threat					*High vs. low self-threat*	
Sense of Closure items	Condition	*M*	*N*	*SD*	*95%CI*		*M*	*N*	*SD*	*95%CI*	
1. I have complete closure on this event	High self-threat	5.55	111	1.81	**–0.93**	**–0.13**	5.08	108	1.90	**–1.20**	**–0.30**
	Low self-threat	6.08	111	1.42			5.83	108	1.90		
2. The event seems like ancient history to me.	High self-threat	4.65	110	1.93	**0.30**	**1.23**	4.46	110	2.06	**0.40**	**1.42**
	Low self-threat	3.89	110	2.09			3.55	110	2.23		
3. The event is a 'closed book' to me.	High self-threat	5.49	108	1.71	–0.01	0.99	4.83	109	2.05	–0.22	0.76
	Low self-threat	5.00	108	2.04			4.57	109	2.19		
4. The event is “unfinished business” for me. (Reverse coded)	High self-threat	5.64	109	1.77	–0.81	0.09	4.80	110	2.07	**–1.14**	**–0.19**
	Low self-threat	6.00	109	1.75			5.46	110	1.90		
5. I have put the event behind me completely.	High self-threat	5.22	109	1.86	**0.13**	**1.12**	4.60	109	2.06	**0.11**	**1.08**
	Low self-threat	4.60	109	2.02			4.00	109	2.27		

Note. The values in bold are statistically significant at $p < .05$.

Table 2

Item-by-item Analysis of Sense of Closure Scale Items

		Men			High vs. low self-threat		Women			High vs. low self-threat	
Centrality of Event Scale items	Condition	*M*	*SD*	*N*	*95% CI*		*Mean*	*SD*	*N*	*95% CI*	
1. This event has become a reference point for the way I understand new experiences.	High self-threat	3.17	1.22	111			3.17	1.23	108		
	Low self-threat	3.00	1.19	111	–0.11	0.45	2.55	1.22	108	**0.36**	**0.88**
2. I automatically see connections and similarities between this event and experiences in my present life.	High self-threat	2.84	1.30	109			2.77	1.24	109		
	Low self-threat	3.07	1.22	109	–0.57	0.11	3.03	1.23	109	–0.57	0.05
3. I feel that this event has become part of my identity.	High self-threat	2.37	1.26	111			2.38	1.31	110		
	Low self-threat	2.81	1.29	111	**–0.75**	**–0.13**	2.42	1.24	110	–0.33	0.26
4. This event can be seen as a symbol or mark of important themes in my life.	High self-threat	2.61	1.34	111			2.65	1.41	109		
	Low self-threat	3.26	1.25	111	**-0.95**	**-0.35**	2.62	1.18	109	–0.27	0.32
5. This event is making my life different from the life of most other people.	High self-threat	2.26	1.33	111			2.22	1.23	110		
	Low self-threat	2.43	1.28	111	–0.47	0.12	2.23	1.13	110	–0.24	0.22
6. This event has become a reference point for the way I understand myself and the world.	High self-threat	2.61	1.29	111			2.81	1.26	108		
	Low self-threat	2.77	1.26	111	–0.46	0.14	2.50	1.23	108	**0.03**	**0.58**
7. I believe that people who haven't experienced this type of event think differently than I do.	High self-threat	2.92	1.38	110			2.86	1.31	109		
	Low self-threat	2.81	1.22	110	-0.22	0.44	2.45	1.21	109	**0.12**	**0.70**
8. This event tells a lot about who I am.	High self-threat	2.39	1.27	111			2.73	1.20	108		
	Low self-threat	3.52	1.16	111	**–1.44**	**–0.83**	3.57	1.19	108	**–1.15**	**–0.54**
9. I often see connections and similarities between this event and my current relationships with other people.	High self-threat	2.47	1.31	110			2.63	1.28	110		
	Low self-threat	2.89	1.21	110	**–0.77**	**–0.07**	3.15	1.22	110	**–0.82**	**–0.21**
10. I feel that this event has become a central part of my life story.	High self-threat	2.15	1.30	111			2.23	1.24	110		
	Low self-threat	2.53	1.31	111	**–0.66**	**–0.09**	2.06	1.20	110	–0.10	0.42
11. I believe that people who haven't experienced this type of event, have a different way of looking upon themselves	High self-threat	2.76	1.41	110			2.81	1.30	110		
	Low self-threat	2.75	1.21	110	–0.29	0.32	2.40	1.17	110	0.14	0.68

than I have.											
12. This event has colored the way I think and feel about other experiences.	High self-threat	2.77	1.30	109			2.88	1.25	109		
	Low self-threat	2.85	1.22	109	–0.38	0.21	2.50	1.28	109	0.11	0.65
13. This event has become a reference point for the way I look upon my future.	High self-threat	2.59	1.37	111			2.63	1.36	110		
	Low self-threat	2.82	1.34	111	–0.54	0.09	2.45	1.21	110	–0.10	0.46
14. If I were to weave a carpet of my life, this event would be in the middle with threads going out to many other experiences.	High self-threat	1.99	1.23	109			2.16	1.23	107		
	Low self-threat	2.36	1.32	109	**–0.62**	**-0.11**	1.96	1.16	107	–0.05	0.44
15. My life story can be divided into two main chapters: one is before and one is after this event happened.	High self-threat	2.11	1.30	110			2.32	1.48	109		
	Low self-threat	2.12	1.40	110	–0.32	0.30	1.75	1.14	109	**0.27**	**0.87**
16. This event permanently changed my life.	High self-threat	2.58	1.43	110			2.49	1.41	110		
	Low self-threat	2.33	1.42	110	–0.08	0.59	1.92	1.15	110	**0.27**	**0.88**
17. I often think about the effects this event will have on my future.	High self-threat	2.23	1.22	111			2.33	1.23	105		
	Low self-threat	2.38	1.36	111	–0.41	0.12	2.07	1.23	105	–0.02	0.56
18. This event was a turning point in my life.	High self-threat	2.54	1.35	109			2.66	1.42	108		
	Low self-threat	2.33	1.39	109	–0.12	0.54	1.95	1.17	108	**0.40**	**1.01**
19. If this event had not happened to me, I would be a different person today.	High self-threat	2.79	1.44	111			2.71	1.36	109		
	Low self-threat	2.46	1.46	111	**0.01**	**0.65**	1.97	1.23	109	**0.43**	**1.04**
20. When I reflect upon my future, I often think back to this event.	High self-threat	2.18	1.17	111			2.45	1.32	110		
	Low self-threat	2.48	1.31	111	**–0.58**	**–0.02**	2.08	1.17	110	**0.09**	**0.65**

Note. The values in bold are statistically significant at $p < .05$.

Appendix J

Coding Frame: Motives For Challenging Others' Memories

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TABLE OF CONTENTS

PURPOSE OF THIS CODING MANUAL

- In this study, participants were asked to write about a time in which they challenged someone else's account of a past event. The instructions specifically asked them to describe:
    - **How** they challenged the other.
    - **Why** they challenged the other.

- Use this manual to code the reasons participants themselves identify as motivating their challenge. In other words, although you may detect numerous reasons for initiating a challenge, you are being asked to code ONLY those reason(s) the participant himself/herself explicitly identifies in his/her writing.

- In every account, you will find at least 2 players:
    - **The challenger** = the participant in this study.
    - **The challenged party** (the challengee) = the other
- Some accounts may involve the following additional players:
    - A third party other = a person who was absent when the challenge occurred but may have been present when the challenged event occurred.

- Throughout this coding manual, the labels "participant(s)" and "challenger(s)" are equivalent; they denote the same individual.

- Throughout this coding manual, the words "reason(s)" and "motive(s)" are used interchangeably.

GENERAL CODING GUIDELINES

- Read this document entirely before you begin coding. Be sure that you understand the definitions for the major categories and are able to distinguish amongst them.

- Always code from the perspective of the challenger.

- Do not infer beyond what is *explicitly stated* by the participant as motive for challenging, unless directed otherwise. Code ONLY what the participant says and do not put forth your own opinion while coding.

- The coding categories devised here are not mutually exclusive or exhaustive. A single statement can be coded under multiple categories.

- In every participant's narrative, attempt to assess which is the focal event. For consistency in coding, pick the broadest grain size (e.g., if participant speaks about a fight in which she was hit, and she said that her partner denied the hitting [but not the fight], see the overall fight as the focal event, not the hitting).

- In most cases, you will be able to identify the focal event from reading the participant's response to "*Describe **how** you challenged this person's memory. What did you say or do to challenge the memory?"* For further context or clarity, it is helpful to consult the participant's response to "*Describe your memory for the event that you chose to challenge."*

- In every participant's response to "**why**" they challenged, it will be helpful to segment and paraphrase their reasons without any embellishments or repetitive words. Paraphrasing involves identifying the logical proposition or statement being made independent of any filler or embellished words.

    - One reason for challenging = one unit of coding.
    - One unit of coding can receive multiple category codes, but only one subcategory code within any one category.

- Do NOT use the response to the following question to code motive: "*Describe your memory for the event that you chose to challenge".* This should only serve as context and help clarify the recalled event.

- Do not discuss your coding strategies or tendencies with other coders until the entire data set is complete and you are instructed to do so.

- Note categories or concepts you find confusing or difficult to distinguish from other categories.

- If you have any questions, ideas, comments, please contact Fiona at dyshnik@uwindsor.ca

STRATEGY FOR CODING MOTIVES

FIRST STEP, read the participant's response to the question "Describe **why** you challenged the other person's memory?"

- *Segment and paraphrase the reasons for challenging (see General Coding Guidelines for this). One reason for challenging = one coding unit.*
- Code mostly everything here as motive.
- At times, there may be extraneous information included in this answer that does not relate to motive. Extraneous information will usually be obvious from the context. If in doubt, code as motive.
    - Example: "I was absolutely sure that I was right and he was wrong. I made the effort to not say a bad word. It doesn't always work, but this time I am positive it did work."
        - "I was absolutely sure that I was right and he was wrong" = Motive. The participant is stating that they challenged because they were confident they were right and the other was wrong.
        - "I made the effort to not say a bad word. It doesn't always work, but this time I am positive it did work" = Extraneous info. Although revealing about the participant himself/herself, these two sentences do not speak to motive for challenging.

SECOND STEP, read the participant's response to the question "Describe **how** you challenged this person's memory. What did you say or do to challenge the memory?"

- Be selective about what you code here as motive. There may be extraneous information included in this answer that does not relate to motive.
- If a participant hints at a motive (however implicitly) when answering "**why**", and then elaborates explicitly on that same motive when answering "**how**", you can code that particular "how" content as a motive. If, however, a participant discusses or hints at a motive while answering "**how**" that is not mentioned in any way while answering "**why**", do not code as motive.
    - **REMEMBER:** Prioritize "**why**" answers at all times! Statements inside "**how**" response are only coded if they are contained, discussed, or hinted at in "**why**" response.
- As a very general guide, it is safe to use "**how**" if you see the following in the "**why**" responses:
    - *Vague stand-alone statements* like "X was wrong" (e.g., "I challenged because) I thought some of the things he was talking about were completely wrong, or slightly wrong". The use of vague statements like "x was wrong" open the door to looking into the "how" answer to better determine what the participant means by "wrong".
    - *Words that imply inaccuracies*, like "liar", "lying", "embellishing" and their synonyms (e.g., "I challenged because she had a way of embellishing things to make them sound worse than they really are"). On their own, such statements hint at accuracy concerns, and looking at "how" response might help narrow down the type of accuracy concern.

    - *Statements about participant's own memory ability* (e.g., I challenged because I have an excellent memory"; "I challenged because I thought I was right"; "I challenged because I have first-hand knowledge of the situation"). The participant here is strongly suggesting that their version of events differs from the others. Consult the "how" response for clarification and further evidence of this accuracy motive.
- As a very general guide, it is safe to use "**how**" if you see the following in the "**how**" responses:
    - *Dispositional statements about others (e.g., about the challenged other, about a third party person).* These will usually take the form of "X is always…" or "Y has a tendency to…"). These are clearly not **"how"** answers and would be more appropriately categorized as motives for challenging.
    - *Dispositional statements about oneself.* These are also clearly not **"how"** answers and would be more appropriately categorized as motives for challenging.
- The logic behind this selective coding of the "how" question is to strike a delicate balance among 1) comprehensively coding motives, 2) staying as close as possible to what the participant is explicitly stating as motivating the challenge, and 3) being mindful of the difference between "how" the challenge was carried out and "why" it was carried out.

Examples of when to use "why" and when to consult "how" responses:

Example 1:

- **FIRST STEP:** Response to "**why**": "his details were wrong, and that memory was very important to me. It was a traumatic event for me, and I wanted to make sure that he knew exactly how it happened."
    - At least 3 motives/reasons here segmented and paraphrased: #1 Because his details were wrong, #2 Because the memory was important to me, #3 Because I wanted to ensure he knew how it happened.
- **SECOND STEP**: Response to "**how**": "I had to stop him midway through, because his facts were wrong. I told him that it's not how it happened. I remembered the incident very clearly since it was a somewhat traumatic event for me, and I corrected him immediately. He got some minor details wrong, but it was understandable, since the event happened many years ago. I, however, still remember it vividly and I can recall every single detail about it, including the colors and the outfit I was wearing that day."
    - "I had to stop him midway through, because his facts were wrong. I told him that it's not how it happened. I remembered the incident very clearly since it was a somewhat traumatic event for me" → Participant elaborates on the previously identified motive #1 (i.e., "his details were wrong") by adding that the other was wrong because he himself remembers "the incident very clearly". This elaboration would receive a code for Internal Features.

- "I remember the incident…as it was somewhat traumatic event for me" → This phrase can arguably be considered an elaboration of motive #2 above and would receive a code for Memory Integrity.
- "He got some minor details wrong, but it was understandable, since the event happened many years ago" → This is another elaboration on motive #1 above. Here, the participant demonstrates a Belief in Accuracy "…he got some minor details wrong" and a Belief about Age and Memory (…since the event happened many years ago").
- "…still remember it vividly and I can recall every single detail about it, including the colors and the outfit I was wearing that day" → More elaboration of motive #1, which would receive a code for Internal Features.

Example 2:

- **FIRST STEP** → Response to "**why**": "Because they weren't in fact with me at the event."
  - One motive/reason segmented and paraphrased here: Because they were absent from the event [Accuracy]
- **SECOND STEP** → Response to "**how**": "A friend tried to invoke the memories of a concert that they claimed they went to with me. I challenged them and said they weren't there. They were surprised but when they thought back, they realized I was right and that they in fact had simply heard so much about the story that they assumed they were there, as they regularly hang out with our mutual friend group."
  - The participant here demonstrates an understanding of general meta-memory beliefs, specifically Memory Integrity (i.e., they had… heard so much…that they assumed they were there). This is not, however, identified explicitly as a reason for challenging, nor is it a direct elaboration of the motive identified when answering "why". No statements inside this "how" response will receive any motive codes.

HOW TO USE THE CODING TEMPLATE

- If a category/subcategory is **present**, enter **'1'** in the appropriate cell.
- If a category/subcategory is **absent**, enter **'0'** in the appropriate cell.
- The Excel spreadsheet is organized such that each MAJOR CATEGORY corresponds to the same letter of the alphabet as the one used in this document ("A" denotes "General Meta-Memory Beliefs", "B" denotes "Internal Features", etc.).
- Within each MAJOR CATEOGRY there are one or more subcategories. Each SUBCATEGORY corresponds to a number. The numbers used in the Excel spreadsheet correspond to the numbers used in this document.
- Within each MAJOR CATEGORY, there is a "Notes" column to include any relevant information pertaining to that category.

(A) GENERAL META-MEMORY BELIEFS

General Notes:

- General beliefs regarding memory and ability are meta-memory attributions about the operations of memory in general (e.g., how memory works); they are NOT event-specific.
- They tend to be learned at school, through conversations with others, through personal experience with remembering, etc.
- General beliefs may be derived through others. For example, one's reasoning that they were "told by another person that memories before a certain age cannot occur," would still be regarded as a general belief.

A1. GENERAL BELIEFS REGARDING MEMORY & AGE

- The participant explicitly states that his/her challenge to the other's memory was motivated by the assumption(s) that:
  - Memories before a certain age cannot occur
  - One was too young to remember
  - Childhood memories are illogical or unreliable
  - Memory declines with age
  - Other memories should be present at age of particular memory assessed
- **Specific Codes:**
  - **Code 1a if comparative =** the motive provided includes a statement that compares the ages of the challenger and the person whom they challenged (e.g., "I challenged his memory because I was older than him and I know the event didn't happen.")
  - **Code 1b if absolute =** the motive provided includes an absolute statement regarding age, with no comparison evoked (e.g., "Young people don't remember well"; "I had to question it because I was sure this was a detail of the story I would've remembered, even though I was too young to remember the original memory")
  - It is possible to code both **1a** and **1b** if the participant makes a comparative statement in one part of their account, and then makes an absolute statement in another part of their account. To assess whether two separate sentences are intended as a comparative statement, use the proximity of the sentences to each other and any context that indicates links between the two as guide. Sentences that follow one-another and/or use connecting links ("and", "so") are to be coded as comparative.
- **Examples:**
  - "[I challenged because] I was concerned with her memory as she is getting quite old." [coded as 1b]
  - "I challenged her memory because… I can understand that she may not fully remember her past since she was only a child back then [when 9/11 happened]…[coded as 1b]
  - "There is no way I could remember something that happened when I was just 2 years old. My teacher said that people can't have memories before

the age of 3 or 4" or "Children have such wild imaginations," or "I should have other memories from that age but I don't".

A2. GENERAL BELIEFS REGARDING MEMORY ABILITY

- The participant explicitly states that his/her challenge to the other's memory was motivated by assumptions regarding their own *general ability* to accurately recall events, AND/OR the other's *general ability* to accurately recall events. For example, the challenger may believe that their memory is superior to the other's, or that the other's memory ability is quite poor.
- **Specific Codes:**
  - **Code A2a if comparative =** the motive provided includes a statement that compares the general memory ability of the challenger against the other's general memory ability (e.g., I challenged because my memory is good and their memory is horrible).
  - **Code A2b if absolute** = the motive provided includes a statement that mentions the challenger's own general memory ability (e.g., "I challenged because my memory is excellent".); OR that mentions the other's general memory ability (e.g., "I challenged because their memory is awful").
  - It is possible to code both A**2a** and A**2b** if the participant makes a comparative statement in one part of their account, and they make an absolute statement in another part of their account. To infer whether two separate sentences are intended as a comparative statement, use the proximity of the sentences to each other and any context that indicates links between the two as guide. Sentences that follow one-another and/or use connecting links ("and", "so") are to be coded as comparative.
- **Examples:**
  - "[I challenged because] I have very, very good memory so I clearly know she said it," (coded as A2b).
  - "[I challenged] because I have a pretty good memory and rarely forget things. So, I was sure that she had forgotten because she always does." (note in this case that an initially absolute statement is closely followed by a statement about the other's memory. The proximity, as well as the link "so" between the two statements, warrants a A2a code)
  - "[I challenged] because I pride myself on my good memory and recollection skill and his side of the story was flawed and untrue from my perspective." (coded as A2a)

A3. GENERAL BELIEFS REGARDING MEMORY INTEGRITY

- The participant explicitly states that his/her challenge to the other's memory was motivated by the assumption that:
  - Memories can be false or reconstructed
  - The telling of (or hearing of) someone else's memory (or another event) can become one's own memory
  - Memories can result from expectations (or prior beliefs)

    - "Important" (serious, dangerous, life threatening, etc.) events should be more memorable
    - Memories can be intentionally or unintentionally borrowed from others.
- Code this subcategory when the participant states that the other's memory or features of their memory were wrong OR the participant's memory or features of their memory are right; do not give this code if the participant states that the other "is/was wrong" or they "I am right" because there is insufficient information here to determine whether memory integrity is being challenged.
- **Examples:**
    - "I challenged their memory because the order in which things took place along with the outcomes from this event were being misconstrued by the false recollection."
    - "If my sister really did do something that serious, I think I would remember it better" or "I think I have this memory because of hearing similar stories from other people but I don't think it really happened to me,"

(B) INTERNAL FEATURES OF EVENT REPRESENTATION

General Notes:

- Internal features of event representation refer to the subjective representation of the event in the participant's mind and the characteristics therein. Examples of internal features or memory characteristics include people, objects, sights, sounds, smells, clarity or vividness, location, narrative coherence (i.e., whether the pieces of the story appear to fit together), imagery perspective (i.e., first person/field or third person/observer), and other thoughts and feelings experienced when recalling the event.
    - For example, the challenger/participant might state they are challenging because their memory for the event feels especially vivid/strong.
- Internal features refer to the participant's assessment of *how* and/or *whether* the event, or parts of the event, are remembered along with specific sensory, contextual, and emotional *characteristics* of the memory itself. It is a person's image of the event in the mind's eye.

B1. INTERNAL FEATURES/MEMORY CHARACTERISTICS

- The participant explicitly states that his/her challenge to the other's memory was motivated by something that:
    - Was/is odd or unusual about their own memory representation, and may align with the following:
        - Internal features present but disorganized (unusual, unfamiliar, not logically consistent)
        - Internal features present but not clear (faded, weak, vague)
        - Internal features absent (missing, unable to retrieve key episodic details)
        - The event no longer seems/feels real
        - The memory seems different compared to other memories
    - Was/is odd or unusual about the other's memory representation, and may align with the following:
        - Internal features present but disorganized (unusual, unfamiliar, not logically consistent)
        - Internal features present but not clear (faded, weak, vague)
        - Internal features absent (missing, unable to retrieve key episodic details)
        - The event no longer seems/feels real
        - The memory seems different compared to other memories
    - Was/is clear, vivid, and interconnected with the participant's other memories, and may align with the following:
        - Internal features are present and clear (vivid, strong, clear)
        - Internal features are organized or linked in some logically consistent manner.
        - The memory seems different compared to other memories
- **Examples:**

- "[I challenged because] I remember it clearly"
- "[I challenged] because it was so clear in my memory what he said"
- "There were certain things that transpired during that visit to Goodwill that link my memory together"
- "I can't remember the details well and everything seems blurry," or, "It just doesn't feel real anymore," or "There are certain parts of my memory that just don't make sense," etc.

(C) EXTERNAL EVIDENCE

General Notes:

- A participant's challenge is motivated by possessing external evidence or lack of thereof. Do not infer lack of external evidence; only code lack of external evidence if the participant explicitly states they could not locate any external evidence.
- External evidence in this category refers to anything that is concrete and/or tangible, such as photos, receipts, videos, other documentation, etc. Emails and letters are also considered external evidence.
- Using logic to discount the plausibility of an event is not coded under this category. Similarly, talking to others or trying to find information or corroboration from others does not constitute external evidence as defined in this category.

C1. EXTERNAL EVIDENCE PRESENT

- The participant explicitly states their challenge to the other's account was motivated by their possession of external evidence that undermines or threatens the validity of the other's account.
- **Example:** "[I challenged because] I had evidence to the contrary, an email"

C2. LACK OF EXTERNAL EVIDENCE

- The participant explicitly states their challenge to the other's account was motivated by the conspicuous absence of external evidence, which undermines or threatens the validity of the other's account.
- **Example:** "[I challenged because…] if he had rode the merry-go-round, there would have been pictures because I had my camera all ready to take them."

(D) ALTERNATE ATTRIBUTIONS

General Notes:

- Alternate attributions refer to sources that affect the event-specific memory or parts of it.
- These sources can be "internal" (from my fantasy) or "external" (from a movie).
- Regardless of the source, the participant states that they are challenging because they know or believe that the other's account has resulted from OR has been spoiled or modified in some way by internal or external sources.
- Do not code here if the "source" for the alternate attribution is social interaction.

D1. INTERNAL ALTERNATE ATTRIBUTION

- The participant explicitly states that their challenge was motivated by the belief or knowledge that the other's account or features of it may have resulted from or were influenced by an alternate internal source, such as imagination, fantasy, nightmare, etc., to the point of being confused with reality.
- **Specific Codes:**
    - **Code 7a.** Imagination/ Confabulation/ Exaggeration/ Simplification/ Fantasy/ Daydream = The participant explicitly states that their challenge to the other's account was motivated by their knowledge or belief that the other's account resulted from or was influenced by an alternate internal state, such as imagination, confabulation, exaggeration, simplification, fantasy and/or daydream, etc. and it is implied this source was confused with reality.
        - **Examples:** "[I challenged because…] their version is made up," OR "[I challenged because…] he/she probably just imagined it"
    - **Code 7b.** Dream/ Nightmare = The participant explicitly states that their challenge to the other's account was motivated by their knowledge or belief that the other's account resulted from or was influenced by a dream or nightmare, and is implied this source was confused with reality.
        - **Example:** "[I challenged because] they dreamt it all up," etc.

D2. EXTERNAL ALTERNATE ATTRIBUTION

- The participant explicitly states that their challenge was motivated by their knowledge or belief that the other's account resulted from or was influenced by an external source such as a movie, television show, book/magazine, etc. and it is implied this source was confused with reality.
- **Example:** "[I challenged their account because] they probably saw that in a movie/on television".

D3. OTHER ALTERNATE ATTRIBUTION (INTERNAL AND/OR EXTERNAL)

- The participant explicitly states that their challenge was motivated by their knowledge or belief that the other's account resulted from or was influenced by

an alternate internal or external source other than the abovementioned categories and it is implied this source was confused with reality. These internal or external sources might include:

- Déjà vu
- Confusion/ misunderstanding
- Hallucination/ delusion
- Mental health issues (includes depression, Alzheimer's etc.)
- Substance use (alcohol, or other "recreational" substances)
- Medication
- Feeling tired/ sleepy/ sleeping
- Meditation
- Hypnotism
- Otherwise lack of alertness

- **Examples:**
  - "I challenged my friend's memory because they have a mental illness that impairs their perception of reality and memory."
  - "I challenged this person because they smoke too much [marijuana] and now there memory is failing them"

(E) PLAUSIBILITY

General Notes:

- Refers to an assessment of whether the event could have actually occurred; it is an appraisal based on one's knowledge of the world. For reasons involving plausibility, the participant assesses the reality status of the event and decides that it is either impossible (i.e., it could not have occurred), implausible (i.e., it is not likely to have occurred), or illogical (i.e., it simply does not make sense) for themselves or for another person.
- Plausibility is an assessment of "could this have happened?", not "did this happen?"
- It is possible for a challenged event to be deemed plausible (and be coded under Plausibility), yet NOT deemed to have occurred (and therefore not coded under Belief in Occurrence).

E1. SUBJECTIVE PLAUSIBILITY

- The participant explicitly states that his/her challenge was motivated by *their own assessment* that the event was impossible, implausible and/or illogical for reasons that are subjective in nature (i.e., they are based on personal feelings, tastes, or opinions) and may align with the following:
- Given age in event
    - Given it was an isolated event/ given frequency of event
    - Relative to anchoring/other life events
    - Given changes in imagery perspective
    - Given people/characters/objects/animals present in memory
    - Given actions in memory
    - Given aesthetics of memory
    - Given one's location in memory
    - Given time the event occurred
    - Given duration of event
    - Given condition in memory
    - Given outcome in memory
    - Given knowledge of other events/ conditions in memory
    - Given characteristics of people/characters/objects/animals/surroundings in memory (size, color, location, condition, etc.)
    - Given inability to remember details in memory
- **Examples:**
    - "I told her that it didn't make much sense. A) At age three, I'm fairly certain if I had fallen and gotten hurt I would have cried and alerted my parents. B) Considering my cousin was two and a half at the time I doubt she could actually remember that far back. C) Even if she could have remembered and even if I fell out of my crib, how in the world would a little three year old with a dislocated elbow climb back into the crib?"

- "[I challenged] because I thought the thing she said happened was absurd. I don't even think we have the same blood type, plus she lives out of the country!"
- "I don't think the roads could have been that icy in the spring, so it's not likely that that's what caused our accident," or, "It just doesn't make any sense. Why would I be wearing winter clothes in the summer?" or, "A car flipped on it's side like that? It's impossible!"

(F) BELIEF IN OCCURRENCE

General Notes:

- Belief in Occurrence refers to an assessment of whether a past event actually occurred.
- It differs from Plausibility by focusing on "did this event in fact happen to me?", not "could this event have happened?"
- As a general rule, all the categories in this section involve a participant who claims to challenge BECAUSE they doubt the occurrence of the event for one reason or another.

F1. THE EVENT DID NOT OCCUR

- The participant explicitly states that their challenge was motivated by *the belief/knowledge* that the event *did not occur*. OR the participant states that they challenged because *the other* or *others* deny the occurrence of the event or provide an alternate explanation or state attribution (e.g., dream) for it.
- This category may overlap with subcategories 13 and 14 below depending on the context provided by the participant.
- **Examples:**
  - "[I challenged because] I'm quite sure that this never happened"; "I mentioned that when growing up she spanked me and she stated that she never did."
  - "My uncle told me it didn't happen," or, "I spoke to my grandfather about it and he denied it ever happening," etc.

F2. THE EVENT COULD NOT OCCUR (I.E., IS IMPOSSIBLE)

- The participant explicitly states that his/her challenge was motivated by *the belief/knowledge* that *there is no way the event could have occurred* (i.e., it is impossible).
- **Examples:**
  - Examples from Fiona's dataset: "I challenged it because I never remembered having gone fishing ever when growing up. This isn't something your mind can make up...you either have done something like that or not. So unless I blocked it out of my memory, I never went fishing on my 10th birthday with my sister."
  - Chantal's examples from coding: "My mom told me that there is no way she would have forgotten my birthday," or, "My brother said that there was no such amusement park near our grandparent's house,"

F3. THE EVENT IS UNLIKELY TO HAVE OCCURRED (I.E., IS IMPLAUSIBLE)

- The participant explicitly states that their challenge was motivated by *the belief/knowledge* that *the event could have occurred but it is unlikely* (i.e., it is

implausible). In other words, the participant challenges the other because they themselves doubt the occurrence of the event, but they do not actually state that the event did not occur.

- **Examples:** Chantal's examples from NBM coding: "My mother told me she didn't think that I would have been allowed in the water at that age without a life jacket," or, "My dad said my grade 4 teacher probably wouldn't have told me that I did a horrible job on my science fair project," etc.

F4. LACK OF CORROBORATION FROM ANOTHER

- The participant explicitly states that their challenge was motivated by the *belief/knowledge that others cannot confirm the memory.* Otherwise stated, the participant challenges the other's account because others have told the participant that they do not remember the event (or cannot confirm the event). Note that the participant is not actually stating that the event did not occur; they are only stating that the event cannot be confirmed by a third party.
- **Example:** Chantal's examples from NBM coding: No body else remembers it but me," or, "My friend who I thought was with me does not remember it at all,"

F5. THE EVENT WAS NOT WITNESSED

- The participant explicitly states that their challenge was motivated by the belief/knowledge that they themselves and/or others did not witness the event. Note that the participant is not stating that the event did not occur; the participant is only expressing a reason for the inability to witness the event.
- **Specific codes:**
    - **F5a:** The participant explicitly states that their challenge was motivated by the *belief/knowledge* that they themselves were not present (physically or mentally) to witness the event (e.g., I didn't see it).
    - **F5b:** The participant explicitly states that their challenge was motivated by the *belief/knowledge* that the other person (i.e., the challenged person) was not actually present to witness the event (e.g., You weren't there).
    - Code F5 if either F5a or F5b, or both, are present.
- **Example:** Chantal's examples from NBM: "I was told I wasn't even there," or, "I was told I was too drunk to see it," or "I was told I was sleeping at the time,"

(G) BELIEF IN ACCURACY

General Notes:

- Belief in Accuracy refers to an assessment of whether the details of a recalled event are accurate.
- As a general rule, all the categories in this section involve a participant who claims to challenge BECAUSE they doubt the accuracy of the event for one reason or another.
- Whereas Belief in Occurrence focuses on whether the entire event occurred or not, Belief in Accuracy focuses on whether the details recalled within the event are correct or not. For example, "You did not wear a blue jacket, you wore a green sweater" is a challenge to Belief in Accuracy.
- The challenger may agree that the event occurred, but challenge one or more details about the memory for the event.
- The challenger may challenge both occurrence and accuracy; for example "You were not there when that event happened [occurrence], and so are wrong that he did not wear the blue jacket, he was wearing the green sweater [accuracy] ."
- It is possible to challenge occurrence without challenging accuracy, "That event did not happen to you, it happened to me; but everything you describe is exactly right because I told you the story."

G1. THE EVENT HAPPENED DIFFERENTLY

- The participant explicitly states that their challenge was motivated by the belief that feature(s) of the event, as recounted by the other, are inaccurate, wrong, or happened differently.
- This challenge *does not* necessarily invalidate the occurrence of the event; it merely offers alternate suggestions regarding content components of the event.
- The stated reason might include the following:
    - Occurred to someone else (other than the participant)
    - Occurred at a different age
    - Occurred at a different place
    - Occurred at a different time
    - Occurred over a different length of time
    - Occurred in a different context
    - Involved different objects
    - Involved different actions
    - Involved a different outcome
    - Did not include certain features that were reported
- **Examples:**
    - "[I challenged because] his details were wrong"
    - "I challenged his memory because his recollection of the event was not exactly how it had unfolded in reality,"
    - "[I challenged because] her perception of how many cigarettes she had was wrong. My mother claimed that I stole a large portion of her cigarettes

from her pack. I immediately let her know I only took one and she insisted there were MANY missing."

(H) PROSOCIAL MOTIVES

General Notes:

- Prosocial Motives refers to challenges intended to develop, maintain, and/or nurture closeness in social relationships. This takes a number of forms, including being helpful in some way, illustrating a point or giving advice in order to teach and inform others (e.g., pass on valuable life lessons or information), making the conversation more enjoyable, collaboratively co-constructing memories with others present at the original event so as to produce more complete memories, and providing empathy to others.
- Challenges prompted by prosocial motives will tend to show all of the following characteristics:
    - Consist primarily of an external, social focus;
    - Are accompanied by the participant's explicit expression of helpful and/or positive intentions;
    - Focus more on a specific person other than OR in addition to oneself.
- Subcategories inspired by Alea & Bluck (2003); Bluck et al., 2005; Webster, 2003; Pasupathi et al., 2002.
- At all times, prioritize the coding of the "why" responses over the "how" responses.

H1. SEEKING CONFIRMATION

- The participant explicitly states that their challenge was motivated by a desire to *seek out, verify, or confirm* details about a past event and/or negotiate a shared interpretation of a past event. In all these instances, participants enlist the other's assistance with the explicit purpose of co-constructing memories in order to produce more complete memories.
- Coding aid:
    - The participant will typically admit OR strongly hint at having *doubts* about their own recollection and/or interpretation of the challenged event. This doubt motivates their asking the other for help.
    - The tone of these narratives will typically be *benign* in nature, reflecting a *genuine* collaborative attempt at trying to make sense of a past event.
    - Participant's use of words like "verify" or "confirm" (or their synonyms) will typically suggest a Seek Confirmation motive.
    - If in doubt, prioritize coding the "why" response over the "how" response.
- **Examples:**
    - "I challenged her memory because I thought it was different from mine and I figured between the two of us we could iron out the parts that were incorrect on both sides."

  - "The reason why I challenged the person's memory was to verify a bet to ensure that the loser of the previous set of games would go on to cover the winner's games."
  - "We challenge each other because we value accuracy in memories and love one another. We want to make sure we are both right. It is not a matter of keeping tabs to see who has the better memory."
  - "I was unsure about my recollection of the event that happened and wanted to see if I was just being crazy."

H2. PROVIDING EMOTIONAL SUPPORT

- The participant explicitly states that their challenge was motivated by a desire to offer empathy, care, understanding, and/or emotional support to the other. There will often be a quasi-therapeutic tone to these challenges as participants attempt to cheer the other up, instil confidence, show that they care for the other, or alleviate the other's stress.
- Expressions of concern about a loved one's memory should be coded under this category.
- **Examples:**
  - "I challenged this person's memory because I wanted to instil confidence in them so that they would succeed. Whether true or not, I wanted them to see the events that happened as positive rather than negative"
  - "I wanted my partner to remember this event that way he would feel more at ease about the delivery"

H3. PASSING ON KNOWLEDGE/INFORMATION

- The participant explicitly states that their challenge was motivated by a desire to pass on valuable life lessons or information.
- The value/importance of the information needs to be recognized implicitly or explicitly by both the challenger and the challenged party in order to be coded here. If the participant states that the challenged account was important or valuable *to them*, but there is no indication of importance to *the other*, do not code the account under his category.
- Coding aid:
  - The participant is motivated by their own *belief and/or knowledge* that the information they are passing on by challenging the other's account is *valuable or important* *to the other.*
  - This *belief/knowledge* can be explicitly stated (e.g., "I thought it was important to x") OR strongly implied by the context (e.g., themes of safety, security, love/belonging, financial lessons, health, happiness, self-esteem, confidence, achievement, etc. are strongly indicative of importance/value to the other).
- **Examples:**
  - "I wanted to teach my brother responsible financial habits"

- "I did so partly because I wanted to inform her of something she actually had that she believes she never had"
- "I felt that she should know where she was at that time [when 9/11 happened] so that she does not live life thinking she was somewhere else when that happened."
- "I challenged the memory because I thought it was important for my mother to realize that the reason my dad was making more money was because his boss wasn't managing the company correctly."

H4. REMINISCING

- The participant explicitly states that their challenge was motivated by a desire to indulge in the enjoyable recollection of a past event.
- Coding aid:
  - Participants will often (but not always) refer to positive emotions and actions like "happy", "funny", or "laugh".
  - Participants will also typically (but not always) use neutral or positive labels to refer to the act of the challenge itself, like "conversation" or "reminiscing", rather than "disagreement" or "fight".
- **Examples:**
  - "[I challenged] to reminisce on the good times. To take us back to a happy time."
  - "This is why I brought it up, pretty much for the laughs from the rest of our friends."
  - "It was just a conversation about our childhood."

H5. RELATIONSHIP MAINTENANCE [H5]

- The participant explicitly states that their challenge was motivated by their desire to rebuild or maintain the relationship with another person, either the challenged party or another third party. In order to receive this code, the participant must explicitly state that *relationship maintenance is partially or entirely at the root of their motive* for challenging (e.g., "I have hope of recreating our friendship").
- Consult both "*how*" and "*why*" responses because context and background information provided primarily in "how" responses will be crucial to your coding of this subcategory. If there is contradictory information, prioritize "why" over "how" responses.
- **Specific Codes:**
  - **Code H5a** if relationship maintenance is done through manipulation and/or deception. *For example*, the participant might lie, omit, or even blame the challenged party about the event or features of the event in order to rebuild, maintain, or strengthen the relationship with the challenged person.
  - **Code H5b** if relationship maintenance is done through any other means aside from the ones described in H5a. **Please make a note of this in the Excel file.**

- **Example:**
    - "[I challenged because] I have hope of re-creating our friendship" [Example of H5b]
    - **"How**" response: "When I was younger, I borrowed a game from a friend. I played and highly enjoyed it. Before I could return it the friend moved and I kept it. Several years later we reconnected with each other. We got on the topic of the game ad he stated vaguely remembering lending it to me. I said that it was great and that I returned it right before he moved out of the state. He shrugged and said "oh, that's right" and that was it. I've still got the disc sitting in a case on my shelf. "**Why"** response: "It was easier to just say that I returned it and continue with the friendship rather than potentially starting an argument about if I was being a thief." [Example of H5a]

(I) INTERNAL MODELS OF SELF & OTHERS

General Notes:

- Internal Models of Self & Others refers to challenges resulting from *the participant's internal model(s)* of themselves/the challenged party/a third party in terms of qualities, values, characteristics, personality traits, typical behaviors, preferences, social category, etc.
- Unless otherwise indicated, any mention of "internal models" when coding this category is always referring to internal models held by the participant himself/herself.
- As a reminder, in every account, you will find at least 2 players:
    - The challenger = the participant.
    - The challenged party (aka, the challengee) = the other
- Some accounts may involve the following additional players:
    - A third party other = a person who was absent when the challenge took place but may have been present when the challenged event occurred.
- Challenges prompted by internal models will tend to have an *implicit* or *explicit* assessment of the compatibility between the participant's internal models and/or the challenged event (or features of the event). Challenges may involve:
    - Disputing the other's account because the other is deemed to possess personality traits/tendencies that the participant believes would undermine the credibility of the challenged event (or features of the event).
    - Disputing the other's account because they are deemed to undermine the credibility of the challenged event (or features of the event; e.g., by lying, being in denial, or omitting the truth) ***only*** in the context of this challenge.
    - Disputing the other's account and/or perception of a third party person because it differs substantially from the challenger's own perception of this same third party person.
    - Disputing the other's account because doing so is compatible with the participant's perception of their own personality characteristics, values, qualities, preferences, etc.

- Disputing the other's account because what the other alleges about the challenged event (or features of the event) is deemed incompatible with the participant's self-concept and their sense of continuity between past and present self-concepts.

I1. DISPOSITIONAL VIEW OF OTHER

- The participant explicitly states that their challenge was motivated by the *knowledge or belief* that the other's *disposition* (e.g., their qualities, characteristics, personality traits/tendencies) *undermines* their credibility.
- There is an implicit sense in these accounts that the participant has formed an internal model of the other (i.e., as a "drama queen") from prior knowledge and is relying on this model and its associated expectations to now evaluate the credibility of the other's account.
- Coding aid:
  - Look for statements that refer to *tendencies* (e.g., "she *always* …"; he *has a way* of…"; "x is a drama queen") or *blanket/sweeping dispositional statements* (e.g., "he is a liar".)
  - Look for dispositional attributes that speak to notions of credibility, honesty and dishonesty. (e.g., synonyms of: "liar", "denial", "exaggerate", "drama queen").
  - Participant's use of present tense verbs to describe the other might also be indicative of dispositional attributions. Use the context to determine if this is the case.
  - Consult "how" answers and code under this subcategory if dispositional attributes are found there.
- **Examples:**
  - "[I challenged because] she also had a way of embellishing trifling things to make them sound more worse than they really are"
  - "[I challenged because he is a liar and is constantly full of shit regarding his stories and memories."
  - "My husband is overly optimistic, and is innocent to a fault." → Note that the appraisals are not always negative in nature.

I2. SITUATIONAL VIEW OF OTHER [12]

- The participant explicitly states that their challenge was motivated by the knowledge or belief that the challenged other is lying, in denial, or untruthful *specifically* with regards to the challenged event. *In other words, the participant makes dispositional claims about the challenged other (e.g., x is dishonest, a liar, in denial…) only in the context of the challenged account.*
- There is a sense in these accounts that the participant may be challenging because the other's dishonesty in this situation is incompatible with the participant's own internal model of the other. Alternatively, or additionally, the challenge may be rooted in the incompatibility between the participant's own values of honesty, truth, etc., vs. the other's values of honesty, truth, etc.

- Incompatibility between internal models *may* at times be evident through expressions of frustration (e.g., "it bothered me that…" or "it was aggravating that…").
- **Examples:**
  - "I had to bring this event up because it always bothered me why he lied to me about what he paid for the car"
  - "[I challenged because] it was aggravating that she denied [saying that she was barely making it on a 30k salary when I was complaining of being in a large amount of student debt yet still managing through it] in that latest argument."

I3. DISCREPANT VIEWS OF OTHER

- The participant explicitly states that their challenge was motivated by the *belief or knowledge* that their view of another person (either the challenged party or a third party) is incompatible with the challenged other's view. The incompatibility may be around the challenged other's OR the third party's behavior(s), thought(s), reaction(s), characteristic(s) and/or trait(s).
- **Specific Codes:**
  - **Code I3a** *if discrepant view of 3rd party other* = the challenger and challenged other disagree on view of a 3rd party person. In some <u>but</u> not all cases, the participant may believe that their own internal model of this third party person is more accurate than the other's. In some <u>but</u> not all cases, the participant may perceive the other's view of this third party person as <u>distorted</u> or <u>unfair.</u>
  - **Code I3Bb** *if discrepant view of challenged other* = the challenger and challenged other disagree on their views of the challenged other. Look for challenger statements that are directed at the challenged other and take the form or the spirit of "you are acting differently from what I know of you" or "you have changed".
  - Code the column labelled **I3 as well as I3a OR I3b**. If it is not clear, code only I3.
- **Examples:**
  - I3a: "[I challenged because] I didn't think it was right for her to continue to blame her sister for things [her sister] was not at fault for"
  - I3a: "[I challenged because] she created a memory in her mind that was not fair to our mother"
  - I3a and I3b: "He remembers not being abusive at all to our mother when I witnessed his emotional and sometimes physical abuse first hand. He now wants me and everyone else to believe his stories because the truth of the facts would make him look bad. I feel it is almost my obligation to remind him that as long as I am around, his lies and version of the truth will continually be challenged.]…He made some bad things try to disappear by not admitting what he really did to our Mom…. I don't like the fact that he tries to sweep all of this negative action under the carpet now that the person he did it to [Mom] passed away."

I4. DISPOSITIONAL VIEW OF SELF [14]

- Participant explicitly states that their challenge was motivated by their *perception* of their *own dispositional tendencies* (e.g., their values, qualities, characteristics, personality traits and tendencies, preferences, behavior), *likes,* and/or *dislikes*. There is an implicit sense that through the challenge, the participant is reaffirming or upholding aspects of who they believe they are.
- Participants may claim to challenge because they perceive themselves as:
    - Being the kind of person who challenges, argues, disputes or starts fights;
    - Being the kind of person who speaks up (or does not back down);
    - Being the kind of person who needs to be is right
    - Being the kind of person who likes Y or hates X
- This subcategory differs from subcategory #30 below in that participants are NOT evaluating the compatibility between their past self-concept (as currently perceived) and their current self-concept (as currently perceived). Rather, *their dispositional statements are expressed as absolute truths about them,* with no explicit evaluative overtones.
- **Examples:**
    - "[I challenged because] I can't stand when something is incorrect. Besides that, I always feel the need to be right."
    - "[I challenged] because I don't like to be misunderstood, but most importantly I don't like being lied on."
    - "[I challenged] because I like to argue…"
    - "[I challenged because] I generally don't like to back down when I think I'm right."

I5. CHANGING VIEW OF SELF [15]

- The participant explicitly states that their challenge was motivated by their *desire to break away from own dispositional tendencies and habits* (e.g., their values, qualities, characteristics, personality traits and tendencies, preferences, behavior).
- There will typically be a clear sense in these accounts that, by challenging, the participant is behaving differently in this situation from what they typically do.
- **Specific Codes**
    - **Code 27a if** *participant deviates from own dispositional tendencies this <u>one</u> time* = the participant acknowledges that they have always been the kind of person who X (e.g., does not challenge, does not argue, fights, does not speak up, speaks up, gets annoyed, likes Y, hates A), but not this time; this time, they are doing something different.
    - **Code 27b if** *participant deviates from own disposition tendencies from now on* **=** the participant acknowledges that they have always been the kind of person who X (e.g., does not challenge, does not argue, fights, does not speak up, speaks up, gets annoyed, hates A), but not anymore; now on, they will be acting differently.

  - Code the column labelled **27** as well as **27a OR 27b** if the participant states that the change is specific to the challenged event or whether they intend to act differently now on. If it is not clear whether the change is temporary or perpetual, code only 27.
- **Examples:**
  - "[I challenged because] on that day I got tired of playing along and not wanting to rock the boat with her."
  - "[I challenged because] I felt like I was standing up for myself by holding her accountable because I've witnessed others correct her when she does this and I notice that I have a tendency to just go along with what she says just to keep the peace."

I6. CONSISTENT VIEW OF SELF OVER TIME [16]

- The participant explicitly states that their challenge was motivated by *their belief or knowledge* that the event or features of the event *are inconsistent with how they currently view themselves.* Participant appears to base this *belief or knowledge* on an implicit assessment of compatibility & continuity between their *past and present self-concept*.
  - *In other words, participant's internal models of "past self" and "present self" do not match.*
- For example, the participant might dispute the other's account by arguing that "it is unlike me to do X" or "it is not in my character to do Y".
- Coding aid:
  - All challenges coded under this category will include a strongly implied or explicit assessment of *past self* & *present self.*
  - Look for statements that explicitly or implicitly refer to: "I'm not like that!", "I would never…" or "It is not like me to do/think x…"
- **Examples:**
  - "[I challenged because] I wouldn't have gotten rid of myself because they had sentimental value to me. "
  - "[I challenged because] my husband claimed I had said something that I didn't. I tried to tell him I would never say something of the sort and told him why I wouldn't have."
  - "My girlfriend claimed that I had previously agreed to wait until we owned our own home to buy another car to work on. I [challenged] because I would never enter into this agreement."

(J) SELF-FOCUSED MOTIVES

General Notes:

- Self-focused motives refer to challenges intended to consolidate, preserve, protect, and/or enhance a sense of "I" and "who I am".
- These challenges will tend to show all of the following characteristics:
  - Consist primarily of an internal, self focus;
  - Focus more on the self rather than OR in addition to others.
- If unsure about a code, err towards coding conservatively.

J1. CORRECTING THE EVENT INTERPRETATION

- The participant explicitly states that their challenge was motivated by a desire to *correct, clear up, or clarify* the other's *interpretation* of a past event. Stated otherwise, the participant deems the others' interpretation of a past event to be erroneous; the challenge is intended to rectify this interpretation.
- Regardless of how the other is affected by the challenge, it is the participant's stated intention to correct the other's interpretation that matters.
- These challenges differ from subcategory "Correcting Views of Me" below in that:
  - The participant is not explicitly reflecting upon the impression they are making on the other
  - The participant is not explicitly concerned about whether they are being perceived in a positive light. Rather, their overarching concern is the stated desire to correct/rectify/clarify the other's interpretation, not restore their positive self-image.
- Coding aid:
  - Consider *both* "how" and "why" responses because context and background information will be crucial to your coding of this subcategory.
  - Participant's use of words like "correct", "clarify" and/or "clear up" in the context of interpretations might suggest a Correcting the Event Interpretation motive.
- **Examples:**
  - **"How"** response: "When my sister came home for winter break in 2014, we found a stuffed pink rabbit in the garage along with the other junk. When I was little I used to cherish this rabbit and hugged and slept with it every night. My sister thought I just outgrew the rabbit when I stopped caring about it, but I told her she was the one who made me stopped caring about the rabbit. I told her that she told me a scary story about stuffed animals coming to life and killing their owners, and that I got scared and locked my rabbit in the closet. I even told her the TV show that inspired her story. My sister said she did not remember telling that scary story at all, and the look on her face was one of denial.] "**Why"** response: When we found the rabbit, the subject about me outgrowing it came up, but I wanted to correct my sister that that was not the case."

- **"How"** response: "My mom believes I think she is stupid. I don't, but she will put words in my mouth whenever she tells her friends about our disagreements. I found out that she had been drinking heavily and was involved in an affair with a married man, and we got into an argument over it. After a few weeks, she started to say I had called her "stupid" and "a whore". I hadn't, and I disagreed with her. My brother was there during the argument and told me I was right. I didn't say those things. **"Why"** response: I wanted to make it very clear that I didn't say that to my mother. I didn't mention the drinking and cheating to call her stupid or a whore. I wanted to make it clear that I was just worried about her behavior."

J2. CORRECTING VIEWS OF ME

- The participant strongly suggests OR explicitly states that their challenge was motivated by *a desire to correct an unfavourable self-presentation and/or to establish a favourable self-presentation.* In such instances, the participant deems the other's recollection to reflect unfavourably upon them; the challenge is intended to shape the other's impression of the challenger in more positive/favourable terms.
- These challenges differ from the coding subcategory "Correcting the Event Interpretation" in that the participant strongly suggests OR explicitly states being concerned with how unfavourably or negatively they are being perceived or risk being perceived by others.
- Coding Aid:
  - Strong suggestions of concern regarding one's self presentation may take the form of the challenger trying to distance themselves from socially undesirable qualities, like stupid/ignorant, violent, liar, etc.
  - It is possible to code both this and subcategory "Correcting Event Interpretation" if the participant explicitly articulates both (a) a desire to correct the other's interpretation (regardless of how that correction makes them look), coded under the subcategory above and b) a desire to project a more favourable self-presentation, coded under this category.
- **Examples:**
  - "[I challenged because the event as told by the other] made me look a little more violent than I had been."
  - "[I challenged because] it bothered me that she thought of me as a heavy drinker when I was younger."
  - "[I challenged because] if the incorrect details about me were assumed to be true, it would be a poor reflection on my character and my personality."
  - "[I challenged because] I didn't want people thinking me and my brother fight MMA style over stupid things"

J3. PERSONAL NEED TO CORRECT THIS EVENT

- The participant explicitly states that their challenge was motivated by a *personal need for accuracy for the event itself*. These challenges will *typically* involve all of the following:
    - Participant values accuracy regarding the event itself (or event features). Look for evidence of the participant acknowledging their need for accuracy through statements like: "I wanted to set the record straight".
    - Participant believes that their own recollection regarding the challenged event is accurate. This may be implicit or explicit.
    - Ensuring that the event is recollected accurately *primarily benefits* the participant (i.e., satisfies their need for accuracy).
- **Coding Aid:**
    - Look for tell-tale expressions like: "*I wanted* to set the record straight", "I *just had* to help her remember", "I *wanted to clarify* xyz", "I *wanted to correct* him", "I *wanted to let her know she was wrong*", "*I wanted the memory to be correct*" to identify a personal need for accuracy.
    - Accounts that receive a code under this subcategory could also be coded under Belief in Accuracy. Only code as "Personal Need to Correct this Event" instances when the participant strongly implies or explicitly articulates *their own desire/need* for an event (or event features) to be recalled accurately.
    - Participant's statement that they always need to be right or are the kind of people that like to be right are captured by subcategory "Dispositional View of Self" and should NOT be coded here.
- **Examples:**
    - "[I challenged because] I wanted to make sure the story that I was listening to was accurate"
    - "[I challenged because] but I couldn't justify letting her continue to believe that my hair was long just for the sake of some laughs. I never had long hair."
    - [I challenged because] I *just had* to help her remember."

J4. SEEKING VALIDATION

- The participant strongly suggests OR explicitly states that their challenge was motivated by a *desire to elicit empathy and/or validation of a past experience*. Specifically, participants challenge because they want the other to:
    - Acknowledge and/or take responsibility/admit guilt/wrongdoing regarding the challenged event.
    - Understand the emotional consequences of what happened in the past.
- **Coding Aid:**
    - Look for statements or synonyms of "I wanted X person to understand" or "I wanted Y person to admit the truth…"
    - Challenges involving past trauma and/or abuse will *typically* be coded under this subcategory, unless there is good reason not to. Other challenges (i.e., not involving some kind of trauma or abuse) may also be coded under this subcategory.

  - Consider *both* "how" and "why" responses because context and background information will be crucial to determining the nature of the challenged event.
- **Examples:**
  - "[I challenged because] her version was so far off that it functioned as a violent denial of the pain we children had experienced at various points in our childhoods" → Although not explicit, there is a strong implicit suggestion that the participant challenged because she felt invalidated and wanted the other to admit [not deny] what happened. The "pain us children…" here is also strongly suggestive of the desire this participant demonstrates to be understood at an emotional level.
  - "I challenged his memory of it because I just wanted him to admit the truth,"

J5. SEEKING RECOGNITION

- The participant strongly suggests OR explicitly states that their challenge was motivated by a *desire to be recognized/acknowledged for their role in something deemed positive, valuable, and/or helpful* by both the challenger and the challenged party.
- In these instances, the participant will *typically* claim that the other attributed the challenger's helpful advice to someone else (e.g., a third party other, the challenged other). The challenge is intended to rectify this role misattribution and reinstate the participant as the source of the positive contribution.
- **Examples:**
  - "I challenged the other person's memory because she wanted to claim all the glory for herself and wasn't giving me any glory that I deserve [for helping her win money on a scratch card]"
  - ["I challenged because] I was upset that he did not [give me] credit for playing a part in his eventual marriage."

J6. MANAGING ANTICIPATED OUTCOMES RELATED TO THE SELF

- The participant explicitly states that the challenge was motivated by a *desire to prevent* a negative, unfavourable, or unwanted situation from occurring to them and/or *ensure* that a positive, favourable, or wanted situation does occur to them.
  - Note that it is the participant who decides what is negative, unfavourable, or unwanted. For example, here's an instance when ice cream, a favourable outcome for most people, is nonetheless not considered wanted: "I challenged it because I wanted to go on that rollercoaster with my dad. This was the bargain I had been promised, not the ice cream!"
- **Examples:**
  - "I challenged it because I wanted to go on that rollercoaster with my dad. This was the bargain I had been promised, not the ice cream!"

- "[I challenged because] I wanted her to keep her promise to me to do something for me, so when she told me she didn't want to do the thing I wanted her to do, I was quite upset. I wanted her to fulfill her promise."
- "[I challenged because] I didn't want to watch the same movie I had already seen."

J7. DEFENDING THE SELF

- The participant explicitly states that the challenge was motivated by a *need to protect oneself in response to a strongly implied or explicit threat to the self*. In other words, participants will claim to challenge in *self-defence*.
- All challenges coded under this subcategory involve an explicit or strongly suggested threat that has either already occurred or is anticipated to occur. Threats may be of an emotional or physical nature, or both.
  - Emotional threat may involve: feeling or anticipating fear, dread, pain, hurt, shame
  - Physical threat may involve: actual or threatened serious injury or violence
- *Most (but not all)* challenges coded under this category will contain an explicit acknowledgment that the challenge itself is a form of self-defence (e.g., "I defended myself…").
- **Examples:**
  - "[I challenged because I wanted] to avoid being emotionally and verbally abused by her."
  - "I challenged the person's memory because they were trying to intimidate me in the litigation"
  - "[I challenged because] I was defending myself"
  - "I challenged this particular memory because it is one of the most painful experiences that I have ever had to endure"

J8. SOCIAL MISCHIEF

- Participant explicitly states that their challenge was motivated by their own pursuit of fun, thrill, or amusement within an interpersonal relationship. Whether the challenge itself was viewed as fun or amusing by the challenged other is irrelevant to this code; *only the participant needs to explicitly view the challenge as fun or amusing* in order to receive this code.
- **Coding Aid:**
  - Synonyms of "fun", "amusing", and expressions of thrill (e.g., "I want to see if I could do it"; "just for the thrill of it", "just for the heck of it") can all be used as coding cues.
  - Consult both "how" and "why" responses because context and background information (e.g., as to whether something was done for amusement only, for example) provided primarily in "how" responses will be crucial to your coding of this subcategory. If there is contradictory information, prioritize "why" over "how" responses.
- **Examples:**

- "[I challenged because] I wanted to have some fun challenging my sister's memory because she prides herself in her memory"
- **"How"** response: "I told my friend he forgot to give me back the 100 dollars I gave him. **"Why**" response: "[Even though he actually returned the money owed to me 2 weeks ago, I challenged him about not returning the money because] I wanted to see if I could do it."

J9. SOCIAL COMPARISON

- Participant states that their challenge was motivated by one-upmanship – wanting to show superiority or dominance in a particular area relative to another person. To receive this code, participants need to explicitly state OR strongly imply that they are attempting to overly influence or take control of the conversation about the event itself or event features *in order to demonstrate superiority or dominance.*
- Consult both "*how*" and "*why*" responses because context and background information provided primarily in "how" responses will be crucial to your coding of this subcategory. If there is contradictory information, prioritize "why" over "how" responses.
- **Examples:**
  - "[I challenged because] I wanted to be able to say I knew more then him, about the house that we lived in."

(K) EMOTIONAL STATES

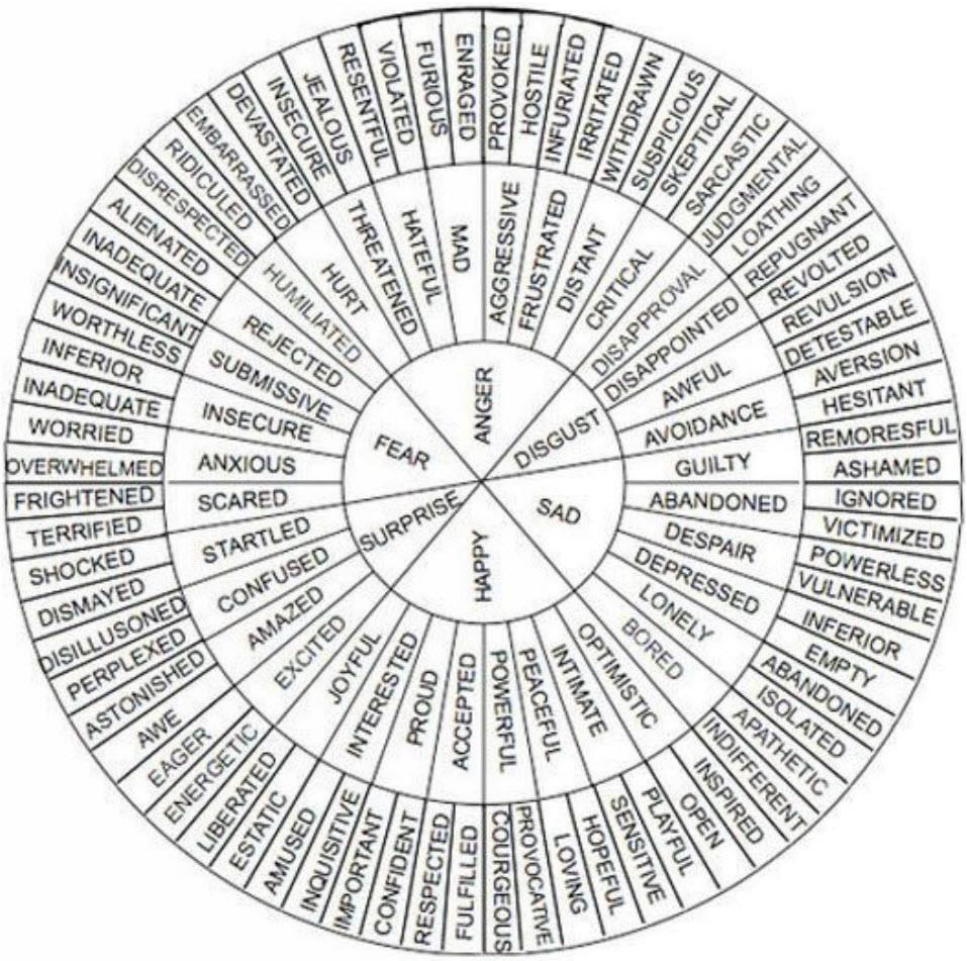
General Notes:

- Emotional States refers to challenges stemming from participants experiencing certain emotional states.
- Only code an emotional state that is explicitly stated in the "why" answer. You may consult the "how" answer for context purposes only.
- If unsure about a code, err towards coding conservatively.

K1. EMOTIONAL STATES

- The participant explicitly states that their challenge was motivated by *their experience* of a particular emotional state. Sometimes (but not always) participants will elaborate on the intensity and/or distress associated with the emotion state; this provides further evidence of their view that the challenge was motivated by emotions (e.g., it was *the most* painful, I had all this *anger pent up*).
- Code this subcategory anytime an emotional state is used to *partly* OR *entirely* explain the motivation for challenging.
- **Coding Aid:**
    - **Only code the participant's emotions.** Do not code how others may be feeling.
    - Sometimes, participants do not take ownerships of their feelings but will instead speak in third person (e.g., "this friend…has a way of making people feel bad." OR "It irritated me that…"). Using the **"how"** answer as context, you can code this as a feeling the participant themselves is experiencing.
    - Note the emotional state in the NOTES column in Excel for quick reference.
    - Figure 1 (below) is a non-exhaustive list of adjectives used to describe commonly encountered emotional states. You may come across adjectives that are not represented in Figure 1 below.
- **Specific Codes.**
    - **Code 38a** for **Negative Affect/Emotion**: This includes but is not confined to states of sadness, upset, guilt, disgust, shame, anger, hostility, fear, or anxiety.
    - **Code 38b** for **Positive Affect/Emotion:** This includes but is not confined to states of interest, confidence ("I'm sure…"), excitement, strength/empowerment, enthusiasm, inspiration, happiness, surprise, love, hope, joy, pride, etc.
    - **Code 38c for Neutral affect/Emotion:** This includes but is not confined to states of indifference, not caring, etc. ("I was indifferent"; "I didn't care").
        - NB: Code 38 if 38a, 38b or 38c are present. If it is not clear, code only 38.
        - NB: Code "I'm sure…" under 38b as a synonym to "I'm confident" (Positive Affect). DO NOT CODE "I knew/know" as an emotional state.
- **Examples:**

- "I challenged because it is one of the most painful experiences that I have ever had to endure." → Notice the identification of an emotional state, "painful", as motivating this challenge. Code under 38a.
- "[I challenged because] I was trying to be honest about what happened in the past and come clean about something that I had felt guilt over when I was younger." → Notice the identification of two emotional states: "honesty" and "guilt". The participant feels guilty. By challenging, he wants to reveal the truth and be honest, but he is not there yet. Code this under 38a for guilt.
- "[I challenged because] I had all this pent up frustration and anger even years later and I just finally felt mature enough to call my mom out on it" → Note the identification of frustration and anger. Code under 38b.



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